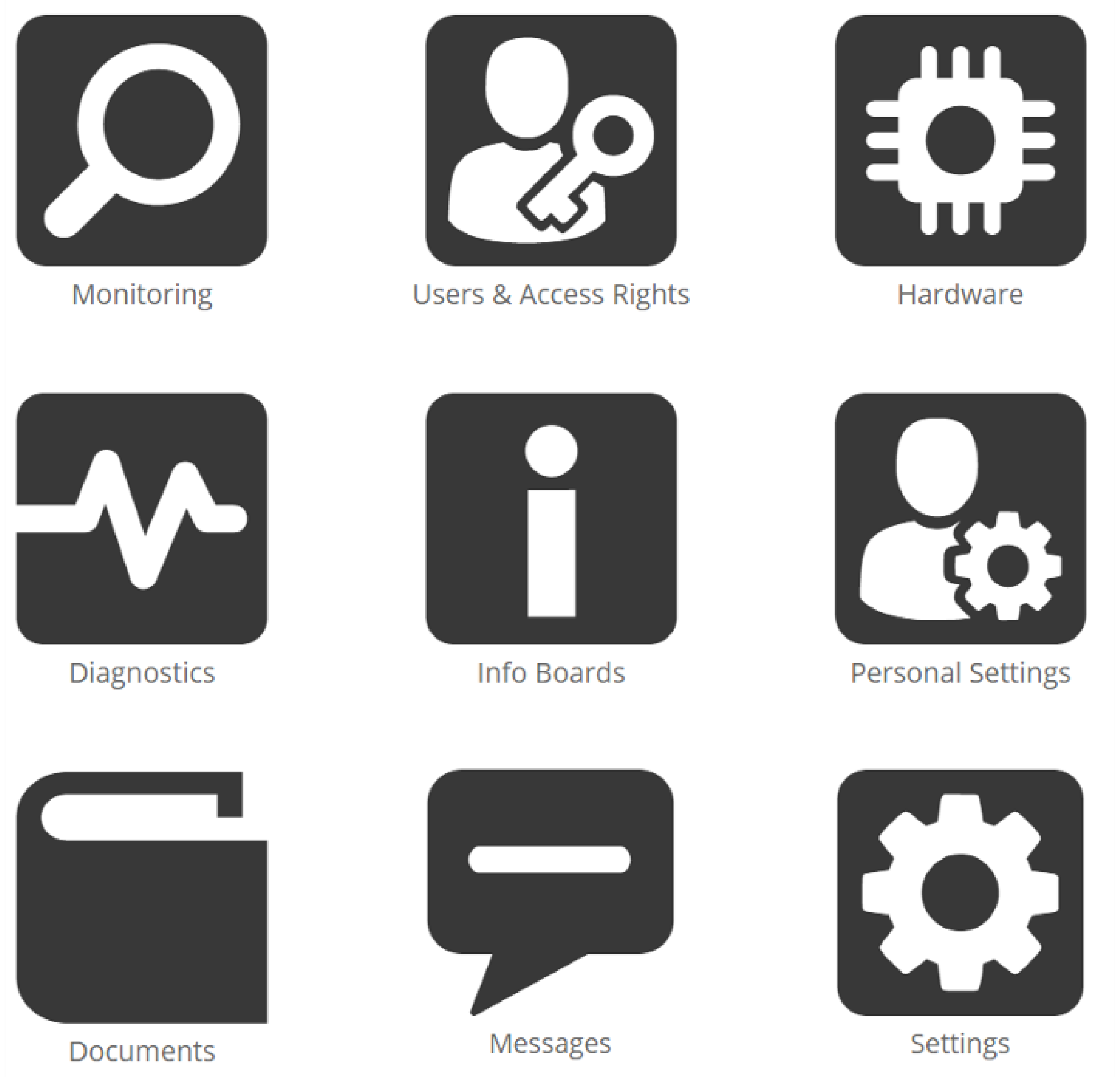
MAN8007 Manual version 3.0.0

Nova 3.0 software Administrator manual



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Explanations of words and concepts

Central:	An electronic device, an integral part of an access control system
ID card:	The identification card could be MIFARE card, EmMarine card…
PIN:	Personal identification number
Reader:	An electronic device used to register ID cards and PINs with central
Access group:	A group consisting of specifically defined doors. A user is assigned one or more access groups. The user has then been granted access through the doors defined in the access groups
REX:	Request to exit
DM:	Door monitor
LAN:	Local area network
WLAN:	Wireless local area network
WAN:	Wide area network
MAC:	Media access control address – usually noted on the side sicker of the central
GUI:	Graphical User Interface – the user-friendly software for controlling the central.
HTTP:	Hypertext Transfer Protocol - old and unsafe
HTTPS:	Secure version of HTTP

Introduction to Access control

Access control is any system or mechanism that grants or revokes the proper access to system resources. Access control systems, in buildings and facilities, normally consist of hardware and software. It allows the user to access and use different doors in pre-specified time intervals.
The following manual describes the basic concepts for optimal and successful use of the Nova software.
The name "Nova" is used throughout this manual for addressing the different software versions:

- NovaSimpli
- NovaSimpli350
- Nova10
- Nova100
- NovaPRO
- NovaServer

The core concepts in all software versions are identical. The differences between them will be explained when applicable. In most cases, the applications have different limits regarding the number of users, number of doors, and some special functions.
More information about activation keys needed in chapter **6.1 Add-ons and Modules**.

Nova software limitations

Nova10 and Nova100 limitations

CPU limitation of the central Alpha affects the service of a web interface and automated data replication. Complex systems with numerous events, changes, and integrated modules (e.g. Info boards) can soon reach Nova100's limitations. An upgrade to NovaServer is suggested when one of the limits is reached:

(a) Max. 25 online centrals
(b) Max. 100 online or wireless online readers
(c) Max. 250 offline readers (with reader expansion modules)
(d) Max. 5.000 users (with user expansion modules)
(e) Max. 100 user photos can be stored on centrals Alpha2 or Alpha4. Use Alpha2+ or Alpha4+ with Alpha USB flash drive for extra storage when you have more than 100 user photos.
(f) Max. 5 Info boards can be used with Alpha2+ or Alpha4+ and Alpha USB flash drive.
(g) A burst of log volume due to 4 door openings per second on each central or continuous opening of 2 doors per second on the complete system

NovaServer and Virtual NovaServer limitations

NovaServer has a powerful CPU, but limitations should be considered for slave centrals. Please get in contact when one of the limits is reached:

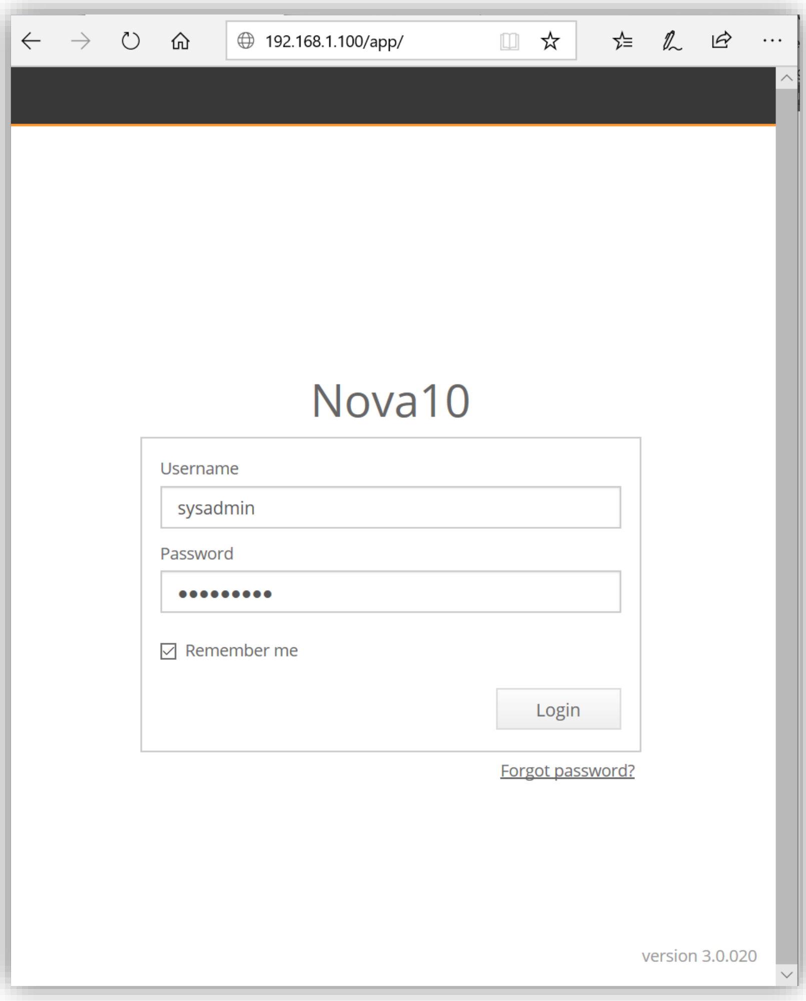
(a) Max. 250 online centrals
(b) Max. 5.000 online, wireless online or offline readers (with reader expansion modules)
(c) Max. 50.000 users (with user expansion modules)
(d) Max. 5.000 access groups
(e) Max. 100 Info boards
(f) A burst of log volume due to 4 door openings per second on each central or continuous opening of 10 doors per second on the complete system

1 Login page

Open a web browser and navigate to the IP address of your central.

- (Default central address is "**https://192.168.1.100**" Picture 1.1).

NOTE: If the installer made a shortcut on the desktop, use it to access the Nova software.



Nova10

Username

sysadmin

Password

●●●●●●●●●

☑ Remember me

version 3.0.020

Picture 1.1: Login page

- Type your username and password into the login page (Picture 1.1). If logging in for the first time, use predefined:
  - Username: **sysadmin**
  - Password: **sys4Admin**

NOTE: Passwords are case sensitive.

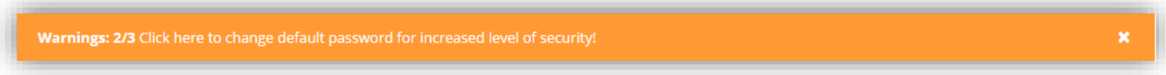
If login credentials were correct, the home page of the Nova software will appear on the screen.

Forgot password – if a user has an email or phone provided in the Nova account, the request to reset the password can be sent. **This function is not compatible with two-factor authentication.**

IMPORTANT! Please change the predefined password and username to protect unauthorized access to your system! (See chapter 6 for further details).

IMPORTANT! Warning messages will appear on the home page of Nova to change the default password to increase system security and to change the default IP address "http://192.168.1.100".

Clicking the message will allow the administrator to change the settings described in the message, otherwise clicking the X button (displayed on Picture 1.2) will prevent them from showing up again.



Warnings: 2/3 Click here to change default password for increased level of security! ×

Picture 1.2: Warning message

1.1.1 Account types

Nova software implements different types of accounts:

- **User** – a normal user login, can change some of its information, can add door widgets that have access to, has access to files (uploaded by sysadmin), and access to booking.
- **User (read-only)** is used only for booking module. If this user's login information is provided for booking login, the clients that have a link to the calendar can freely browse the calendar without a session drop (designed for displaying booking availability only!).
- **Checkpoint user login –** only has access to checkpoint widget, where he can monitor the cards that pass over a pre-defined reader.
- **Print administrator** – has access to all users (can create user, change their PIN, name, last name, account validity, additional fields, add Cards or Unauthorized cards, can set default card layout), card designer card/user reports and booking. He cannot manage access groups or any other user data.
- **Local admin** – can only manage pre-defined user and hardware list. He can create new users that are automatically added to his user list and are invisible to another local administrator (the same goes for time schedules and access groups).
- **Administrator account** is used for the day-to-day system administration and permits/allows the management of users, access groups, schedules, and control of doors in the system.

- **The system administrator account** is used by the person installing the system and managing the hardware (e.g. adding centrals and readers).
  NOTE: Do not use this account in the normal workflow.
  Since this account controls the access of all other administrator accounts, it should be assigned to the IT-responsible, the installing contractor, etc.
- **A super administrator account** is primarily used for support purposes. This account is disabled by default.
  The System administrator can enable/disable the Super administrator account by navigating to **Home > Settings > Login Settings > Super administrator**.
  In case the system administrator does not have access to the GUI, a super administrator account can also be enabled by a short press of the left button (next to the power lines) on any of the centrals.

2 Home page and main navigation

The main page consists of different widgets displayed based on the access rights of the person logging in:

- System administrator
    - Access to hardware widgets.
    - Access to user's widgets.
    - Can create **link widgets** for all users.
    - Can create **door widgets** for all doors in the system if the system administrator has assigned access. Door widgets are only displayed on the home screen.
- Administrator
    - Access to user's widgets.
    - **Sees the link widgets** created by the System administrator.
    - Can create **door widgets** for all doors in the system if the administrator has assigned access. Door widgets are only displayed on the home screen.
- User
    - Sees link widgets created by the System administrator.
    - Can create **door widgets** for all doors in the system if the user has assigned access. Door widgets are only displayed on the home screen.

Widget types:

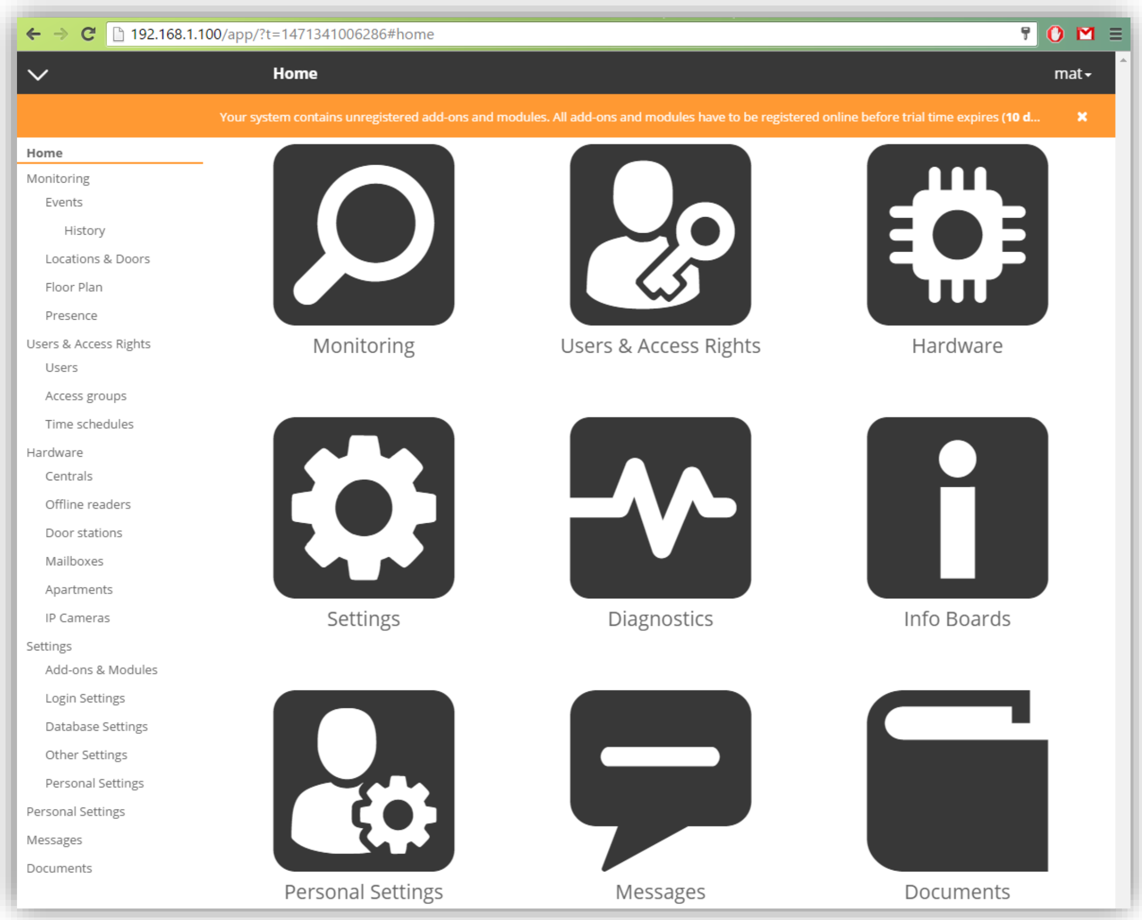
- **Weblink widget** – Can create a link to an external web page or linked file location.
- **Door widget** – Enables opening the desired door with a single click (very handy for mobile access).
- **User widget** – Used for user management.
- **Hardware widgets** – Used for managing system hardware.

A short description of the other non-user created widgets:

- **Monitoring –** Consists of widgets with different overviews.
    - **Events –** History/Live events feed.
    - **Floorplans –** Displays hardware location on the ground plan/blueprint.
    - **Locations & Doors –** An overview of locations and hardware displayed in a tree structure.
    - **Presence –** Displays groups of people that have checked-in.
- **Users & Access Rights** – All about users and their management.
    - **Users –** Add/edit/delete users.
    - **Access groups –** Create/edit/delete access groups.
    - **Time schedules –** Create/edit/delete Time schedules.
- **Hardware –** All about hardware.
    - **Centrals –** Add/edit/delete readers and centrals.
    - **Offline readers –** Add/edit/delete offline readers.
    - **Door stations –** Add/edit/delete door stations.

    - **Mailboxes** – Add/edit/delete mailbox units.
- **Settings –** Contains all general/system-wide settings.
    - **Add-ons & modules –** Includes addition and activation of different add-ons and modules.
    - **Login settings –** Language settings, maintenance contact information, password recovery, and new user registration and social login settings.
    - **Database Settings –** Configuration/Events database download, automatic database backup.
    - **Other Settings –** Time-zone, webserver port, email settings, and unique PINs.
    - **Personal Settings –** Personal language and password.
- **Messages –** API for sending emails or messages to the door stations.
- **Documents –** Important files (seen by everyone) that can be uploaded to the central (maintained by administrator or system administrator).

For easier navigation, use the arrow on the left top side of the window to display or hide the **quick access menu**.

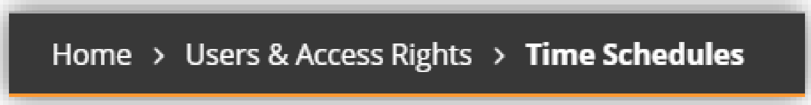


Your system contains unregistered add-ons and modules. All add-ons and modules have to be registered online before trial time expires (10 d...

Picture 2.1: Home page with widgets and navigation menu

From every page, there is access to any of the previously selected widgets on the **header bar**.

E.g. to navigate from the **Home** page to **Users & Access Rights** and afterward to **Time Schedules**, simply click on **Users & Access Rights** to return to the wanted widget (Picture 2.2).



Picture 2.2: Steps and access to the current widget

By clicking on the user-name on the right side of the header, a dropdown menu will display:

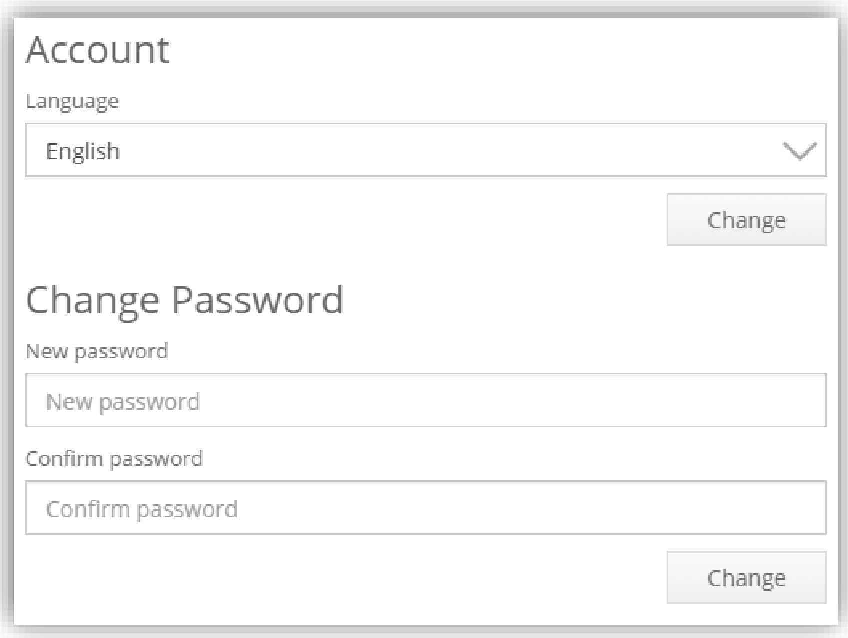
- **Account** – For managing currently logged-in account settings – furtherly described in chapter 2.1 Account settings.
- **Widgets –** Used to create User widgets. Description of details is described in chapter 2.2 Creating user widgets.
- **Logout –** Logs out the current user.
- **Version number** - a software version of the Nova software. Providing the version number when contacting support is crucial for easier determination of the problem(s).

2.1 Account settings

This option enables a user to manage their account.

Basic settings:

- **Account language** – The user can change what language the website will be displayed in.
  NOTE: Changing the language will only affect the user who changed it and display the site in the set language.
- **Change Password** – Users can change their login password.



Account

Language

English

Change

Change Password

New password

New password

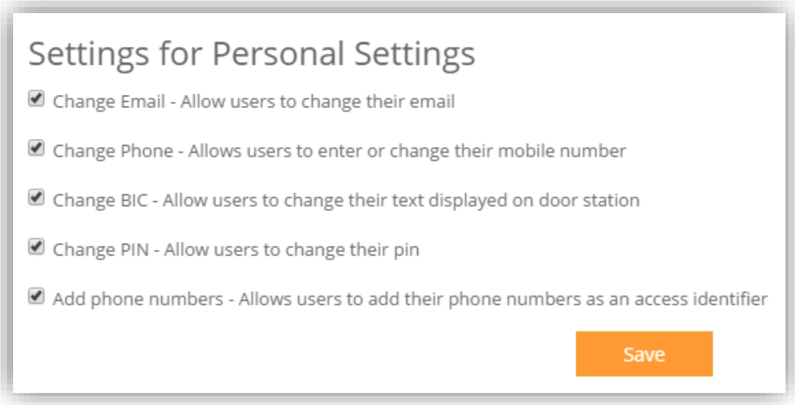
Confirm password

Confirm password

Change

Picture 2.3: Users can change their language and password.

Nova 2.0 Self-service activation key enables the System administrator to extend the user settings. These options can be found in **Home > Settings > Personal Settings.**



Settings for Personal Settings

☑ Change Email - Allow users to change their email

☑ Change Phone - Allows users to enter or change their mobile number

☑ Change BIC - Allow users to change their text displayed on door station

☑ Change PIN - Allow users to change their pin

☑ Add phone numbers - Allows users to add their phone numbers as an access identifier

Save

Picture 2.4: Extended user personal settings

Extended user settings consist of:

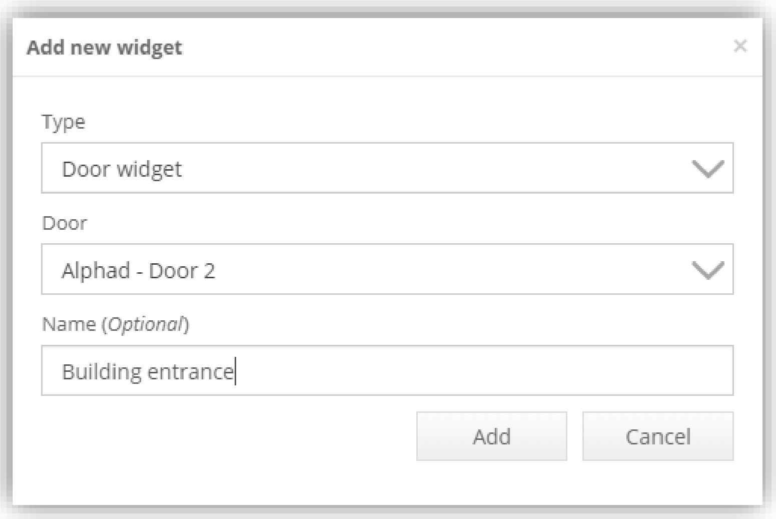
- **Changing email –** Allows users to enter or change their email address. This is an option for the Messaging module.
- **Changing phone number –** Allows users to enter or change their mobile number. This is an option for Messaging and Presence modules.
- **Changing PIN** – Enables users to change their PIN.
- **Adding phone numbers –** Allows users to add their phone number as an access identifier. Used for accessing doors via mobile phone calls.

2.2 Creating user widgets

2.2.1 Door widgets

Users can create their widgets by clicking on their usernames while logged in and navigating to the **Widgets** option. By pressing the **Add** button, a new pop-up window will appear. Users who have at least some access rights to that door can create door widgets for specific quick door access. These widgets are only seen by the user who created them.

They will only be able to access the door(s) within their set access schedule.



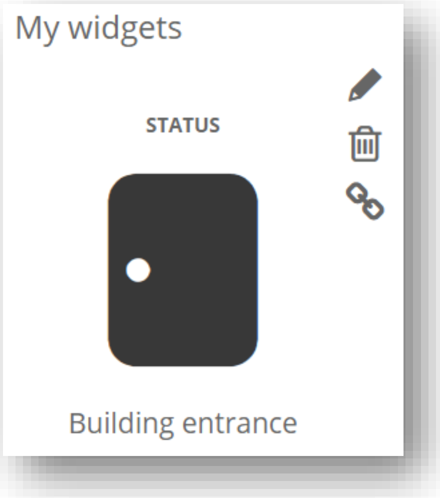
Add new widget

Type: Door widget

Door: Alphad - Door 2

Name (*Optional*): Building entrance

Picture 2.5: Creating a new Door widget



Picture 2.6: Door widget

2.2.2 Door widget - Weblink access

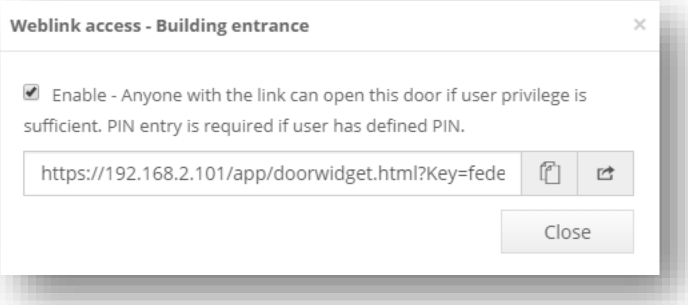
Every widget can generate link access to the door. This is useful for:

- Creating a link and sending it to a person with limited time access (mailman, renter…). A link can be easily copied by pressing the copy icon next to it - Picture 2.7.
- Creating a link widget on the mobile device – pressing the second button on Picture 2.7 will open link in a new tab which can be saved to desktop for easy access.

IMPORTANT! Users who enter via the link, in the GUI will be displayed as the Entry of the **user who created the widget**.

Additionally, the link will only work within access times; user validity also affects the ability to open doors.

IMPORTANT! Disabling and re-enabling the link widget will create a brand new URL while making the old one obsolete.



Weblink access - Building entrance

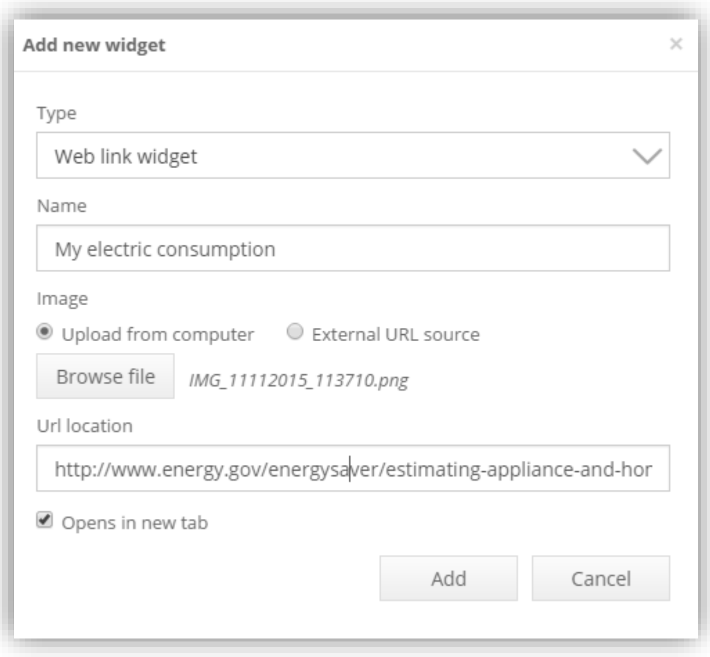
☑ Enable - Anyone with the link can open this door if user privilege is sufficient. PIN entry is required if user has defined PIN.

https://192.168.2.101/app/doorwidget.html?Key=fede

Picture 2.7: Link with access

2.2.3 Weblink widget

The system administrator can additionally create a Web link widget that can link to external websites or upload a file from the computer. Unlike the Door widgets, Link widgets are displayed to **everyone** on their home page.



Add new widget

×

Type

Web link widget

Name

My electric consumption

Image

● Upload from computer ○ External URL source

Browse file *IMG_11112015_113710.png*

Url location

http://www.energy.gov/energysaver/estimating-appliance-and-hor

☑ Opens in new tab

Add Cancel

Picture 2.8: Creating a Link widget

To create a Link widget:

1. Select widget type.
2. Enter its name.
3. Select the picture you wish to display as a cover of the widget (either upload it from the computer or provide the URL address to the picture, e.g. www.example.xyz).
4. Enter the URL address for the link.
5. Tick the checkmark if the web-page should open in a new window (otherwise it will open on the current page).

3 Monitoring widget

Monitoring widget is divided into:

3.1 Events widget

Centre panel: *The latest events* display recent events in the system indicating the time, location, and name of the user that triggered the event. The *Clear* button removes all of the events from the currently active feed of events. New events are still displayed.

NOTE: The events are not deleted, just temporarily hidden from the user.
When the Events page is loaded, it displays the last 50 events. This number extends to 300 if the browser page stays open while new events are added. Live events can be filtered by typing the keyword into the text box on the top of the panel (e.g. Reader connected).

Right panel: System information, Errors, Warnings, Disconnected centrals and readers and unlocked and blocked doors.
These panels show the current state of the system:

- *System information:* shows the number of present doors and users,
  the current time on the central, database usage, and uptime of the central.
  Clicking on the time stamp will send a request to update time on all centrals in the system.

- Errors and Warnings, Disconnected centrals and readers and
  Unlocked and blocked doors: shows what needs to be inspected

3.1.1 Event history

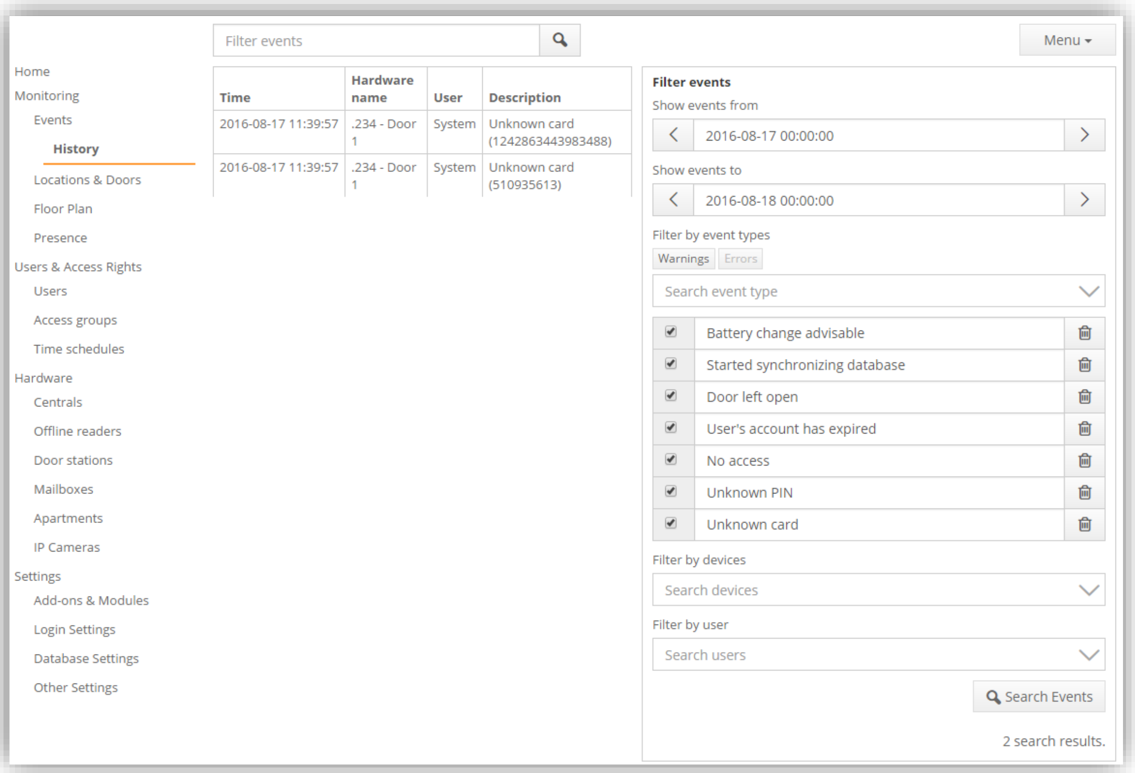
The event history is accessible by navigating to **Menu > History**.
The right panel offers the user a variety of filter types. The first filter is to set the beginning and the end of the time frame for searched events.
By clicking on predetermined tags, the events for that tag will automatically be selected (e.g. Clicking on the "Warnings" tag will select the Unknown PIN, no access events…).
Event types can also be entered manually by selecting them from the dropdown menu.
Selecting the devices from the device filter enables the search to work only on certain hardware.

Events can also be filtered by a specific user(s).

NOTE! Leaving any of the fields empty will result in a selection of all fields from that type.

IMPORTANT! Using a narrow History search will result in fewer results but will require more system resources and hence more time. Searching the events in a larger period will result in longer waiting times as well. Instead, make your requests short and simple then run them multiple times if required.

The history result page can be printed out or saved to an Excel file by navigating to the **Menu > Print** or **Menu > To Excel**.



Time	Hardware name	User	Description
2016-08-17 11:39:57	.234 - Door 1	System	Unknown card (1242863443983488)
2016-08-17 11:39:57	.234 - Door 1	System	Unknown card (510935613)

Filter events

Show events from: 2016-08-17 00:00:00

Show events to: 2016-08-18 00:00:00

Filter by event types: Warnings Errors

Search event type

- ☑ Battery change advisable
- ☑ Started synchronizing database
- ☑ Door left open
- ☑ User's account has expired
- ☑ No access
- ☑ Unknown PIN
- ☑ Unknown card

Filter by devices: Search devices

Filter by user: Search users

2 search results.

Picture 3.1: Event history with "Warnings" filter active

IMPORTANT! Software version NovaSimpli350 does not display or store any history of the events in the system. Events can only be monitored through a live feed of events on the events widget.

3.1.2 Manage error and warning events

The event managing window can be opened from the **Events** page by navigating to **Menu > Manage error and warning events**. By default, all Warning, Error, and Custom events will be displayed. With a click on a cogwheel in the upper left, we can filter the event list to show **all events, events with priority, custom events, and normal events.** The search function will also reduce the list if the contained string is found in the name of the event.

NOTE: Custom events can only be added if the scripting key is present in the system. To read more about the scripting module, please navigate to the chapter 7 Module: Scripting.

By double-clicking on the event or navigating to **Menu > Edit [Event name]**, a new popup will display:

- **Event name** (name can only be changed on custom events)
- Event priority
  - **None** – this event will not be displayed in the table.
  - **Information** – if the event is triggered, it will be displayed on the bottom of the list with a grey icon.
  - **Warning** – if the event is triggered, it will appear between the Information and Error section with a yellow icon.
  - **Error** – if the event is triggered it will be displayed on the top with a red icon next to it.
- **Sound alert** – after the event happens, it will trigger the selected sound notification (their tune can be tested by clicking the button next to it).
- **Text instructions** – if the text instructions are provided, they will be displayed as a note when the operator tries to remove the notification.
- **Reason confirmation** checkbox – if the operator wishes to remove the notification, a response must be provided.

3.2 Locations & Doors

Access control can be installed in all types of buildings, regardless of the number of rooms and doors.

- **Locations** - In the software these buildings and rooms are referred to as locations.

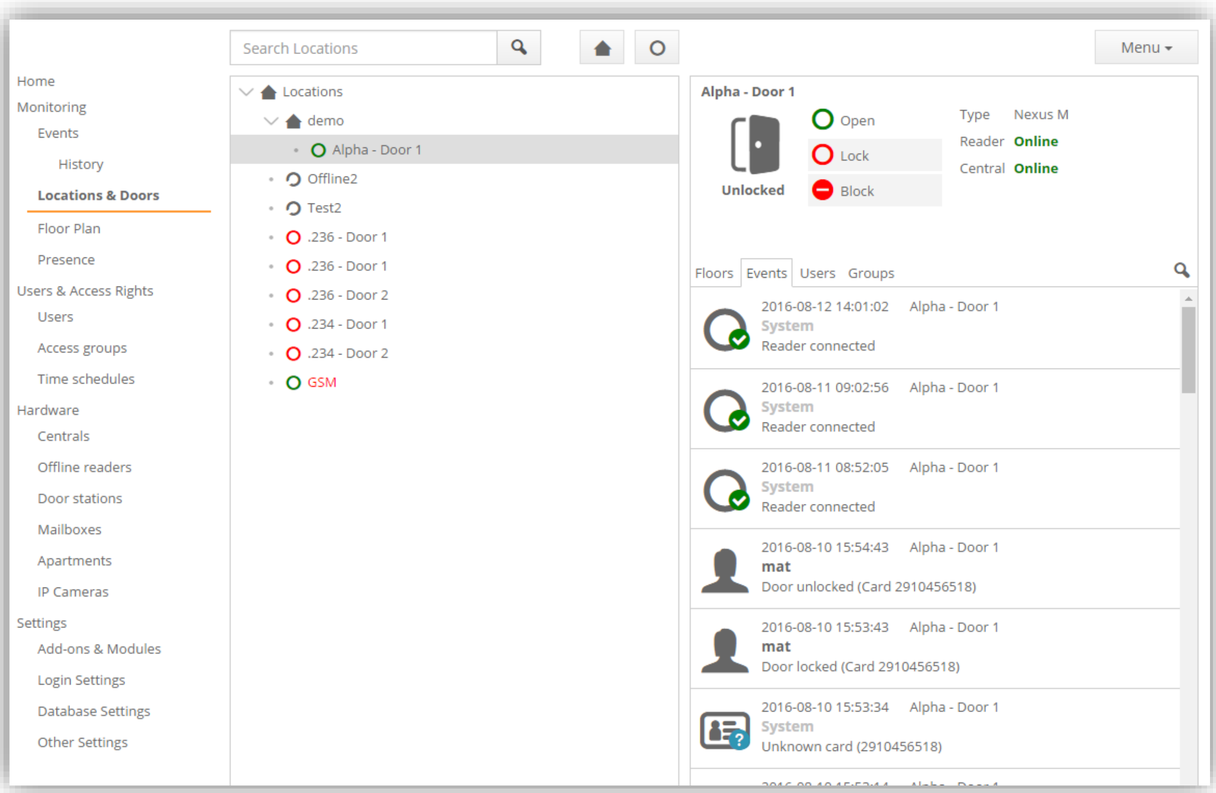
Doors – Doors are assigned to the locations in the form of readers. Readers are added to the system using the hardware widget (see **5.1.13 Adding new readers**).
This model represents the logical scheme of the access control system and its components.

Overview of different locations

Navigate to **Home > Monitoring > Locations & Doors** to see the location tree displayed. Clicking on different icons will reveal different branches of the device tree:

🏠 - Displays only locations and unsorted readers.

○ - Extends the entire tree with all locations and readers.



Type Nexus M
Reader Online
Central Online

2016-08-12 14:01:02 Alpha - Door 1
System
Reader connected

2016-08-11 09:02:56 Alpha - Door 1
System
Reader connected

2016-08-11 08:52:05 Alpha - Door 1
System
Reader connected

2016-08-10 15:54:43 Alpha - Door 1
mat
Door unlocked (Card 2910456518)

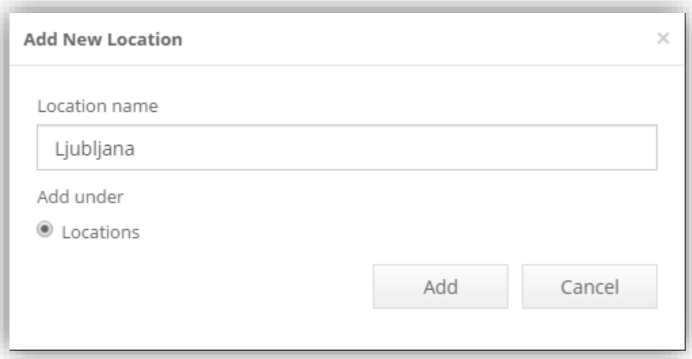
2016-08-10 15:53:43 Alpha - Door 1
mat
Door locked (Card 2910456518)

2016-08-10 15:53:34 Alpha - Door 1
System
Unknown card (2910456518)

Picture 3.2: Locations and detailed information

Adding a new location:

1. Select the root location (the top position).
    a. NOTE: If there are no locations created yet, the new one is the top location.
2. Click on **Menu** > **Add New Location** button.
3. Enter a name for the new location into popup window (Picture 3.3)
    a. Optional: Select a previously created location that the new location is going to be a branch of (placed under).



Location name: Ljubljana

Add under
● Locations

Picture 3.3: Adding a new location

Renaming locations:

1. Select the location for renaming.
2. Click on Menu > Edit location.
3. Rename it.

Removing location:

1. Select the location.
2. Click on Menu > Remove location.

NOTE: Locations that contain sub locations cannot be deleted. To remove a location, all sub-locations and readers need to be transferred or deleted.

Arranging items:

1. To move an item, select it.
2. Click on **Menu** > **Move.**
3. Select the location that the item will be placed under.

3.2.1 Location management

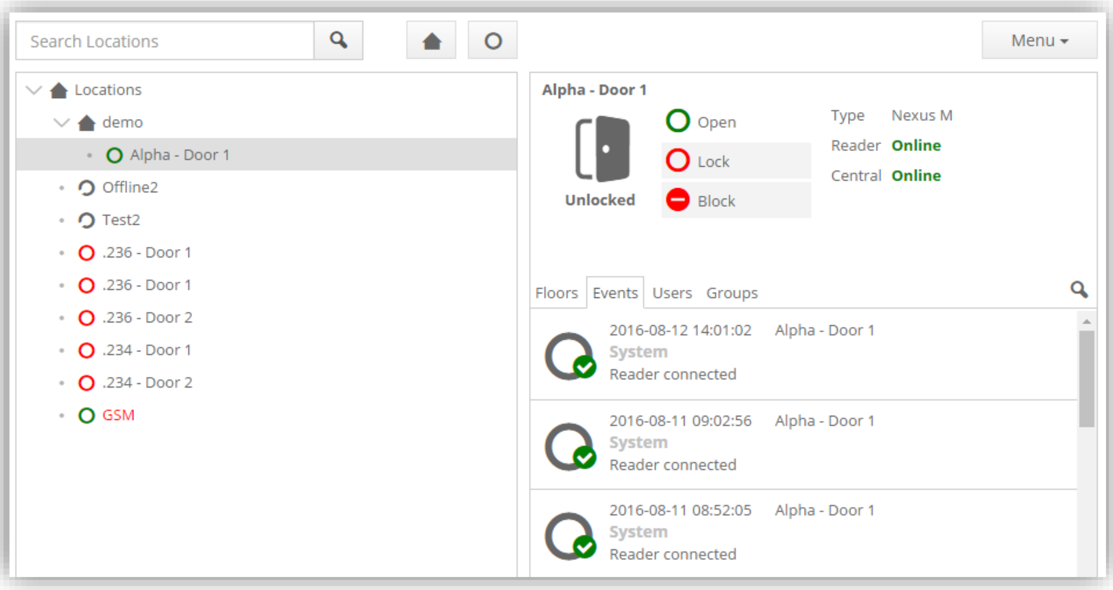
Selecting a location enables the management of all readers located in the selected location and its sub-locations.

By selecting their location and perform one of the next actions, all readers in the location can simultaneously:

- Lock
- Unlock
- Block
- Unblock

When selecting a reader, the GUI will show:

- Reader status
- Possibility to manage related door (Picture 3.4)



Alpha - Door 1

Unlocked

Type Nexus M
Reader **Online**
Central **Online**

2016-08-12 14:01:02 Alpha - Door 1
System
Reader connected

2016-08-11 09:02:56 Alpha - Door 1
System
Reader connected

2016-08-11 08:52:05 Alpha - Door 1
System
Reader connected

Picture 3.4: Location and doors showing all readers in the system assigned to locations

Description of the reader icons:

- ○ - Door is locked, the reader LED is red
- ○ - Door is unlocked, the reader LED is green
- ⊖ - Door is locked and blocked, the reader LED is red
- ⊖ - Door is unlocked and blocked, the reader LED is green
- ↻ - Offline reader
- ? - Door & reader status is unknown (the central did not receive an update)

In the lower right panel, additional information about the selected item is shown in columns:

1st tab: displays the **Floors** that the reader is shown on. **NOTE:** This tab is only visible if there is a Floorplan module added in the system.
2nd tab: list of last **Events** related to the selected reader (if the selected item is a location, the events are not shown).
3rd tab: list of all **Users** having access rights to the selected item and all connected readers (when the selection is a location).
4th tab: list of **Access groups** that have any access to the selected reader or location.

NOTE: To manage an offline reader, select it, and choose **Menu > Edit** (**Basic administrators** cannot change hardware settings).

4 Users and Access rights

IMPORTANT! The creation of the access groups before adding users is strongly recommended – see part 4.3 Access groups for instructions.

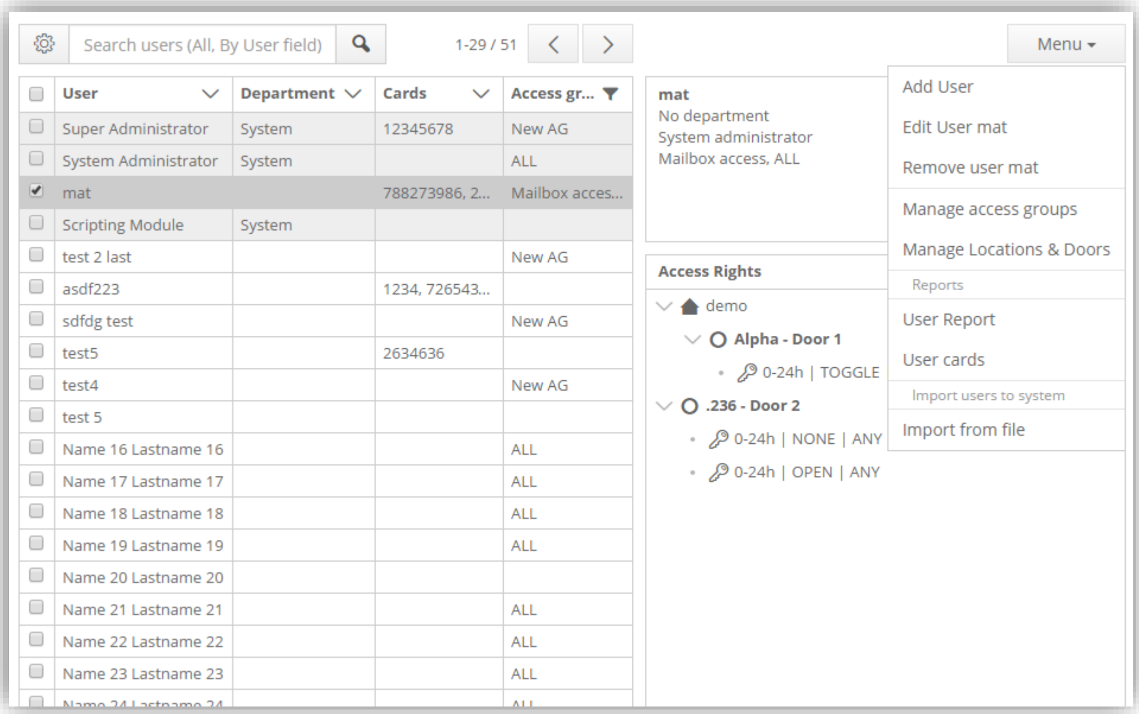
The Users and Access Rights page is used for managing users and the setup of:

- Users' access rights
- Access groups: pre-definition of doors that a user has access to when being a members of this group.
- Time intervals: precise time interval can be set for user's access to specific doors

4.1 Users

When clicking the Users widget, the Menu contains the following options:

- Add User (see Picture 4.1)
- Edit User
- Remove User
- Manage access groups
- Select columns – read more about in chapter 4.2.4 Custom user preview.
- Manage Locations and Doors – a redirection to Locations & Doors
- Reports – different types of reports for the specific user(s) or their access cards
- Card designer – comes with an activation key. You can read more about it in chapter 15 Module: Card designer.
- Import users – a function to import users from CSV files



mat
No department
System administrator
Mailbox access, ALL

	User	Department	Cards	Access gr...
□	Super Administrator	System	12345678	New AG
□	System Administrator	System		ALL
☑	mat		788273986, 2...	Mailbox acces...
□	Scripting Module	System		
□	test 2 last			New AG
□	asdf223		1234, 726543...	
□	sdfdg test			New AG
□	test5		2634636	
□	test4			New AG
□	test 5			
□	Name 16 Lastname 16			ALL
□	Name 17 Lastname 17			ALL
□	Name 18 Lastname 18			ALL
□	Name 19 Lastname 19			ALL
□	Name 20 Lastname 20			
□	Name 21 Lastname 21			ALL
□	Name 22 Lastname 22			ALL
□	Name 23 Lastname 23			ALL
□	Name 24 Lastname 24			ALL

Picture 4.1: User management

User information is displayed in the upper right panel. Access rights are displayed in the right panel below.

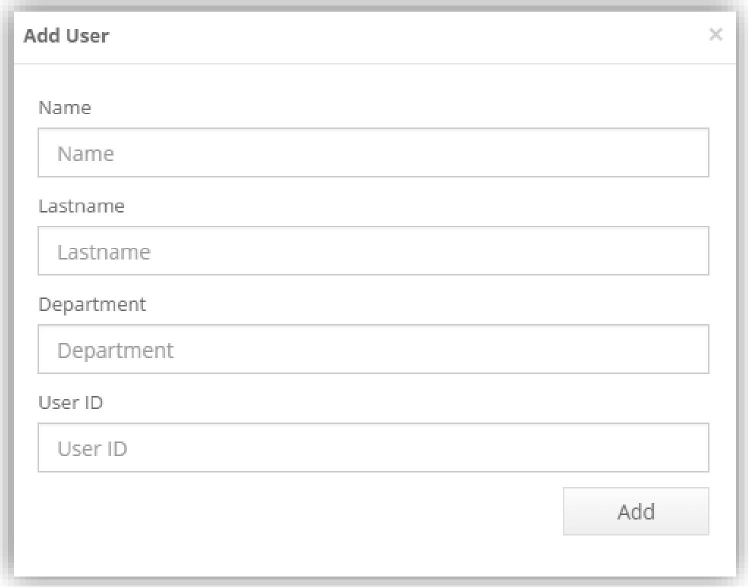
4.2 New users

A new user is added by clicking **Menu > Add user**.

User data can be entered in the new window (Picture 4.2).

- Name
- Last name
- Department
- User ID

The data needs to be saved by clicking the button **Add**.



Add User

Name: Name

Lastname: Lastname

Department: Department

User ID: User ID

Picture 4.2: Input for new user data

Additional data that can be defined for selected/new user:

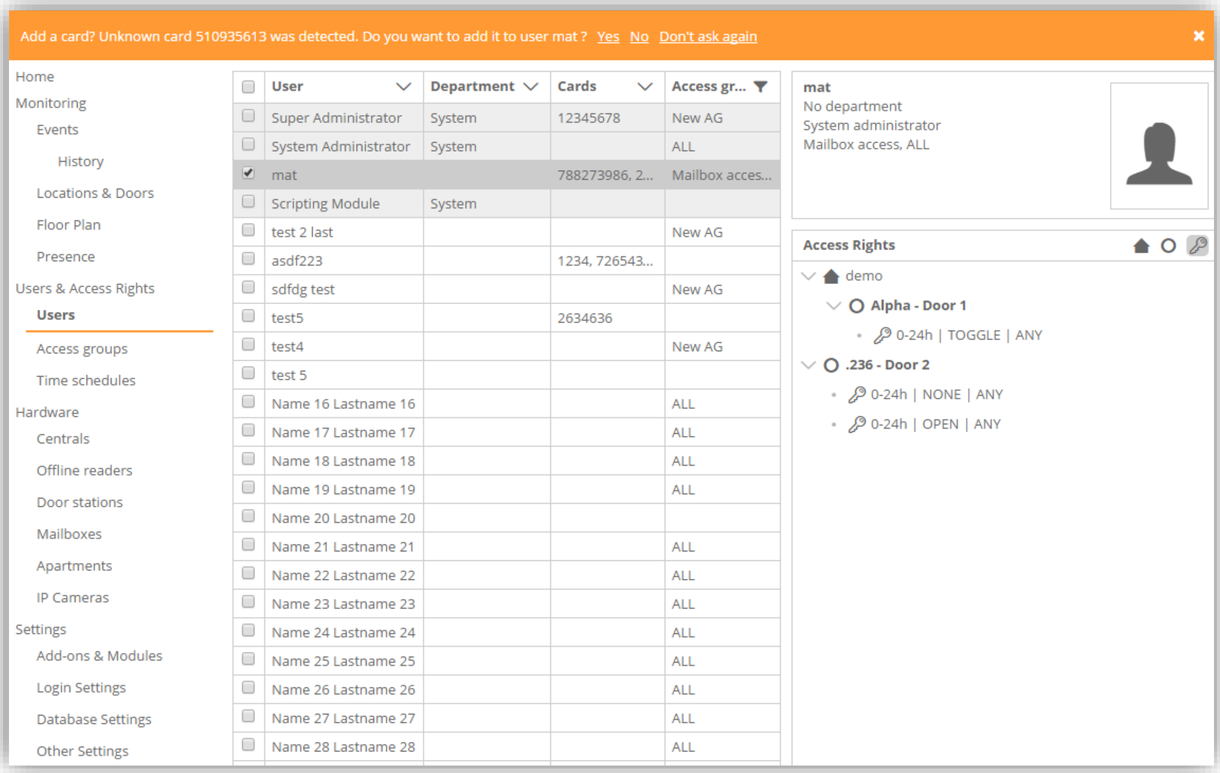
- PIN (must not exceed 20 characters)
  IMPORTANT! Each user needs a unique PIN. The length of the PIN-code on offline readers is limited to a maximum of 7 characters.
  The PIN that does not comply will not work and will not display any warning when writing data on a user card.
  IMPORTANT! If a user enters a wrong PIN 5 times in a row, the reader will report Access suspended for any PIN entered in the next 30 seconds.
  - Generate a new PIN – this option generates a pin that is unique and complies with the global PIN length value.

- Card number (usually marked on identification card). Each user can have up to 16 different card numbers/telephone numbers. A table card reader can be used for easier card number input.
- The validity of the user account (before the start date and after the end date the user will not have valid access rights).
- E-mail, Phone, Address, and Remarks.
- Add a picture

4.2.1 Adding unknown card(s) to user

When the system detects an unknown card (i.e. a card that is not assigned to any user) and the user is either currently selected in the user grid or the user editor is open, the option to assign the card to the currently selected user will appear in the bar at the top of the screen (Picture 4.3). In that case, the card will automatically be saved and listed like other assigned cards.

NOTE: This mechanism is used to quickly assign more cards to a single user. The the downside is that a card reader is needed next to the PC, as the detection of a new card and assignment to a user has to be made simultaneously.



Add a card? Unknown card 510935613 was detected. Do you want to add it to user mat ? Yes No Don't ask again

☐	User	Department	Cards	Access gr...
☐	Super Administrator	System	12345678	New AG
☐	System Administrator	System		ALL
☑	mat		788273986, 2...	Mailbox acces...
☐	Scripting Module	System		
☐	test 2 last			New AG
☐	asdf223		1234, 726543...	
☐	sdfdg test			New AG
☐	test5		2634636	
☐	test4			New AG
☐	test 5			
☐	Name 16 Lastname 16			ALL
☐	Name 17 Lastname 17			ALL
☐	Name 18 Lastname 18			ALL
☐	Name 19 Lastname 19			ALL
☐	Name 20 Lastname 20			
☐	Name 21 Lastname 21			ALL
☐	Name 22 Lastname 22			ALL
☐	Name 23 Lastname 23			ALL
☐	Name 24 Lastname 24			ALL
☐	Name 25 Lastname 25			ALL
☐	Name 26 Lastname 26			ALL
☐	Name 27 Lastname 27			ALL
☐	Name 28 Lastname 28			ALL

mat
No department
System administrator
Mailbox access, ALL

Access Rights

- demo
  - Alpha - Door 1
    - 0-24h | TOGGLE | ANY
- .236 - Door 2
  - 0-24h | NONE | ANY
  - 0-24h | OPEN | ANY

Picture 4.3: Assignment of the unknown card to a user

4.2.2 Card function assignment

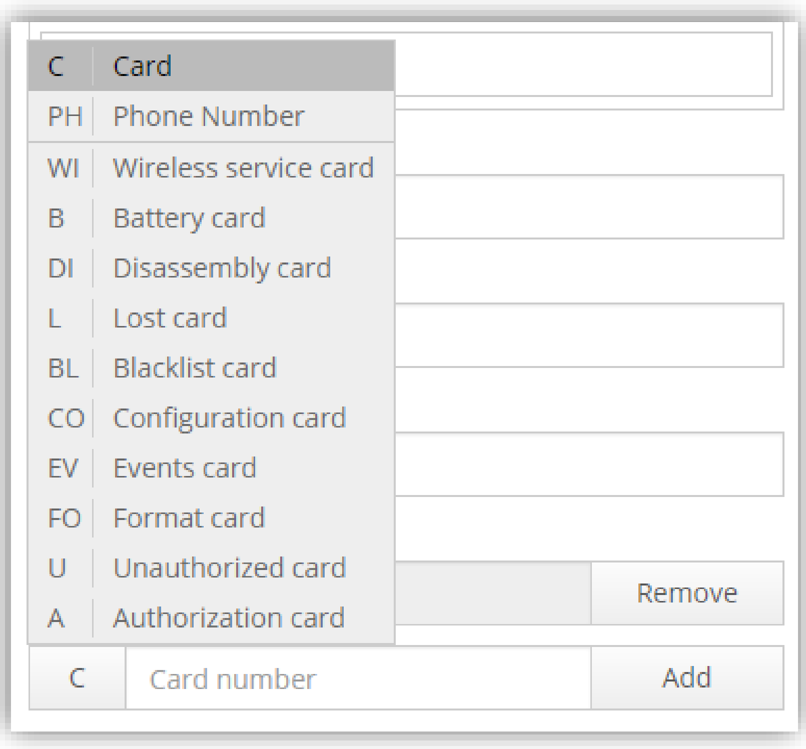
Different functions can be assigned to the user's cards by selecting the button to the left of the card number.

By default, each new card is tagged as **C** (**Card**), but its function can be changed by selecting a new function from the menu that opens (Picture 4.4), when clicking the button to the left of the card number:

- **L**: **Lost card** - in the case that a card was lost or stolen, it needs to be tagged with this option. Lost card event is displayed on the main page if someone tried to use the lost card
- **PH**: **A phone number** - if the user can open doors using a GSM gateway

The options below are **only visible to the system administrators** and are used for maintenance of offline readers:

- **WI: Wireless service card** - card for pairing offline readers with Antenna module, also used for firmware upgrade on the offline readers
- **B**: **Battery card** - card for replacing batteries on an offline reader, if applicable
- **DI**: **Disassembly card** - card for disassembling an offline reader, if applicable
- **BL**: **Blacklist card** - card for transferring the list of lost cards to an offline reader
- **CO**: **Configuration card** - card for transferring configuration settings to an offline reader
- **EV**: **Events card** - card for transferring the list of events from an offline reader to the central
- **FO**: **Format card** - the card will be formatted when detected on the online reader
- **U**: **Unauthorized card** - the card will not work until it is activated by the authorization card; after that, it will change its type to C - Card
- **A**: **Authorization card** - used for activating unauthorized cards
- **DA**: **Door App** – used with **22 Module: DoorApp** to open the door using phone's NFC technology
- **RF**: **Pro remote control** – A remote control used for accessing garage doors, barrier gates, etc.
- **LP**: **License plate** – used with a license plate reader



Picture 4.4: Changing the card's function

4.2.3 Managing users, their access rights and apartments

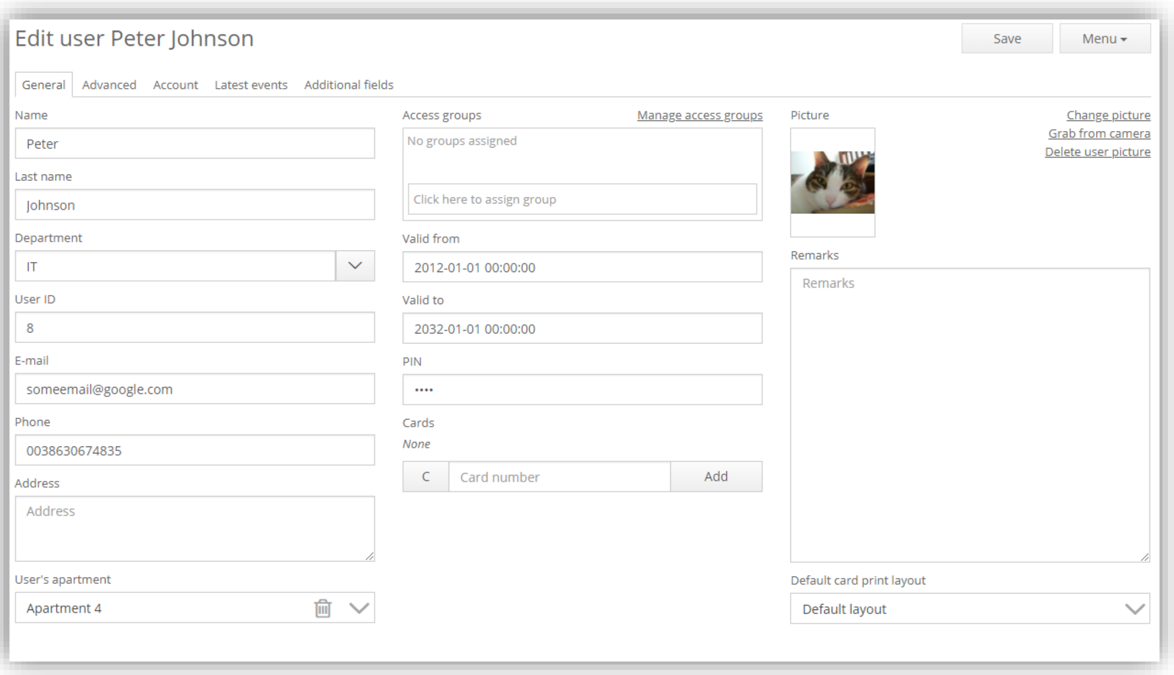
After saving user data, additional options are available through the tabs appearing on top: Access rights, Card settings, setting Account options, previewing Last events.

Edit user:

By clicking the **Menu > Edit user** button in the main navigation menu or by double-clicking the user in the list of users, it is possible to edit user's data such as:

- Edit personal, contact and identification information
- Assign a specific PIN or generate a random one.
- Add/Remove access groups
- Change picture: by clicking the Change picture button on the right side of the window (Picture 4.5)
- Grab from the camera – grabs a picture from a camera connected to PC
- Delete user picture

NOTE: These options are present every time someone is editing an existing user or after creating a new user.
NOTE: Administrator or **System Administrator** can edit all user data**.** Some of the data users can edit by themselves: Read which and how users can edit their data in caption **2.1 Account settings**.



Edit user Peter Johnson

Name: Peter

Last name: Johnson

Department: IT

User ID: 8

E-mail: someemail@google.com

Phone: 0038630674835

Address: Address

User's apartment: Apartment 4

Access groups: No groups assigned

Valid from: 2012-01-01 00:00:00

Valid to: 2032-01-01 00:00:00

PIN: ••••

Cards: *None*

Picture

Remarks: Remarks

Default card print layout: Default layout

Picture 4.5: User settings

Assigning Access groups:

Assigning the Access group to a **single user** is done in the settings window for the user (Picture 4.5):

1. Type the name of the Access group in the corresponding field.
2. Select the correct Access group from the autocomplete dropdown list, it will be added to the field above. Assign groups as requested.
3. Save changes.

Assigning Access groups to **multiple users** is done from the user list by selecting multiple users. Selection can be made by holding Ctrl (adds non-consecutive selection) or Shift (adds consecutive selection) key. In case the selection is made from a touch device, multiple users can be selected by placing a check-mark in front of their entry.

Click the **Menu > Edit users** button.

- The left column includes all Unassigned access groups.
- The middle column includes Assigned access groups for selected users.
    - Access groups can be Assigned or removed by selecting the Access group and pressing the corresponding button on the middle (Add or Remove).
- **The right column** displays access to the currently selected access group.
- **Offline readers tab –** all settings are applied to selected users
    - Define the validity of data written on cards for offline readers
    - Define if assigned user cards should be able to activate/deactivate the toggle mode on offline readers (Constantly unlocked/ activated so it

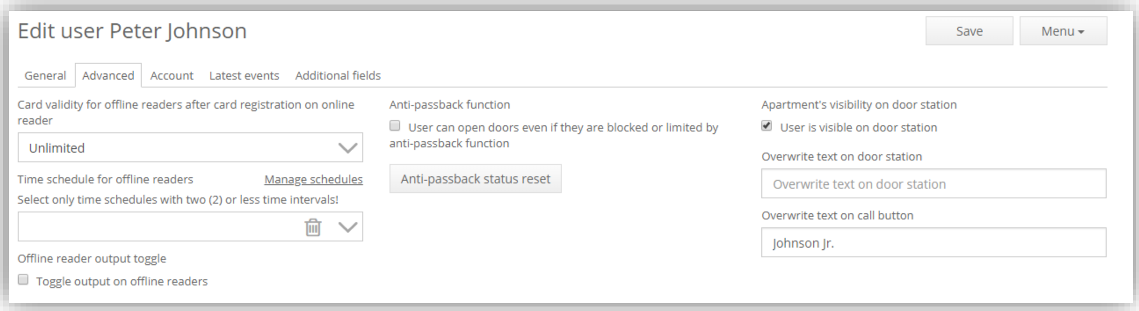
works like a thumb turn on the inside of a door or a regular mechanical handle). This option is only displayed if the Offline+ activation key is applied in the system.

  - Specify the schedule to limit the usage of a user's card to follow defined intervals on offline readers.
    NOTE: Offline readers only support 2 time intervals, so only the first two defined intervals in the selected schedule will apply. The option of checking time intervals on user cards needs to be enabled on the offline reader (see Picture 4.6). This option is only displayed if the Offline+ activation key is applied in the system.

Tab **Advanced** (Picture 4.6):

- Define the validity of data written on cards for offline readers
- Specify the schedule to limit the usage of a user's card to follow defined intervals on offline readers.
  NOTE: Offline readers only support 2 time intervals, so only the first two defined intervals in the selected schedule will apply. The option of checking time intervals on user cards needs to be enabled on the offline reader (see Picture 4.6). This option is only displayed if the Offline+ activation key is applied in the system.
- Define if assigned user cards should be able to activate/deactivate the toggle mode on the 2nd read on offline readers (Constantly unlocked/ activated so it works like a thumb turn on the inside of a door or a regular mechanical handle). This option is only displayed if the Offline+ activation key is applied in the system.
- **Privileged access** checkbox – users who have this checkmark set, will ignore any software limitations like blocked doors, anti-passback, or interlock errors.
- Anti-passback function – the option to remove anti-passback limitations from this user. Pressing the Anti-passback status to reset will open a window and ask the Administrator to reset anti-passback status for current or All users in the system.

- Apartment's visibility – option to show/hide the user on the door-station. The user's display data can be altered by writing the text in the overwrite textbox field. This option is only displayed if the Door station activation key is applied in the system.



Edit user Peter Johnson

Card validity for offline readers after card registration on online reader: Unlimited

Time schedule for offline readers
Select only time schedules with two (2) or less time intervals!

Offline reader output toggle
□ Toggle output on offline readers

Anti-passback function
□ User can open doors even if they are blocked or limited by anti-passback function

Apartment's visibility on door station
☑ User is visible on door station

Overwrite text on door station: Overwrite text on door station

Overwrite text on call button: Johnson Jr.

Picture 4.6: User's advanced settings

Account tab – Promote/demote user's access rights to the software:

1. Select the user from the user list (Picture 4.3).
2. Click the Account tab.
3. Choose the account type and language.
4. Fill out the form with the user's login name and password.

To see a user's history/event log:

1. Select a user from the user list (Picture 4.3).
2. Click Menu > Edit user button.
3. Navigate to tab **Last events***.*

Additional fields tab:

Sometimes costumers wish to store some more information about a customer, that isn't pre-determined by Nova2.0. In such cases, they can create their fields with custom labels and variable entries.
The additional fields work great with card manager, to read more about it, please navigate to chapter **15.3 Additional user fields.**

Removing a user:

1. Select the user from the user list (Picture 4.3).
2. Click on **Menu > Remove the user** in the main menu.
   NOTE: The user will be deleted, but the card will remain in the system, for the administrator to see if someone is trying to gain access using a deleted card.
3. Follow steps from chapter 4.2.1 to re-use the card for a new user.
   This will make the card work normally and report all events as a new card.

Assigning apartments:

If there is a Module: Door stations or Module: Mailboxes applied in the system, Apartment widget becomes visible.
Make sure that apartments are created before they are assigned (reference - 8.3 Managing apartments).
To assign the apartment:

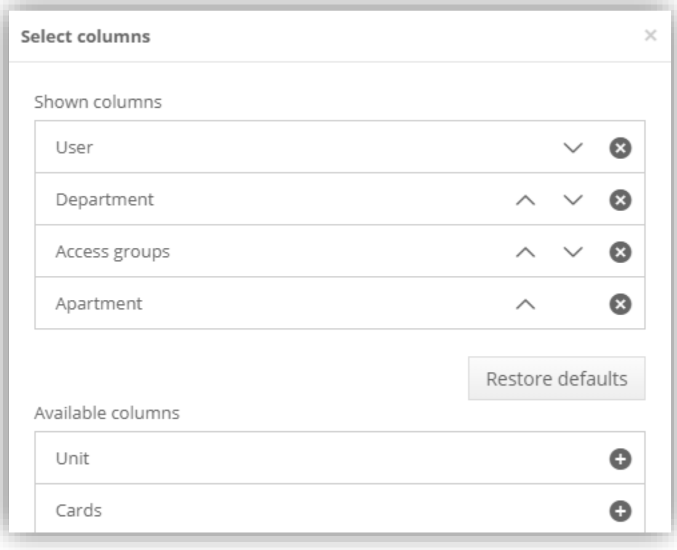
1. Enter the user's **General** setting.
2. Under **User's apartment** start typing the name of the apartment.
3. When the selection narrows, select it from the drop-down menu.
4. **Save** changes.

4.2.4 Custom user preview

Nova 2.2 supports resizable columns. Each column can be made wider or shorter by holding down the mouse key on the vertical line between columns and dragging it to left or right (the same as it works in any other table management software).

Columns can be added/removed or reordered by navigating to **Menu > Select Columns**. On the top, the shown columns are present. You can remove the column by pressing the X next to its name or the arrows for re-arrangement. To add a column to the user list, a plus button needs to be clicked next to the column name. The custom fields can also be used with the custom preview (read more about them in chapter 15.3 Additional user fields).

Restore to defaults button will set the preview to the original state.



Select columns

Shown columns

User

Department

Access groups

Apartment

Restore defaults

Available columns

Unit

Cards

Picture 4.7: We can select custom columns and create a unique view

With the new columns, we can sort them alphabetically as we did with the others. Additionally, the search functionality has been extended. We can now specify (by clicking on the cogwheel before the search field) to search on a specific column.

NOTE: The custom selection is stored locally which means that any changes that are made on one computer won't be visible on another nor will work on a different browser.

4.2.5 Importing users from CSV or Excel file

User data can be imported into the software from a.CSV (comma-separated values) or Excel file:

1. Click the **Menu > Import from file** button in the main user menu
2. Open the file that includes users from the opened popup window.
   NOTE: The CSV type file needs to have the data for each user in separate lines separated either by comma (,), semicolon (;) or TAB separator.

3. The data from the import file will be parsed and presented in a grid (Picture 4.8). If any changes need to be resolved, data can be rewritten in the grid.

The header of the grid includes different options for the determination of the parsed data. Please select the correct one that represents the column.

- Unused
- Last name
- Name
- Department
- Access group
- Card
- PIN
- User ID

NOTE: The lines that installer does not want to import, are easily removed by pressing x next to them.

ATTENTION: Values in the column matched as *Access group* must match valid Access group names, which are already present in the system. Furthermore, the values in the column matched as *Card* or *PIN* details must be valid numbers.

NOTE: Each user needs to have a unique PIN.

After everything is set, press **Start Import**. Users that are successfully imported will turn green, while the ones that have an error, will turn red and their status will change to the error message.

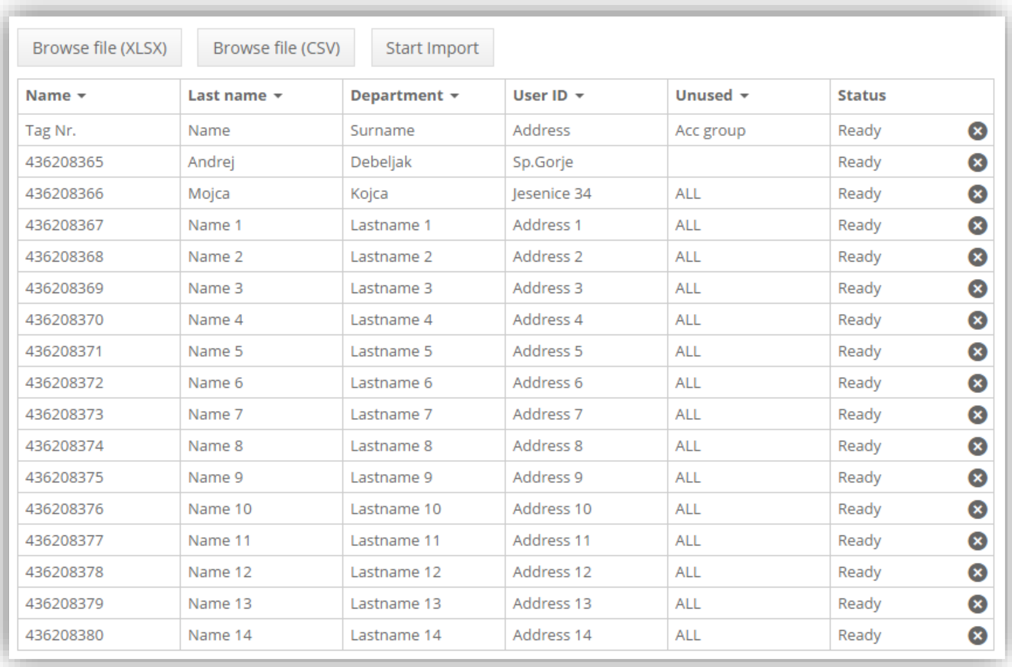
4.2.6 Custom user search

By navigating to users, the search filter defaults to match the name or last name. The search was improved to have a better result set using spaces (for ex. Searching for "St K" or "St n" will find a "Stephan King" and "Steven Kong" users).

The filter to search on another column can be set by clicking on the cogwheel ⚙ before the search bar. The drop-down menu offers a search between different columns and different access levels.

NOTE: NovaServer is a lot more powerful thus allowing the search to be run on all active columns.

In the Nova 2.2, we can also specify (in the same cogwheel drop-down menu) if we want to display users that have expired validity.



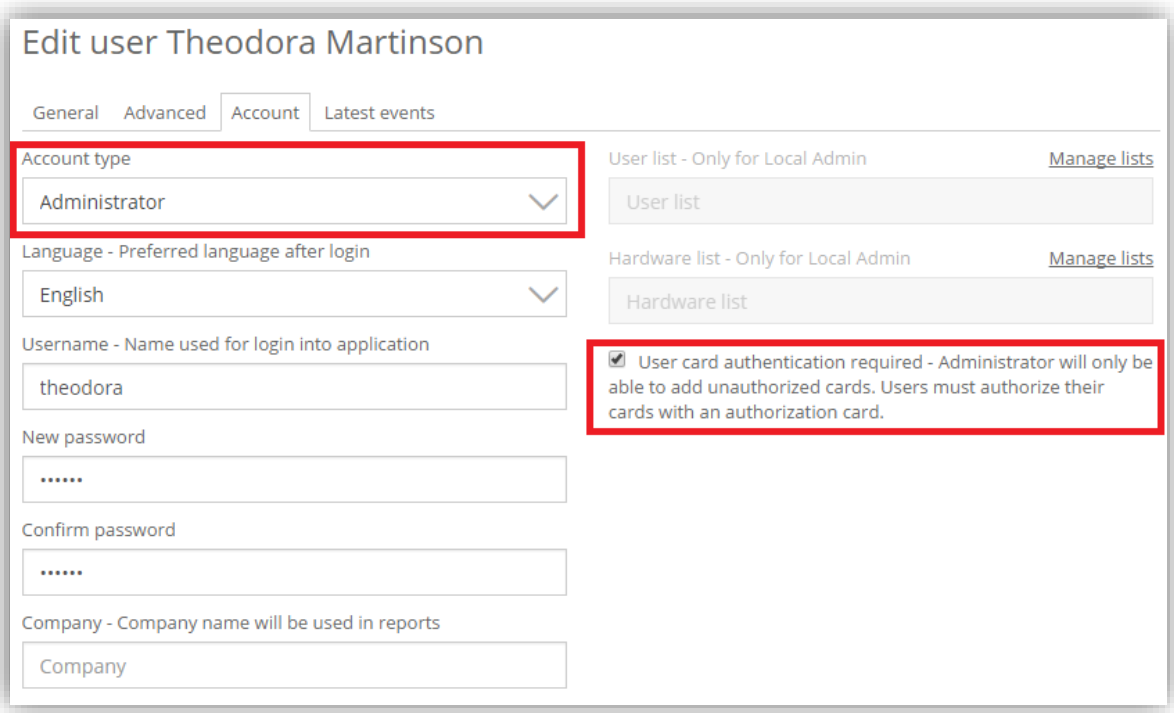
Name ▾	Last name ▾	Department ▾	User ID ▾	Unused ▾	Status	
Tag Nr.	Name	Surname	Address	Acc group	Ready	⊗
436208365	Andrej	Debeljak	Sp.Gorje		Ready	⊗
436208366	Mojca	Kojca	Jesenice 34	ALL	Ready	⊗
436208367	Name 1	Lastname 1	Address 1	ALL	Ready	⊗
436208368	Name 2	Lastname 2	Address 2	ALL	Ready	⊗
436208369	Name 3	Lastname 3	Address 3	ALL	Ready	⊗
436208370	Name 4	Lastname 4	Address 4	ALL	Ready	⊗
436208371	Name 5	Lastname 5	Address 5	ALL	Ready	⊗
436208372	Name 6	Lastname 6	Address 6	ALL	Ready	⊗
436208373	Name 7	Lastname 7	Address 7	ALL	Ready	⊗
436208374	Name 8	Lastname 8	Address 8	ALL	Ready	⊗
436208375	Name 9	Lastname 9	Address 9	ALL	Ready	⊗
436208376	Name 10	Lastname 10	Address 10	ALL	Ready	⊗
436208377	Name 11	Lastname 11	Address 11	ALL	Ready	⊗
436208378	Name 12	Lastname 12	Address 12	ALL	Ready	⊗
436208379	Name 13	Lastname 13	Address 13	ALL	Ready	⊗
436208380	Name 14	Lastname 14	Address 14	ALL	Ready	⊗

Picture 4.8: Import users from CSV or Excel file

NOTE: When importing from Excel file, make sure that the imported cells are set to "Text" and not as "Number".

4.2.7 Card authorization

Some installations require cards to be authenticated before they start working. To get such system working, the system administrator needs to assign an administrator, provide him with username, password, and a checkmark next to the user authentication text shown in Picture 4.9**.**



Edit user Theodora Martinson

Account type: Administrator

Language - Preferred language after login: English

Username - Name used for login into application: theodora

New password: ••••••

Confirm password: ••••••

Company - Company name will be used in reports: Company

User list - Only for Local Admin: User list

Hardware list - Only for Local Admin: Hardware list

☑ User card authentication required - Administrator will only be able to add unauthorized cards. Users must authorize their cards with an authorization card.

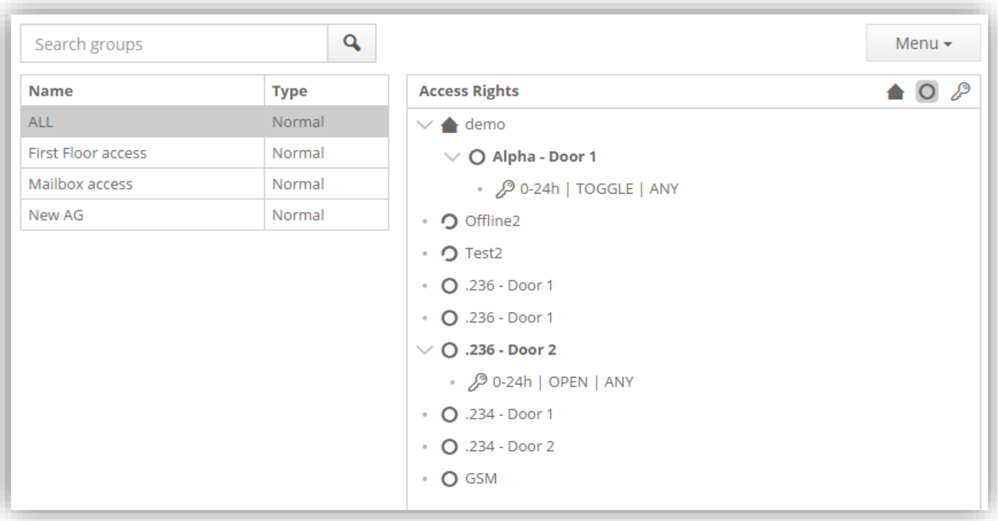
Picture 4.9: An assigning administrator whose cards will be added as unauthorized

The system administrator can then assign authorization cards to users.
When the Administrator logs into the nova, he/she can assign new cards to users, but are automatically set as **Unauthorized card** and won't work even if the user rights are correctly assigned.
The card will start working once the correct **Authorization card** is put on the reader; there will be a beeping sound, prompting for the correct user card. If the user card is put on the reader in the beeping period, it changes its status from **Unauthorized card** to **Card** and begins to work as a standard card.

Additionally, if more people are set in the same apartment, it is enough to set the **Authorization card** only to one person and use it to authorize other cards from that apartment.

4.3 Access groups

Clicking the button **Access groups** in the navigation menu will display the page below (Picture 4.10)



Name	Type
ALL	Normal
First Floor access	Normal
Mailbox access	Normal
New AG	Normal

- demo
  - Alpha - Door 1
    - 0-24h | TOGGLE | ANY
  - Offline2
  - Test2
  - .236 - Door 1
  - .236 - Door 1
  - .236 - Door 2
    - 0-24h | OPEN | ANY
  - .234 - Door 1
  - .234 - Door 2
  - GSM

Picture 4.10: Access groups editor

By clicking the **Menu > Add group** button in the Access group editor a new access group can be added.

It is possible to:

- Enter the new group name in the **Name** input box
- Enter group description or other info in the **Description** field optionally (Picture 4.11).
- Save the new Access group by clicking the **Add** button.

To edit an existing group:

- Select the group
- Click button **Menu > Edit** [group name] (Picture 4.11)

To remove an access group from the list:

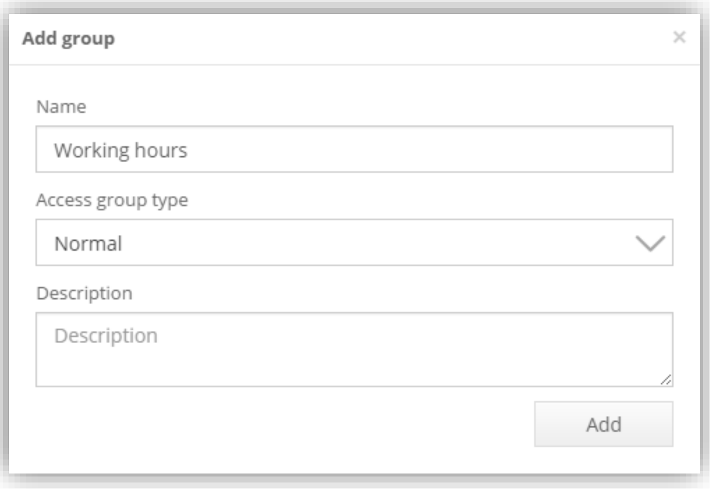
- Select the group
- Click the **Menu > Remove** [group name] button

NOTE: Access groups assigned to users cannot be deleted.

NOTE: If there will be multiple similar access groups, one can copy the whole group by selecting the original group and click **Menu > Copy** and then make adjustments accordingly.

Booking module

In case the activation key for booking module is installed, the type of access group can be changed from **Normal**, which is used in Nova for defining access rights for users, to type **booking**, which is used in booking application. **Booking** access groups are shown as different types in *Access group* editor. For more information about the booking module please see chapter 13.



Add group ×

Name

Working hours

Access group type

Normal

Description

Description

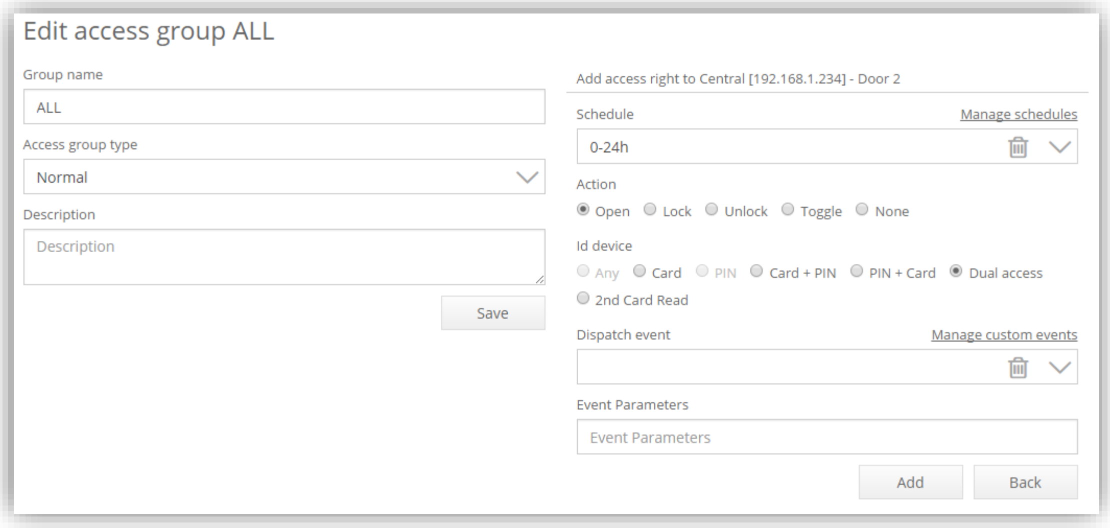
Add

Picture 4.11: New group editor

Access group editor

Access rights for selected access group in Access group editor (Picture 4.10) are visible in the hardware tree next to the list of groups. Buttons at the top of the tree can adjust the current tree view and select which branches of the tree are displayed.

New access rights can be added to the selected group by clicking on the +button, which is visible when an item from the hardware tree is selected (Picture 4.10). This will switch the hardware tree view into access properties for the previously selected hardware.



Edit access group ALL

Group name

ALL

Access group type

Normal

Description

Description

Save

Add access right to Central [192.168.1.234] - Door 2

Schedule — Manage schedules

0-24h

Action

● Open ○ Lock ○ Unlock ○ Toggle ○ None

Id device

○ Any ○ Card ○ PIN ○ Card + PIN ○ PIN + Card ● Dual access ○ 2nd Card Read

Dispatch event — Manage custom events

Event Parameters

Event Parameters

Add — Back

Picture 4.12: Schedule, action, and ID device selection

Select a schedule, action and identification device
Here it is possible to:

- Select the desired schedule
- Select action to be executed when an identification device is presented to the reader

Id devices available:

- Any (all ID sources with access will trigger the selected action)
- Card (only Cards with access will trigger the selected action)
- PIN (only the correctly entered PIN will trigger the selected action)
- Card + PIN (when a user shows the card to the reader, the person's PIN has to be entered in the following couple of seconds to execute the selected action)
- PIN + Card (the PIN of the user has to be entered primarily and then the card has to be checked for the selected action)
- Dual access (two cards with access must be presented on the reader in a limited time)
- 2nd Card Read (on the 2nd Card read, execute the selected action)

If the Scripting module activation key is installed, an action can be set to trigger and dispatch a custom event, which is handled by the user script in the context of the access right. For more information, please see chapter 7.
NOTE: The existing access rights can be edited or removed with the use of appropriate buttons shown on the selected tree item. The visibility of buttons for a selected item depends on its type (location, offline reader, or online reader).

IMPORTANT! When assigning access rights for offline readers, a default timetable *0-24h* (to add a new schedule, please read chapter **4.4 Managing schedules**) follows the actions **OPEN** and **CARD** as a source for executing an action. Those access rights cannot be edited. This does not apply for the Nexus MKO which also supports PIN+card.

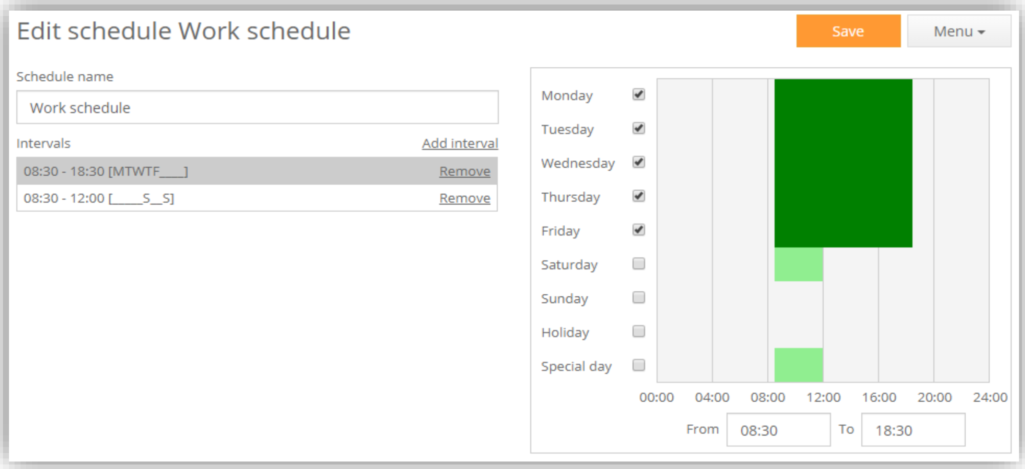
4.4 Managing schedules

The NovaSimpli software includes one, predefined schedule (0-24h), which is valid from 00:00 until 23:59 for every day of the week and cannot be modified or deleted. In other versions of Nova software, the option to manage and create additional time schedules is added. It can be accessed by clicking the **Time schedules** button found by navigating to **Home > Users & Access Rights > Time Schedules**.
In the **Time schedules and calendar** editor, the options are:

- Create, edit, or delete existing schedules.
- Enter holidays and other special days in the calendar
- Add more time intervals to the schedule by clicking the **Add Interval** button

NOTE: Each schedule contains one- or multiple-time interval(s), where each of them has a defined time span and days when the interval is valid (Picture 4.13).

NOTE: If the two schedules collide (ex. 00:00 – 24:00), the **lock** function will have a priority, therefore locking the doors at the last time set.



Schedule name: Work schedule

Intervals

08:30 - 18:30 [MTWTF____]

08:30 - 12:00 [_____S__S]

Monday ☑
Tuesday ☑
Wednesday ☑
Thursday ☑
Friday ☑
Saturday ☐
Sunday ☐
Holiday ☐
Special day ☐

From 08:30 To 18:30

Picture 4.13: Time intervals

If there is a holiday (for **any** day of the week), the **holiday schedule is used instead**!

Special days have higher priority than holidays and standard weekdays (if they are set on the same day).

Exception day can be added by navigating to **Menu > Add exception day,** select the date range and apply to the new schedule that will work on a set range of days. The only one-time range can be set, but multiple exception days can be added to cover the required time slot.
Exception day has the highest priority over Holidays, special days, and standard schedules.

IMPORTANT! Holidays and Special days are dependent on the country set on the central and affect all the readers in the system, while the **exception day** applies only to readers who have the schedule with exception day assigned.

Validity – country dependent

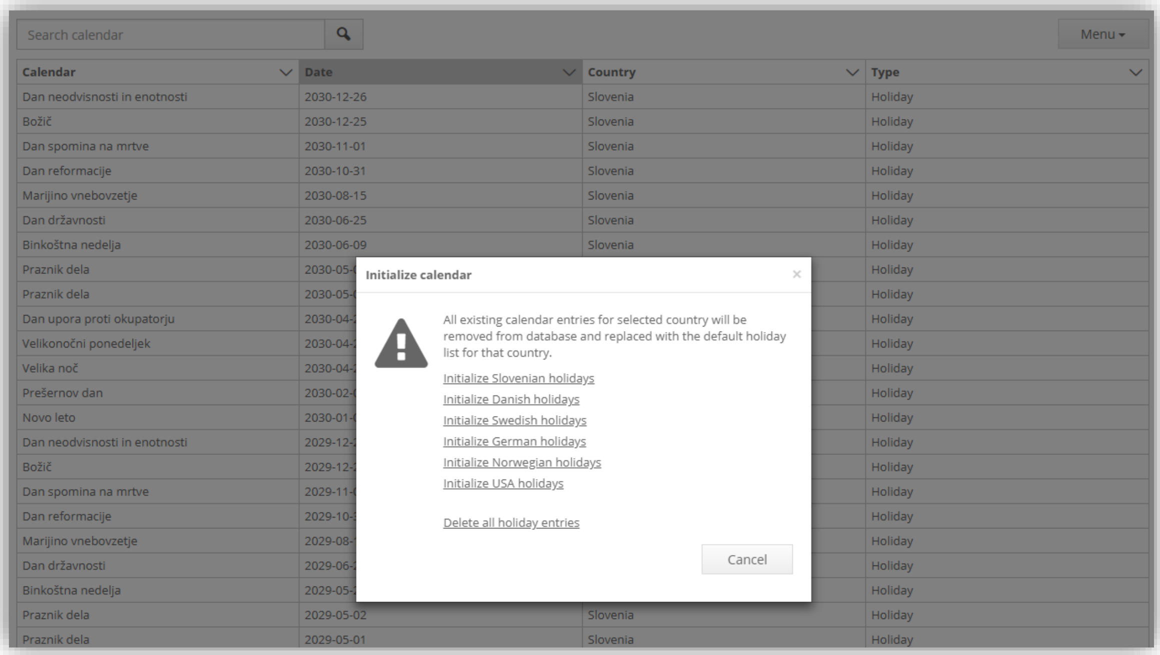
Time intervals can be defined on normal/ordinary days, special days or holidays, but please note that:
Special days and **Holidays** are predefined in the calendar and are country dependent. To access the calendar options, select the **Menu > Calendar** button from the **Time schedules** editor.
For each entry in the calendar:

- There is an option to specify for which country the entry is valid.
- The Country value is matched with the Country property of the central (see chapter 5.1.5 Adding, removing and editing centrals – Settings tab).
- If the country is not provided for a Holiday, the calendar entries are valid everywhere (independent of central's country).

To automatically import Holidays for a country:

IMPORTANT! When assigning the holidays, make sure that the country on every central is selected correctly! If a system is installed in multiple countries, a customer can import different holidays and applicable countries need to be selected on the central(s).

- Click the button **Menu > Initialize calendar** in the calendar editor.
  NOTE: All existing calendar entries for the selected country will be deleted from the database and replaced with the default list of holidays for the selected country. If any holidays are set wrong or missing, they can still be manually added/edited after the import is completed.
- To delete all holidays from the system, choose the last option from the menu.



Calendar	Date	Country	Type
Dan neodvisnosti in enotnosti	2030-12-26	Slovenia	Holiday
Božič	2030-12-25	Slovenia	Holiday
Dan spomina na mrtve	2030-11-01	Slovenia	Holiday
Dan reformacije	2030-10-31	Slovenia	Holiday
Marijino vnebovzetje	2030-08-15	Slovenia	Holiday
Dan državnosti	2030-06-25	Slovenia	Holiday
Binkoštna nedelja	2030-06-09	Slovenia	Holiday
Praznik dela	2030-05-		Holiday
Praznik dela	2030-05-		Holiday
Dan upora proti okupatorju	2030-04-		Holiday
Velikonočni ponedeljek	2030-04-		Holiday
Velika noč	2030-04-		Holiday
Prešernov dan	2030-02-		Holiday
Novo leto	2030-01-		Holiday
Dan neodvisnosti in enotnosti	2029-12-		Holiday
Božič	2029-12-		Holiday
Dan spomina na mrtve	2029-11-		Holiday
Dan reformacije	2029-10-		Holiday
Marijino vnebovzetje	2029-08-		Holiday
Dan državnosti	2029-06-		Holiday
Binkoštna nedelja	2029-05-		Holiday
Praznik dela	2029-05-02	Slovenia	Holiday
Praznik dela	2029-05-01	Slovenia	Holiday

Initialize calendar ×

All existing calendar entries for selected country will be removed from database and replaced with the default holiday list for that country.

Initialize Slovenian holidays
Initialize Danish holidays
Initialize Swedish holidays
Initialize German holidays
Initialize Norwegian holidays
Initialize USA holidays

Delete all holiday entries

Cancel

Picture 4.14: Initialize calendar with the default holiday list

NOTE: Multiple Holidays/Special days can be selected holding the Ctrl or Shift key on the keyboard.

Automatic schedules changes by examples:

- Time interval from 22:00 to 6:00, unlocks at 22:00, locks at 6:00, even if on next day time interval is not valid; for example, it is Saturday, holiday or even exception day, it will always lock it. Lock time is defined at the start of the time interval when doors are unlocked.
- If an automatic unlock schedule is added or removed to output, the user is asked if output should be locked or unlocked.
- If an automatic unlock schedule is modified and currently not valid anymore, the output is locked.

- If an automatic unlock schedule is modified, for example at 23:00 time interval is modified to 22:00-5:00, the output will be locked at 5:00. Lock time is redefined at 23:00 when the interval was modified.

The Time interval from 8:00 to 16:00 unlocks at 8:00, locks at 16:00.

- If manually locked at 15:00, it will stay locked. If back manually unlocked at 15:10, it will be locked at 16:00.
- If unlocked at 8:00 and controller is powered off at 9:00 when powered is back on, outputs are always put in the same state as before boot. If power comes back at 10:00 it will be unlocked, if it was unlocked before power off, manually or with an automatic schedule. If power comes back at 17:00, the output will be locked and stay locked.
- If the controller is powered off at 7:00 (output was locked) and powered on back at 10:00, the output will be at the same state as at 7:00, locked. The schedule will unlock it since unlock was missed because of power down.

5 Hardware

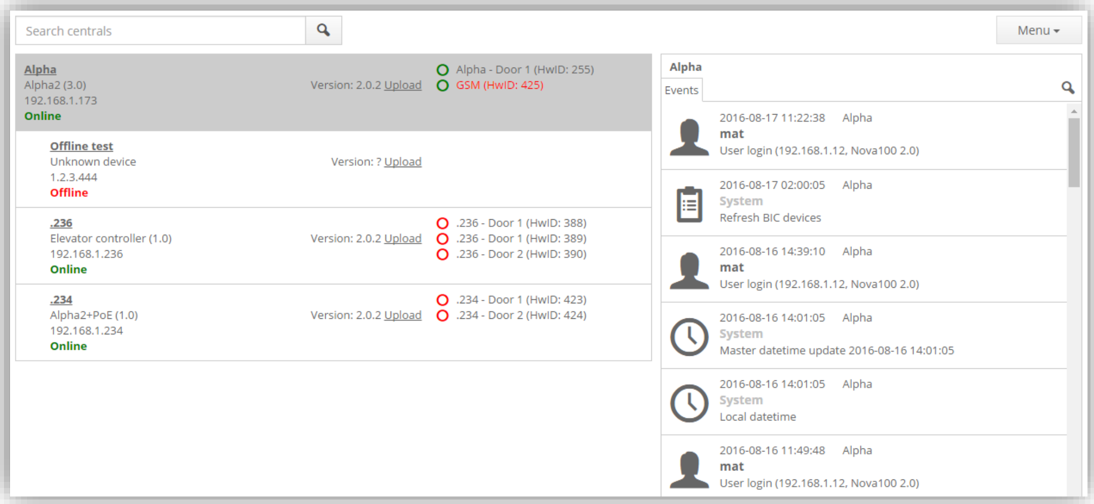
5.1 Centrals

The Central editor is used for previewing and managing hardware.

To open it, navigate to **Home > Hardware > Centrals** (Picture 5.1)
Options in Menu:

- Search centrals
- Add new centrals
- Edit existing centrals
- Remove existing centrals
- Check for updates
- Upgrade all central

The right panel displays the last events of the selected central.



Alpha
Alpha2 (3.0)
192.168.1.173
Online
Version: 2.0.2 Upload
○ Alpha - Door 1 (HwID: 255)
○ GSM (HwID: 425)

Offline test
Unknown device
1.2.3.444
Offline
Version: ? Upload

.236
Elevator controller (1.0)
192.168.1.236
Online
Version: 2.0.2 Upload
○ .236 - Door 1 (HwID: 388)
○ .236 - Door 1 (HwID: 389)
○ .236 - Door 2 (HwID: 390)

.234
Alpha2+PoE (1.0)
192.168.1.234
Online
Version: 2.0.2 Upload
○ .234 - Door 1 (HwID: 423)
○ .234 - Door 2 (HwID: 424)

Alpha

2016-08-17 11:22:38 Alpha
mat
User login (192.168.1.12, Nova100 2.0)

2016-08-17 02:00:05 Alpha
System
Refresh BIC devices

2016-08-16 14:39:10 Alpha
mat
User login (192.168.1.12, Nova100 2.0)

2016-08-16 14:01:05 Alpha
System
Master datetime update 2016-08-16 14:01:05

2016-08-16 14:01:05 Alpha
System
Local datetime

2016-08-16 11:49:48 Alpha
mat
User login (192.168.1.12, Nova100 2.0)

Picture 5.1: Central editor

IMPORTANT! In the NovaSimpli software, the number of centrals is limited to one (1) central.

5.1.1 Searching and managing centrals in Local Area Network (LAN)

When clicking on the widget **Centrals** located in the **Home > Hardware**, and pressing the **Menu > Search centrals**, a list of all Nova centrals in the local network opens. The list consists of the centrals included in the system and other centrals also found in the LAN.

CAUTION! Some centrals may be part of another access control system so please be cautious when adding new centrals to the system!

By selecting the central that was found and is not yet in the system, the options are:

- Add a new central
- Add the central to the system
- Replace existing slave central

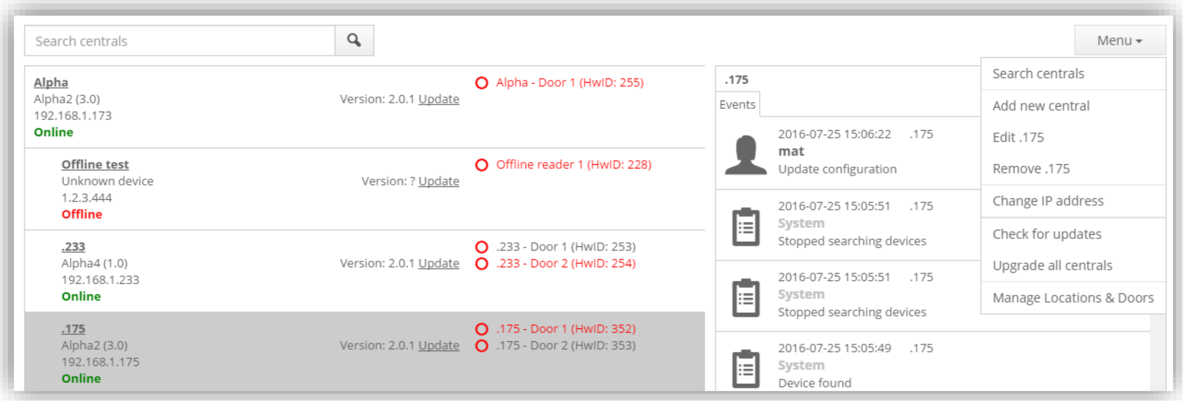
NOTE! Double-clicking the central that is not in the system will bring up the *Add central* pop-up for a faster addition.

IMPORTANT! If a central in the system is RS-485 master, when searching the centrals, a pop-up will show up asking if the RS-485 master should run a search on RS-485 bus too. Keep in mind that the search for the mentioned bus is very slow. The centrals found on LAN will display orderly under the central that found them with their MAC and IP address next to them. Centrals on RS-485 bus will display under the RS-485 master central and only their RS-485 address will be displayed.

5.1.2 Changing a central’s IP address

Change the IP address of a central by:

1. Selecting one of the centrals.
2. Make sure that the central is added to the system.
3. Selecting the Menu > Change IP address.
4. The correct network data must be provided.
5. By pressing **Change,** the network changes will be committed.



Alpha
Alpha2 (3.0)
192.168.1.173
Online
Version: 2.0.1 Update
Alpha - Door 1 (HwID: 255)

Offline test
Unknown device
1.2.3.444
Offline
Version: ? Update
Offline reader 1 (HwID: 228)

.233
Alpha4 (1.0)
192.168.1.233
Online
Version: 2.0.1 Update
.233 - Door 1 (HwID: 253)
.233 - Door 2 (HwID: 254)

.175
Alpha2 (3.0)
192.168.1.175
Online
Version: 2.0.1 Update
.175 - Door 1 (HwID: 352)
.175 - Door 2 (HwID: 353)

.175

2016-07-25 15:06:22 .175
mat
Update configuration

2016-07-25 15:05:51 .175
System
Stopped searching devices

2016-07-25 15:05:51 .175
System
Stopped searching devices

2016-07-25 15:05:49 .175
System
Device found

Picture 5.2: Changing the IP address of a central

IMPORTANT! The following must be entered:

- A new IP address.
- Subnet mask.
- Address of the default gateway.

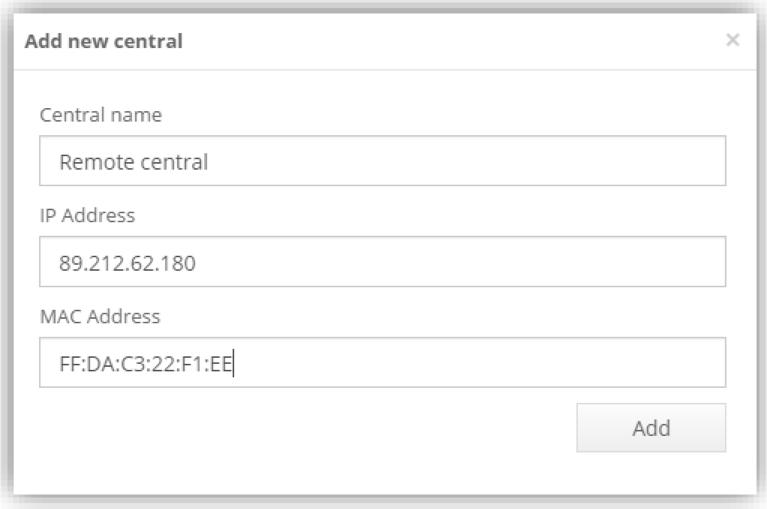
These parameters depend on your network settings. Before you change the address, carefully read displayed warnings, if any.

REMEMBER: The IP of the slave central needs to be in the same network as the master unless you are adding a remote central. If the public IP address of the slave central is provided, and the slave central has the communication port (default 3543) open, the central will be added as a remote slave. Please make sure that the provided public IP is **static**.

5.1.3 How to connect centrals over the internet using remote IP, DNS or DDNS

IMPORTANT! When setting up the system this way, the **port 3543 must be port-forwarded on the target's central network**. Please make the requested changes on the router or inform a network administrator about this request.

To add a remote central to the system, log-into the top master central and follow the steps of manually adding the central (chapter 5.1.5) while providing the **remote IP address**. Having a static IP address is **mandatory** for such a set-up.



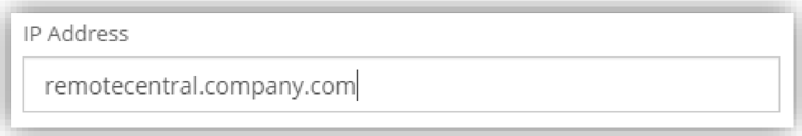
Central name: Remote central

IP Address: 89.212.62.180

MAC Address: FF:DA:C3:22:F1:EE

Picture 5.3: Adding a remote central

To add a central on DNS or DDNS, instead of IP address, the **Domain name** can be used instead.



IP Address: remotecentral.company.com

Picture 5.4: Using DNS or DDNS instead of IP

After the central is successfully added to the system, the central search (chapter 5.1.1) will trigger on both networks, displaying all centrals found.

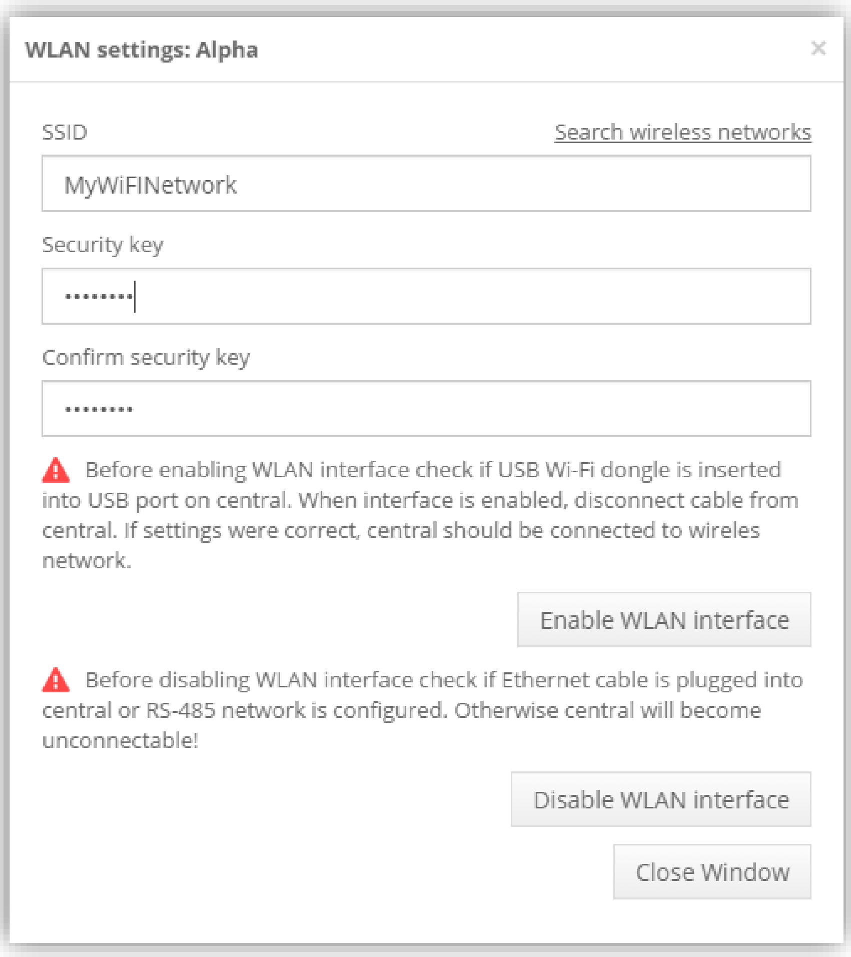
5.1.4 Central's WLAN settings

If the central has a USB port installed, it is possible to connect the central via a USB Wi-Fi dongle to an existing wireless network. Connection requires a name (SSID) and security key for the wireless network.

WARNING! The central only supports wireless networks protected with WPA-PSK (TKIP) and WPA2-PSK (TKIP) encryption!

The wireless settings of the central can be accessed by following these steps:

1. Click the widget Home > Hardware > Centrals.
2. Select the central that you are logged onto.
3. Select **Menu > WLAN settings** from the menu.
4. Type the **SSID** and **security key** into the corresponding fields
5. Click the button **Enable WLAN interface** to establish a connection
   - The central will enable the wireless interface and if the provided parameters are correct, it will connect to the provided wireless network.



WLAN settings: Alpha ×

SSID   Search wireless networks

MyWiFINetwork

Security key

••••••••

Confirm security key

••••••••

⚠ Before enabling WLAN interface check if USB Wi-Fi dongle is inserted into USB port on central. When interface is enabled, disconnect cable from central. If settings were correct, central should be connected to wireles network.

Enable WLAN interface

⚠ Before disabling WLAN interface check if Ethernet cable is plugged into central or RS-485 network is configured. Otherwise central will become unconnectable!

Disable WLAN interface

Close Window

Picture 5.5: WLAN settings

IMPORTANT! The wireless interface can only be enabled on the central that the administrator is currently logged in to. Also, the wireless interface of a slave cannot be enabled from the master central. Also note that during the installation of the wireless interface, the USB dongle and the network cable must both be connected to the central. After the wireless interface is enabled (confirmation dialog notice), the network cable can be unplugged. Nova is then accessible the same way as before on the network cable.

IMPORTANT! If Nova stops working (e.g. the progress spinner in the top right corner keeps spinning), there were some errors with the connection to the wireless network (probably either the SSID or the security key was wrong). Plug the network cable into the central. Wait for Nova to reconnect to the central and then try again.

Search for available wireless networks:

- Click the **Search wireless networks** button next to SSID field in the WLAN settings
- Select from the list of found networks and populate the SSID field, once the search is complete

Disabling the wireless interface:

- Click the button **Disable Wireless interface** (visible when central is connected to a wireless network).

5.1.5 Adding, removing and editing centrals

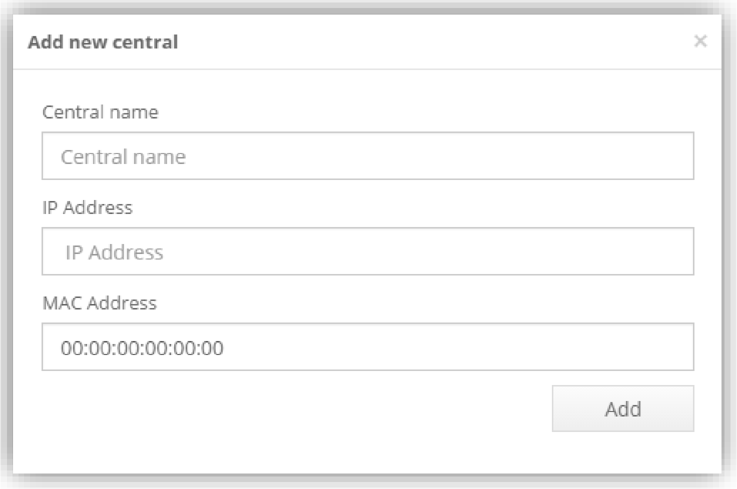
Adding new centrals automatically:

1. Click **Menu > Search centrals** button in the Central editor
   - The list of centrals will be populated
2. Select the wanted central
3. Press Add new central [central's IP address]
   - Popup window: all information will be entered automatically
4. Edit name of the central
5. Press **Add** to save changes

Adding new centrals manually:

1. Click **Menu > Add central** in the Central editor
2. Enter the name of the central, IP and MAC address in the popup window (Picture 5.6)
3. Save changes

IMPORTANT! The default IP address and MAC address are found on the label of the central.



Add new central ×

Central name

Central name

IP Address

IP Address

MAC Address

00:00:00:00:00:00

Picture 5.6: Popup window for adding a new central

Remove centrals:

1. Select the central from the Central editor
2. Click on Menu > Remove [central name] button

Edit centrals:

1. Select the central from the Central editor
2. Click **Menu > Edit [central name]** button or double click the central from the Central editor list
   - A settings window for the central displays (Picture 5.9):

Multiple tabs will show:

Readers and Doors tab (opened by default): Includes the management of the readers on the left half, while the right half represents the door settings of the central.

Settings tab: Consists of 3 columns:

- General and Network settings on the left – consist of the name of the central, country (Set the country for each central – suitable when covering multiple countries with different holidays, etc.), IP, netmask, DNS, and gateway addresses, along with the MAC address. From here, also select (by checking the checkmark) if the central is on a remote location. If the checkmark is marked, a new field will be added to fill the correct remote IP address.
  - WLAN settings are only displayed for the central currently logged into if the central is the correct type to support Wi-Fi connections.
  - Anti-Passback function settings – read more about the Anti-Passback function in chapter 5.1.18 Local Anti-Passback.

IMPORTANT! Advanced settings for the central are not available in the NovaSimpli software.

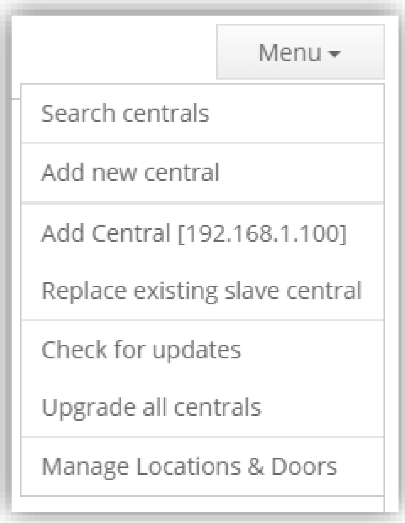
5.1.6 Replacement of malfunctioning slave central

There are many reasons why a central can malfunction and needs to be replaced. Centrals usually have readers and user access groups assigned to them, preventing the deletion of the central.

To keep all of its data and just replace the malfunctioning central, the function **Replace slave central** can be used (Picture 5.7).

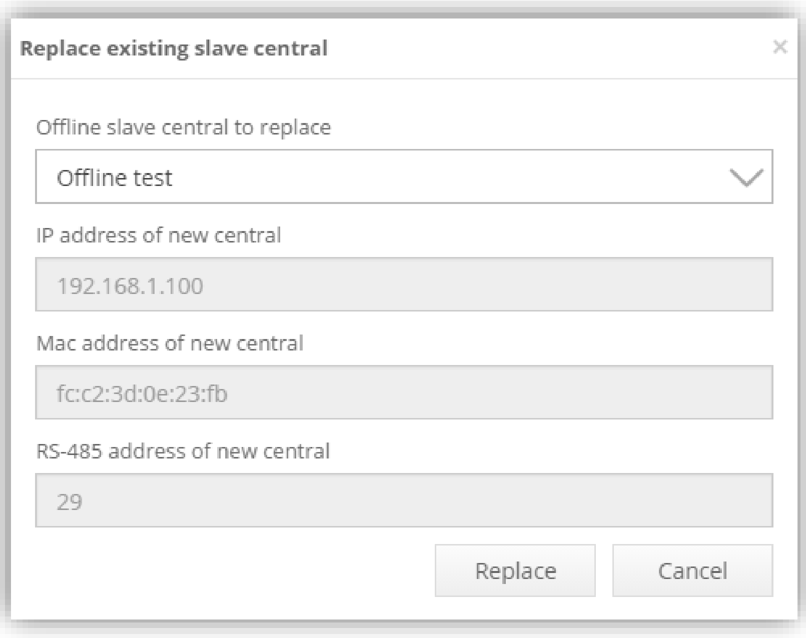
To get to manage centrals window on the main menu navigate to:

1. Home > Hardware > Centrals.
2. Search for new centrals by clicking **Menu > Search centrals**
3. Select the new central and find the options **Menu > Replace existing slave central**. This option is only available for the ones on a default IP address (192.168.1.100).
    - A new popup (Picture 5.8) will appear requesting a selection of the slave central that needs to be replaced while showing the information of the newly added central.
4. Press the **Replace existing slave central** button to start the procedure
    - The newly added central will get the data from the master of the system and adjust the time.



Picture 5.7: Replacing an existing slave central

NOTE: Synchronization can take up to a couple of minutes. After completion, the new central should appear online on **Picture 5.1 Central editor** and the IP address of the old central.



Replace existing slave central

Offline slave central to replace: Offline test

IP address of new central: 192.168.1.100

Mac address of new central: fc:c2:3d:0e:23:fb

RS-485 address of new central: 29

Picture 5.8: Replace existing central pop-up

5.1.7 Replacement of malfunctioning master central

Replacing a master central is similar to the replacement of the slave central but a more complicated process.
To replace a malfunctioning master central, the following conditions must exist:

- the new master central must already be installed in the system
- central must not have any slaves connected to it
- its master must be the malfunctioned central (current master)
    - A **Promote** button will appear in the Central's advanced settings (Picture 5.9) if the slave central meets the requirements.

For a slave to become a new top master, navigate to slave's IP, log into slave central, and follow these steps:

1. Home > Hardware > Centrals.
2. Double click the central that you wish to promote (the one you are currently logged into).
3. Navigate to the **Advanced settings** tab
4. Press the **Promote** button.
    - The system will reassign all of the slave centrals including the malfunctioned master to the newly set master.

NOTE: Master reassignment and database synchronization can take a couple of minutes to finish.

5.1.8 Central settings

Standard settings

- **Central name**: Used for easier central recognition.
- **Country**: Centrals that have the country set will obey any calendar entries set in the calendar settings.
- **MAC address**: Physical address of the central. It can be also found on the sticker on the side of the central. If the centrals are not properly named, this is the only way to distinguish central between each other.
- **Anti-passback**: Local anti-passback functionality (works only on this central). More about its option can be read in chapter 5.1.18 Local Anti-Passback.

Connections settings

Master central options:

- **Set central as master**: If this setting is set, this central will not accept any communications from any other master. This setting makes sure data is not lost, if the master should, mistakenly, be added to another system.
  Master central is responsible for dividing load to slave centrals. If there are many centrals in the system, it is advisable to have Local master hierarchy, where there is a top master that handles local masters and local master handles slave centrals.
  RECOMMENDATION: The Top Master central should be the one that has the least load (least work and readers/doors connected).

Slave central options:

- **Select master central**: Each central must have a master assigned to receive any changes.
- **Connection type**:
  - **IP address** – standard static ethernet connection with the fixed IPs. More about the connection can be read in the chapter 5.1.10 Communication-based on IP address.
  - **Remote central hostname or IP address** – a new field for entering the remote central hostname or IP is displayed below this option. Recommended for remote (over the internet) connections.

    Port 3543 - This port allows communication of the central to pass through. If the central needs to be connected over the internet, this port must be opened on the slave central (the master is the only one that issues commands so only one-way communication is needed). If there is a whole system located on the other side of the internet, it is enough forwarding only the local master port.

    RECOMMENDATION: The default port is 3543 and should stay this way if possible. Changing different ports on the outside can be made from the port forwarding settings of the router. Please check the manual of the router on the subject before making any changes.

    - **RS-485** – connects centrals via an RS-485 connection. More about it can be read in the chapter 5.1.11 Communication-based on RS-485 BUS.
- **Allow system administration**: Allows changes to be made on a slave central. Usually, everything is done from the master central and if any changes are made on the slave central, they are overwritten with data from the master. Enabling this option allows Administrators to manage users on that central without losing any changes. This can be helpful if the Administrator is in a different network and do not have direct access to the master central (or the connection between the master and that central is not stable).

Common options:

- **Ethernet settings**
- **Replicator settings (seen by superadmin only)**
    - **The secured connection between centrals** (set for (local) master) – this option tells the specific central to use a specific secure connection when connecting to its slaves.
    - **Sync filter mode** (set for (local) master)**:** This option is designed for the really big or very active ones. If there are more than 10k events daily, centrals will work slower due to the heavy load from event copying. There are a few options that can be set on the (local) master that will affect the whole system:
        - **RS-485 (default):** Events will be transferred to slaves only if the target central is in the same subtree. Centrals who are set as RS-485 slaves will only get events for them and their RS-485 slaves.
        - **Slow slaves:** will only limit traffic to slave centrals that have a checkmark slow slave set.
        - **Always:** Events will be copied only to target central. This will drastically reduce the load of all centrals, but if the top master dies, there will be no way to create a system backup of events database.
        - **None:** Events will be always copied to other centrals. Including RS-485.
    - **Replicator password** (set on top master): in case of multiple systems running on the same network, we can set different passwords, which will prevent master to connect to the slave if the slave's provided password is wrong.
    - **Slow slave** (set on slave centrals): if set, the events that are not for this controller (or any of its slaves) will be discarded.
    - **Max drift time** (set on top master): a threshold number of milliseconds before the time is synced; time difference between the master's and slave's clock.

Local options:

- **Wi-Fi settings** (displayed only if connected directly to the central and if the central has a USB port)

Advanced settings

- **Database synchronization:** Just in case something is wrong with the database of one of the slave centrals, press the Force synchronization button to copy the configuration database from master to slave. After pressing this button, go to the events page of the central and monitor the progress. After database synchronization, time will be updated as well (more in chapter **5.1.12**).
- **Central reboot:** Pressing this button will send the reboot command to the currently selected central(if online).
- **Reader and lock power reset:** By pressing this button the power to the lock and the reader will be cut – helpful for a remote reader or lock reset.
- **Upgrade firmware on central:** Selecting the Update button will open a File window, requesting to locate the upgrade software package.
- **Optimize database**: Pressing this button will run a database indexer that might speed up the system, but it takes from a few seconds up to a few minutes.
- **Delete user pictures, scripts and uploaded files**
- **Reset central to default** – This will replace the current database with a default one (the same as holding the left button on the Alpha for 20 seconds).
- RS-485: Options to set RS-485 master or RS-485 slave and its address (more on RS-485 connection in chapter 5.1.11 Communication-based on RS-485 BUS).
- **Storage mode** (set locally on central)**:** Alpha2+ and Alpha4+ have a USB connector that supports storage expansion. When uploading larger files; such as pictures for the floorplans, pdfs for info boards, any documents, profile pictures, and database backups are all saved on the external USB storage if present.
- **ADC voltage read** (superadmin only, set locally on central, old central only)**:** In a few cases on the old Alpha hardware, reading current-voltage got stuck and resulted in a central periodical reboot. Removing this checkmark will cause central not to be stuck anymore and should work ok, but any power events will not be shown anymore.

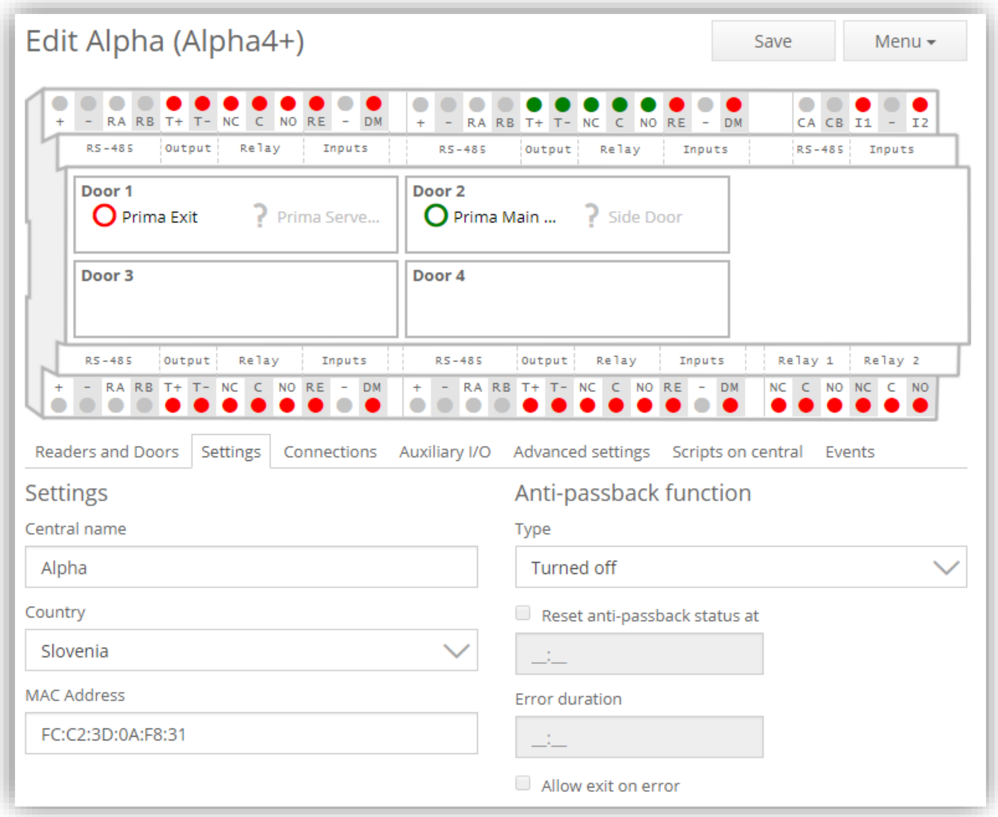
IMPORTANT! When inserting the USB, you need to tell the software to write to the USB storage by clicking on the button Switch to the USB storage button. **Before removing USB from the central make sure that the mode was switched back to central**; otherwise, some data might get lost!

Scripts on central

These options are only shown if the Scripting activation key and at least Nova10 is applied in the system. For further information on scripting please read chapter **7 Module: Scripting**.

Events

Displays events that are limited to this **central only!** (The events from readers or any other centrals will not be displayed in this event list).



Edit Alpha (Alpha4+)

Settings

Central name: Alpha

Country: Slovenia

MAC Address: FC:C2:3D:0A:F8:31

Anti-passback function

Type: Turned off

☐ Reset anti-passback status at __:__

Error duration __:__

☐ Allow exit on error

Picture 5.9: Central settings

5.1.9 Online System-wide software upgrade and single upgrade

There are multiple ways to upload software to the central, the first two are a single central upgrade, while the last option upgrades the whole system.
NOTE: The centrals connected on the RS-485 bus need to be upgraded locally!

Local upgrade:

1. If the central is connected on RS-485, plug in the Ethernet cable, and navigate to its IP (the central and the computer you are accessing from must be in the same network).
2. Navigate to central's IP address.
3. Log-in and navigate to the central's settings (Picture 5.9)
4. Navigate to the Advanced settings tab.
5. Click the **Upgrade** button.
6. Select the .tar package and wait for the process to finish.

Remote upload – **IMPORTANT!** Remote upload only works with central's software version 1.6 and higher and the central must be **online**:

1. Navigate to Home > Hardware > Centrals widget.
2. Find the remote central on the list and double click it (or select and Menu > Edit).
3. Navigate to the Advanced settings tab.
4. Select the **Upgrade** button.
5. You will be prompted to locate the upgrade file.
6. If the central is not master central, the transfer protocol will begin to transfer the upgrade package to the remote central. Once it is completed, the upgrade will start automatically; if the central is the one logged into, it will begin a local upgrade.

NOTE: If there is a local master between the remote central and top master, the package will be first uploaded to top master, then transferred to local master and then to the final slave central.

System-wide upgrade:

1. Navigate to Home > Hardware > Centrals widget.
2. Press **Menu > Upgrade** option from the dropdown menu**.**
3. Check all centrals you want to upgrade. (offline centrals and centrals connected on RS-485 bus will be excluded)
4. Once ready, press the **Upgrade** button.
5. You will be prompted to select **the latest released package** (if the top master has access to the internet) or you can select to **Upload it from the computer** (for the systems without internet access).
    a. For the online option, press the **Select** button next to the Package.
    b. The offline option will ask you to provide the packages from your PC (for alpha and Nova Server is present in the system).
6. The pop-up will ask f you also want to upgrade the readers to the latest software.
7. Wait until everything is finished and **do not close the window as this will terminate the upgrade process**.

After the upgrade is done, **Central was upgraded** event will be displayed in the Events log. If the upgrade was done locally, you will need to log-in again.
If there are some issues during upgrade or centrals that are connected on RS-485 bus (connect to the central with a network cable), navigate to their IP address and upgrade the central locally – following the 1st upgrade description

5.1.10 Communication-based on IP address

The communication between master and slave central is based on the IP address, set in the field *IP address* in the **Central editor – Connections tab** (Picture 5.9), and on the IP port written next to the IP separated by a colon ":".

NOTE: The master central always uses the address in the field **IP address** and port number when communicating with a slave central.
When the master central and the slave central are on the same network:

- The IP address in the Central editor must be the same as the interface IP address of the central (see the section on changing the IP address of a central).
- The port needs to be set to 3543.

Remote network:
When a slave central is located in a remote network (from the master central point of view):

- The field IP address in the central editor must be set to the address of the remote network.
- The address of the remote network is not the same as the interface IP address of the remote central.
- The port must be set to the port number of the remote network, which is forwarded to port 3543 on the remote slave central.

5.1.11 Communication-based on RS-485 BUS

When a slave central is connected to the master central via an RS-485 BUS, option **RS-485 master central** must be enabled, located in the **Connections** tab of the RS-485 master central (Picture 5.9) by:

- Checking the Set as RS-485 master central checkbox.
    - o This setting causes the master central to search and communicate with the slave centrals on the RS-485 BUS.
- Checking the **Set as RS-485 slave central** checkbox in the advanced settings will set the current central as an RS-485 slave (all RS-485 slave centrals must be set after the RS-485 master is set).

- Central search should now prompt the question to search for the centrals connected on RS-485 BUS. Select **Yes** and wait until the search is done. RS-485 centrals will display on the list showing only their Modbus address instead of their IP addresses.

NOTE: The communication between centrals on the RS-485 BUS is based on the RS-485 address, which is set in the field RS-485 address under the Connections tab settings of the central.
The default RS-485 address of the master central is always 1 and is automatically set when the central is set as RS-485 master. The default address of a slave central is set when adding the slave central to the system and it is also found in the central label.

IMPORTANT! The RS-485 address of the slave central is calculated from the last 5 bits of the MAC address, to which you add the value 2 (addresses 0 and 1 are reserved).

Example of RS-485 address calculation:

MAC 00:50:C2:E6:30:6A
6A (hex) = 0110 1010 (bin)
0 1010 (bin, last 5 bits) = 10 (dec) + 2 = 12 (RS-485 address)

WARNING! The default address can be changed to any other unused address on the RS-485 BUS. Resetting the address back to its default address can be done by calculating it like in the example above or hold the left button on the central shown on Picture 27.2 for at least 10 seconds, which will:

- Reset the IP address and RS-485 address back to the default values:
  => 192.168.1.100 for IP address
  =>default value for RS-485 address and port to 80
- It also enables the **Super administrator account** again, if it was disabled. See Appendix A - Description of LEDs and buttons on central for more details.

5.1.12 Database synchronization

The system master central takes care of data synchronization between centrals in the system. In the case where the database of a central is incomplete, a manual synchronization can be done by:

- Clicking the button **Force synchronization** in the advanced settings of the slave
  - The master central updates the database on the slave central with the version from the master central.

NOTE: Only use this option when there is a certainty that differences between database data exist.

5.1.13 Adding new readers

To add new readers to the central:

- Click the **Menu > Search readers** button in the upper right corner of the **Central Editor** (Picture 5.9)
  - This triggers the recognition of already connected readers and starts a search for readers recently connected to the central.

Change address, remove or add readers:

NOTE: Reader search **works ONLY from address 1 to 16 (max)**. Addresses from 16 to 64 are user-defined addresses and will not be displayed as a search result of a reader search. To avoid complications, keep the reader addresses within limits.
After the search is completed, the addresses of listed readers can be changed and the new readers can be added to the central:

1. Click the **Menu > Change address** button from the menu to change the address.
2. **Write new address** and the reader will return with the new entry
3. Select the reader and click the **Menu > Remove reader** button to remove readers from the central

4. Click the **Menu > Add reader** button to add a reader manually if the address and the connected door of the reader are known.

IMPORTANT! When the address of the reader is changed, it remains saved on the reader – if the reader's door socket or central is changed, it will not reset. If the address is changed to more than 16, the central will not find it. The only way to change back from such state is by adding it manually (the address needs to be provided) and once it's connected and online, change its address back to the requested range.

5.1.14 Upgrading firmware on reader

Single reader upgrade:

The firmware of a reader can be upgraded to a newer version by:

- Double click on the reader you want to upgrade and navigate to the **Upgrade firmware** tab.
    1. Select the option **Upgrade firmware** button. Select the *.bin extension file with the new firmware in the popup window
    2. The upgrade process will start and it will last for approximately 30 ~ 120 seconds (depending on the workload of the central).
    3. During the upgrade process, an operation status dialog will be displayed
    4. The reader will beep three times after completing the upgrade process.

NOTE: The upgrade option is disabled on readers that cannot be upgraded.

IMPORTANT! Centrals with Nova version 1.5 or lower need to update the readers by logging in on every central and update its readers. Higher version software allows the update of the readers from the master central only, which makes it faster and more convenient. The upgrade option is disabled on readers that cannot be upgraded.

Upgrade ALL readers on a central:

1. Navigate to the central on which you wish to upgrade readers.
2. Press the Menu > Upgrade all readers button
3. Select the option **Upgrade firmware** button. Select the *.bin extension file with the new firmware in the popup window
4. The readers will beep three times after completing the upgrade process.

5.1.15 Reader settings

The reader needs to be configured correctly and linked to the desired door for the system to function correctly.
When the reader is selected (Picture 5.10), the following info on the reader is shown:

- State of Enabled flag
- Reader Name and Reader type
- Which door the reader is controlling

- RS-485 address

If the reader is not working or is not needed in the system anymore, it can be disabled by:

- Deselecting the **Enable** checkbox

Now the central will cease to communicate with the reader and its warnings and errors are not visible on the **Events** page.

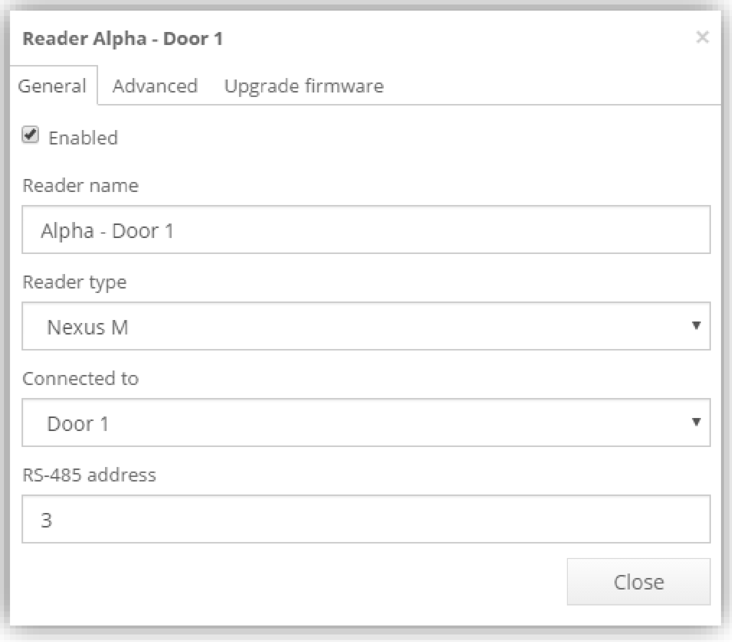
IMPORTANT! Disabled readers are shown in light grey in the locations tree while non-working readers are shown in red.

Set up of door that the reader is connected to:

- Set up of doors controlled by the reader
- Set up the address of the reader

NOTE: Usually the reader is connected to the same door that it controls, but a reader can control another door on the same central.
To do this, please check Picture 5.11: Advanced settings.).
This option is not included in NovaSimpli.

IMPORTANT! Note that if the **Connected to** the setting of a reader is changed, the option **Opens** (controls what doors are opened by the reader) under the **Advanced settings** tab will be updated to the same door. If there were any manual changes previously made in the system, this change resets the manual ones. To make previous options work, the settings need to be manually changed to the previous values.



Reader Alpha - Door 1

☑ Enabled

Reader name: Alpha - Door 1

Reader type: Nexus M

Connected to: Door 1

RS-485 address: 3

Picture 5.10: Reader settings

IMPORTANT! Communication with readers is based on their addresses. It is important that all readers connected to the same door, have unique addresses. If not, the system can behave unpredictably.

Reader settings on Picture 5.10 show the settings needed for basic operation.

Change additional parameters by:

- Selecting the **Advanced** tab (Picture 5.10) – the options are:
    - Select which door the reader controls (additional relays on Alpha+ included)
    - Set direction for each reader (Entry, Exit, Pass-through, I1 entry – I2 exit)
    - Set sensitivity on the tamper sensor

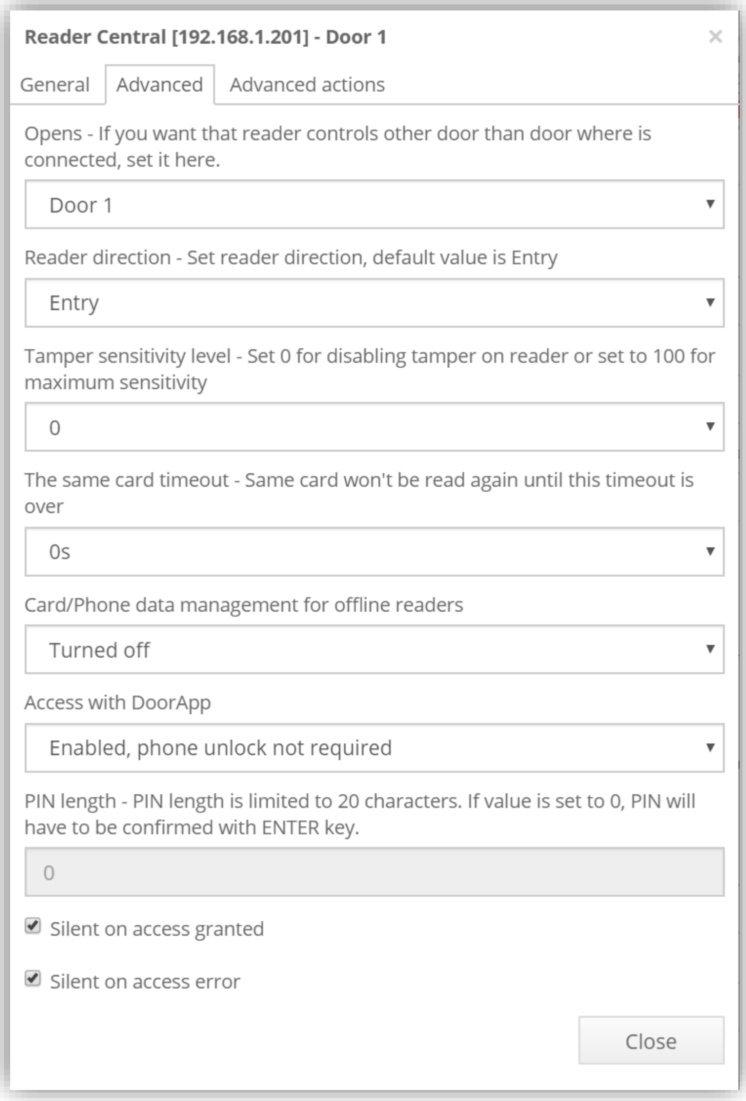
Further options:

- Setting value for **Same card timeout**
    - This setting enables a timeout before the central will process a card from the same user again.

  E.g.: After a user has opened a door with the card, the user will not be able to open it again with the same card until the timeout is over. However, the central will process cards from other users during this period.
- **Enabling the writing of offline access rights to user cards** (only possible if the reader supports writing to cards). Offline readers read these access rights from the card. (See section 5.2 Offline readers for more information)
- Setting value in the **PIN length** field
    - This defines how users enter their PIN on the current reader
        - If the value is greater than 0, then PIN is accepted as soon as the last number is pressed on the keyboard.

  <u>Remember:</u> When PIN length is defined, PINs of all users have to match the defined length.
        - If a value is set to 0, users will have to confirm their PIN with the ENTER key on the keyboard.
- **Mailbox reader** checkmark – If this checkmark is set, the reader is assigned to open mailboxes instead of doors (including checking the rights).

IMPORTANT! The last four options are not available in the NovaSimpli software.


Reader Central [192.168.1.201] - Door 1

Opens - If you want that reader controls other door than door where is connected, set it here.

Door 1 ▾

Reader direction - Set reader direction, default value is Entry

Entry ▾

Tamper sensitivity level - Set 0 for disabling tamper on reader or set to 100 for maximum sensitivity

0 ▾

The same card timeout - Same card won't be read again until this timeout is over

0s ▾

Card/Phone data management for offline readers

Turned off ▾

Access with DoorApp

Enabled, phone unlock not required ▾

PIN length - PIN length is limited to 20 characters. If value is set to 0, PIN will have to be confirmed with ENTER key.

0

☑ Silent on access granted

☑ Silent on access error

Picture 5.11: Advanced settings of readers

Reader sounds

Nova version 2.1 also brings the option to remove any sound from the Nexus readers. Different options are displayed in the reader’s advanced settings - Picture 5.11.

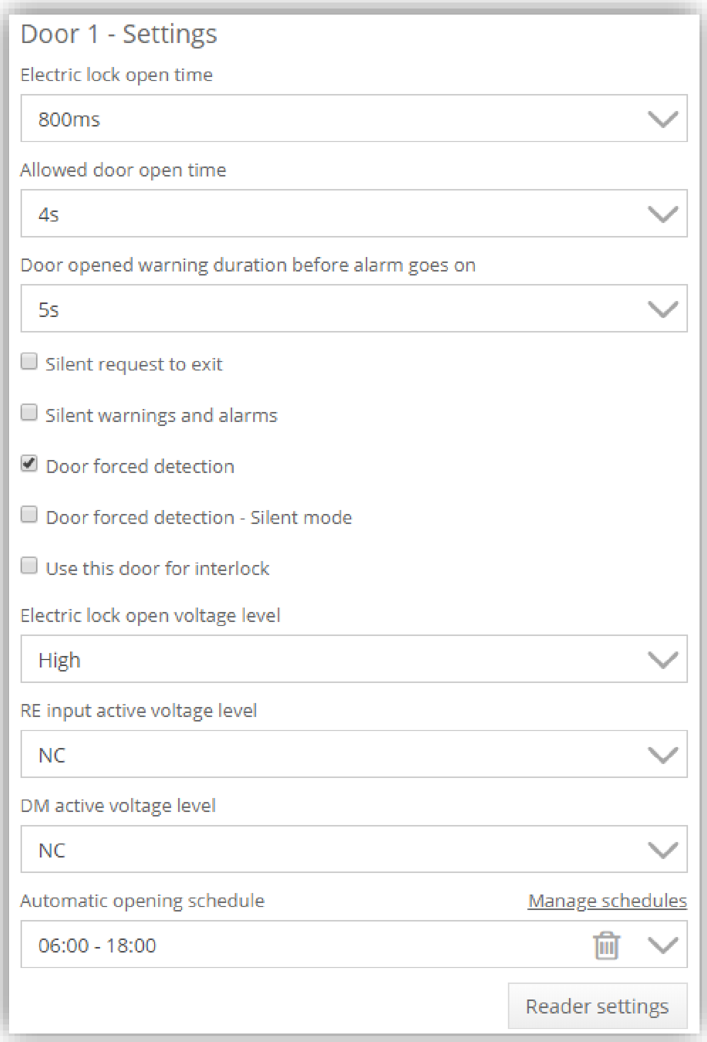
- **Silent on access granted** – removes any beeps when the access is granted.
- **Silent on access error –** reader stays silent whenever there is an error – reading/writing a card.

Additionally, there is an option to **remove sound from REX** input. This can be done by checking the corresponding option on the door settings (option displayed on Picture 5.12).

5.1.16 Door settings

Picture 5.12 shows the settings for doors on the central, which gives the following options:

- Set allowed time for the **electric lock open time** (Electric lock open time)
- Set allowed time for a door to **stay open** (Allowed door open time)
- Set allowed time for how long a reader should **warn the user to close the door before alarm turns on** (Door opened warning duration before the alarm goes on*)*



Door 1 - Settings

Electric lock open time: 800ms

Allowed door open time: 4s

Door opened warning duration before alarm goes on: 5s

☐ Silent request to exit

☐ Silent warnings and alarms

☑ Door forced detection

☐ Door forced detection - Silent mode

☐ Use this door for interlock

Electric lock open voltage level: High

RE input active voltage level: NC

DM active voltage level: NC

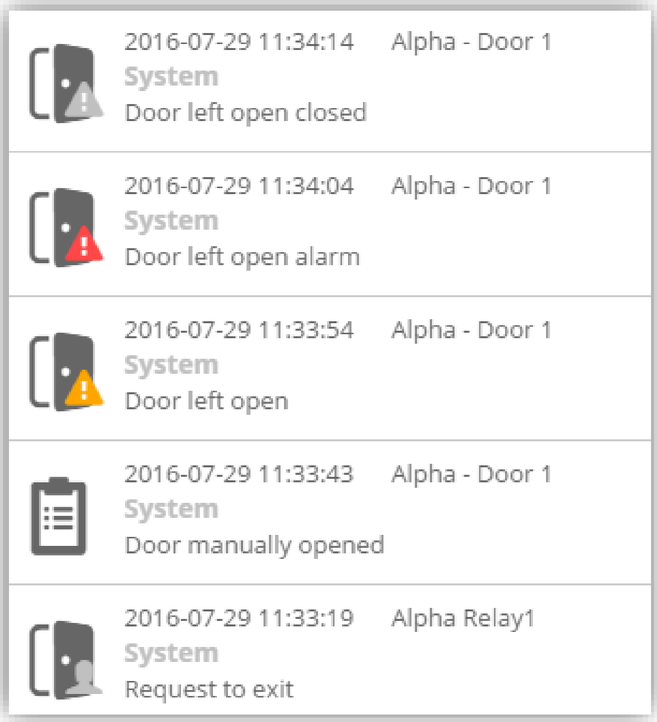
Automatic opening schedule: 06:00 - 18:00

Picture 5.12: Door settings

Picture 5.13 is an example that shows the relation between the described times.

- The door was opened at 11:33:43 and stayed open.
- Ten seconds later the reader started to warn the user with a beeping sound that the door should be closed (11:33:54).
- The user did not react on the warning, so ten seconds later the alarm went on (at 11:34:04).
- The user finally closed the door at 11:34:14.

- The settings on the door were the same as Picture 5.12.



2016-07-29 11:34:14 Alpha - Door 1
System
Door left open closed

2016-07-29 11:34:04 Alpha - Door 1
System
Door left open alarm

2016-07-29 11:33:54 Alpha - Door 1
System
Door left open

2016-07-29 11:33:43 Alpha - Door 1
System
Door manually opened

2016-07-29 11:33:19 Alpha Relay1
System
Request to exit

Picture 5.13: Doors left open and alarm times, example case

Further options:

- **Silent request to exit** – reader won't make a sound when the request to exit button is pressed. This also works with multiple readers connected to the same door.
- Select **Silent warnings and alarms** to avoid the reader from making any sound at warnings or alarms. The events will still be displayed.
- **Disable warnings and alarms when the door is unlocked** – when checked, it will not display or trigger any mentioned events.
- Select **Door forced detection** when there are doors with readers on each side.
    - In this case, the central has total control over the door and can detect if the doors are not opened by readers and will trigger a "door forced" alarm.
    - The administrator can choose the **Silent door forced detection and reader tamper alarm** option if no alarm sound is too loud.
- **Use this door for interlock** – doors that are set to use interlock cannot be opened at the same time (we need to wait for other interlock doors to close before we can open a specific interlock door on the central).
  - A single interlock functionality will only work on that specific central and not on multiple centrals across the system.
  - A single interlock can be set up on each central.
  - Card or REX access will not be granted if other interlock doors are unlocked or opened or if you want to open the already opened door.

- Users with **Privileged access** (page 33) are not limited by this functionality.
- When access is denied, an event will be triggered.

IMPORTANT! The described settings (except Electric lock open time) can only be used with electrical locks having a DM (door monitor) signal line. If not, the central cannot detect if doors are open or not and the described settings have no meaning.

In case of fire or power supply failure
An electric lock usually requires a positive voltage level to be in the locked state and neutral (or low) voltage level for opened, unlocked state.
The reason is that in the case of fire or power supply failure the electrical lock switches to unlocked state and users can go through the door.
The option can be enabled by:

- Matching the option **Electric strike open voltage level** to the required voltage level for the locks used in the system.
- The options **RE input active voltage level** and **DM active voltage level** need to be set according to the system characteristics.
  - The central will open the door when the signal level on RE input (Request to Exit) matches the selected state.
    Unlock when active options will unlock the door until the **signal is present with additional lock open time**.

  - The central will know that the doors are open when the state of the DM signal matches the selected state (High or Low).

If there is a need to use DM and RE inputs with the Scripting module or Parking Controller, the option can be set to:

- Select **Unused** option in the drop-down menu.
  - This will effectively unbind the default behavior of DM and RE inputs, which can then be used for other purposes.
- **Unused NO** / **Unused NC** option can be set for solutions like the Parking controller where a loop would have to give a signal to get access, but it cannot be mounted for whatever reason, we can fake the activity with these options.

5.1.17 Scheduled door opening

In the Nova software, there is an additional option:

- A schedule can be selected from a drop-down list and assign to target doors (Picture 5.12 – bottom option).
  - Doors will automatically be locked and unlocked based on the time intervals of the selected schedule (see part **4.4** for **Managing schedules**).

- By clicking the **Manage Schedules** link, the **Time schedule editor** can be accessed and:
  - Edit schedules
  - Preview schedules

NOTE: This is not possible in NovaSimpli as time intervals here are always set to 0-24 hours.

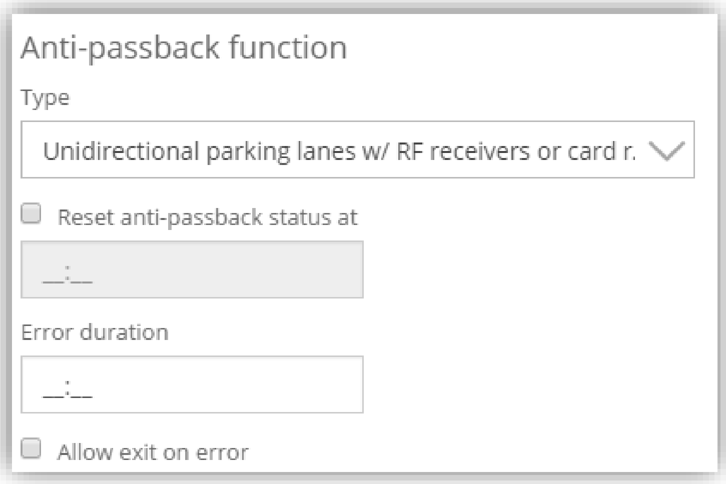
TIP: Set a defined time interval of 1 minute that runs out when doors need to be locked.

5.1.18 Local Anti-Passback

Sometimes the system needs to control the entrances and exits of users. There are multiple ways of achieving the results based on the hardware setup.

IMPORTANT! This instance of anti-passback can be only set-up and it's working on a single central with its local readers.

- The settings can be enabled in the **Settings** tab shown on the target central (**Home > Hardware > Centrals > Edit**).



Anti-passback function

Type: Unidirectional parking lanes w/ RF receivers or card r.

□ Reset anti-passback status at

__:__

Error duration

__:__

□ Allow exit on error

Picture 5.14: Anti-passback settings

There are numerous ways of setting up the method depending on the requested functionality:

1. Bidirectional entry and exit lanes with one RF receiver
2. Unidirectional entry and exit lanes with RF receivers on card readers
3. Bidirectional door with card readers
4. Bidirectional doors with card readers and DM confirmation.
5. Turned off

Below section will describe in details and explain how to set-up:

1. **Bidirectional entry and exit lanes with one RF receiver.**
   This method only uses a single ramp for entry and exit from the parking space.

To set up **bidirectiona**l entry and exit lanes:

- RF receiver direction must be set to **I1 Entry - I2 Exit** (please see chapter 5.1.15 for Reader settings).

2. **Unidirectional entry and exit lanes with RF receivers on card readers.**
   This method is meant for parking spaces with separated entry/exit ramps.
   E.g. When the car stops at the entry, Input1 on the central is triggered and with the proper RF signal opens the ramp. The same way goes for the other direction, but this time Input2 triggers for the exit direction.

To set up **unidirectiona**l entry and exit lanes:

- RF receiver direction must be set to **I1 Entry - I2 Exit** (please see chapter 5.1.15 for Reader settings).

IMPORTANT! If **DM active voltage level** on Entry is set to NO, and an automatic schedule opens the door, the timeout alarm will possibly go off when the car leaves (Input activated). If **DM active voltage level** on Entry is set to NC, and the door on Entry opens, the alarm will trigger the same when the car is at the ramp for too long. To solve the alarm problem, DM active voltage level must be set to **Unused**.

3. **Bidirectional door with card readers.**

To set up bidirectional door with card readers:

- There have to be at least two (2) readers connected to the system. The direction of the readers has to be specified in Nova. One has to be set as **Entry** while the other one has to be set as **Exit** (Please see chapter 5.1.15 for Reader settings). The system keeps track of the user places his/her card on the readers for entry/exit.

4. **Bidirectional doors with card readers and DM confirmation.**

To set up bidirectional doors with card readers and DM confirmation:

- The option with "DM confirmation" works on the same general principle as the previous one. The main difference is the tracking of the doors. When the doors are opened, the door monitor is activated and the user entry is counted when the door closes.

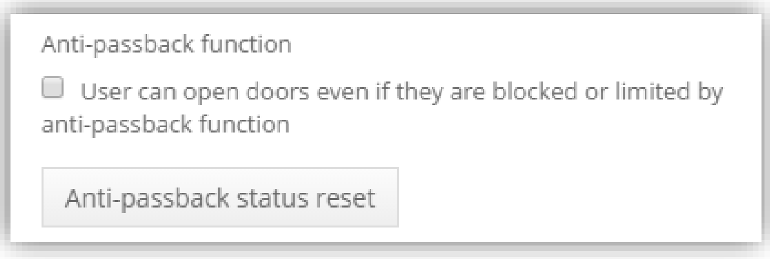
5. **Turned off**
   This method disables Anti-passback functionality.

Additional anti-passback settings:

- The **Reset anti-passback status** option is there to reset all set states once per day (if enabled and the hour is provided).
- Setting **Error duration** option will prevent users to re-Enter/re-Exit for a set time and only allow access when that time passes.
  E.g.: Setting it to 00:30, will allow the user to enter, but on the second try, the access will be denied. After 30 minutes, the user can make another entry.
- The last setting for the anti-passback function is called **Allow exit on error**.
  - Enabling this allows users to exit even when there is an anti-passback error.
    E. g.: A user entered a building but entered with the entry card of someone else. If the user then wants to get out it is not possible, because

the card of the user was never put on entry reader. Allowing exit on error will allow the user to exit with their card.

Individual user settings – found under the **Advanced** tab of a user:



Anti-passback function

□ User can open doors even if they are blocked or limited by anti-passback function

Anti-passback status reset

Picture 5.15: Individual Anti-passback options

- If the Anti-passback function is set on the central and we wish that some of the users are not affected, tick the checkbox next to the **User can open doors even if they are blocked or limited by anti-passback function***.*
- Pressing the **Anti-passback status reset** button will show a pop-up window, allowing you to:
    - Manually reset the status of the current user.
    - Reset status for ALL users in the system.

5.1.19 Alarm, tamper and additional relays management

In the software version 2.1, a new tab was added under Edit central page - **Auxiliary I/O**. This option enables you to control the general inputs and the two additional relays (if the central is correct type).

Tamper Input

Input 1 is intended to be used as Tamper when the central is mounted in the DIN-rail box. This way the administrator is informed if someone had opened it.

- **NC:** The default state – when the box is opened, the circuit the and Tamper activated event triggers. Once the box is closed again, the event Tamper deactivated will be shown in the event list.
- **NO:** The inverted version of NC.
- **Unused:** No event will be triggered.

NOTE: Except for the Tamper activated event displayed in the Errors section, there is no other action executed on the central. For other custom actions, please refer to the chapter 7 Module: Scripting).

Alarm Input

Input 2 is intended to be used as an alarm trigger.

- **NC:** The default state – when the circuit is broken, the Alarm activated event will be added and displayed under Errors. Whenever the circuit is re-connected, an Alarm deactivated event will be shown.
- **NO:** The inverted version of NC.
- **Unused:** No events displayed/triggered.

IMPORTANT! The alarm settings are not a reliable source and are not approved by any fire regulations or norms. Please use this only as a helping tool in case of an emergency.

After you agree with the disclaimer, the dropdown with the Alarm functions are displayed:

- **Turned off –** this central does not react on a signal received from its own Input 2.
- **Open doors on this central –** if the central receives a signal from alarm, it will unlock/lock all local relays and transistors until the signal ends.

Next two options require a Fire alarm module:

- **Open all doors in the system –** if there is an alarm signal received on this central, it will unlock/lock all doors in the system until the signal ends.
- **Alarm action access group –** a custom alarm that triggers a special access group on alarm start/end.

Find the detailed instructions in chapter **18 Module: Fire alarm module**.

5.2 Offline readers

Offline readers are units that act as part of an access control system when correctly configured, but they are not wired to the central.

Management is done through the Nova software with the help of configuration cards and the read/write function of online readers.

Access rights are written to the card when registered on an online reader.
When the same card is used on the offline reader, the data is read from the card, and access is granted or denied.

Management of offline readers:

Open **offline reader editor** (Picture 5.16) by:

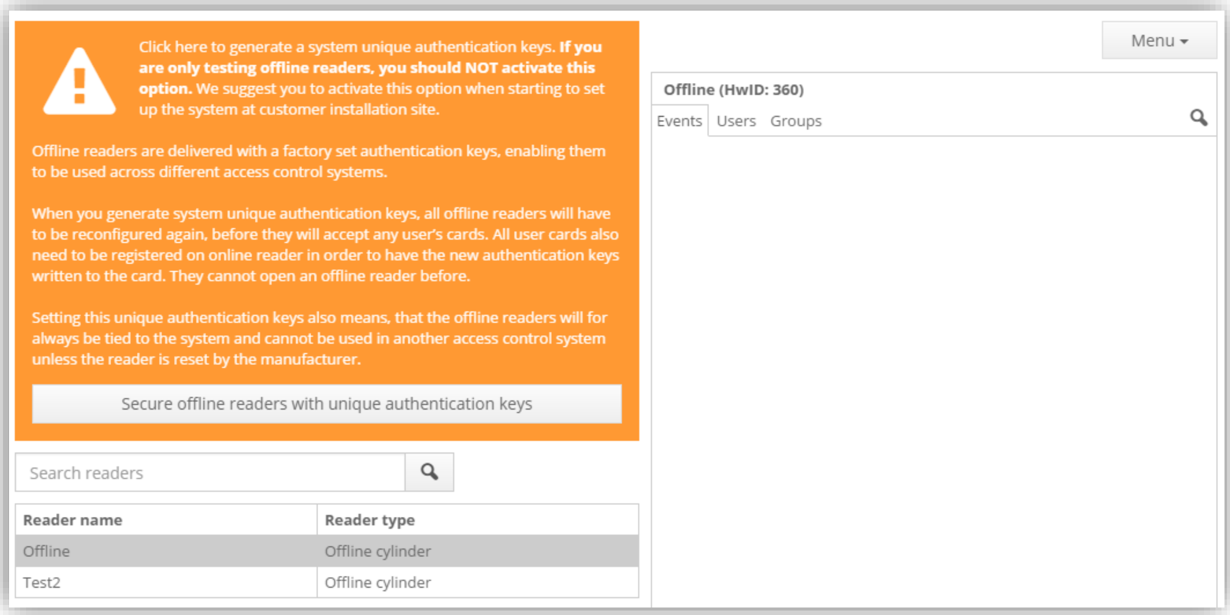
- Navigating to Home > Hardware > Offline Readers widget

Left-panel:

- **Search** option to display only groups/types of readers OR for faster access of the reader if the list of offline readers is long.
- **List** of all offline readers in the system and their type.

Right-panel:

- Preview of currently selected offline readers.
  - The last **events** transferred from the offline reader.
  - List of **users** with access to the selected offline reader.
  - List of **Access Groups** with access to the selected offline reader.



Click here to generate a system unique authentication keys. **If you are only testing offline readers, you should NOT activate this option.** We suggest you to activate this option when starting to set up the system at customer installation site.

Offline readers are delivered with a factory set authentication keys, enabling them to be used across different access control systems.

When you generate system unique authentication keys, all offline readers will have to be reconfigured again, before they will accept any user's cards. All user cards also need to be registered on online reader in order to have the new authentication keys written to the card. They cannot open an offline reader before.

Setting this unique authentication keys also means, that the offline readers will for always be tied to the system and cannot be used in another access control system unless the reader is reset by the manufacturer.

Reader name	Reader type
Offline	Offline cylinder
Test2	Offline cylinder

Picture 5.16: Offline reader editor

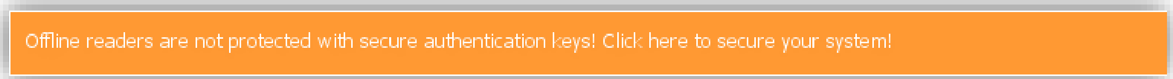
IMPORTANT! The system is using (**UNSAFE**) default authentication keys on MIFARE cards until manual activation of security in the software.

How to do this:

- Click on **<u>Secure offline readers with a unique authentication keys</u>** button (Picture 5.16).

RECOMMENDATION: Change authentication keys before adding the first offline reader to the system to ensure that user cards and newly added offline readers use secured authentication keys from the beginning.

NOTE: Changing authentication keys later, will mean that all user cards and offline readers need to be re-configured with the new authentication keys.
If the system contains at least one offline reader and the offline keys are not protected, the new versions of software (version 1.6+) will display a warning at login (Picture 5.17).



Offline readers are not protected with secure authentication keys! Click here to secure your system!

Picture 5.17: Unprotected offline system warning

When adding a new or editing an existing offline reader, the administrator can:

- Change its name
- Change its type
    - The system automatically generates the reader's address. This address differentiates between offline readers in the system (Picture 5.16).

IMPORTANT! NovaSimpli does not include offline functionality. Consider upgrading to Nova10 or higher to utilize the offline functionality of the access control system.

Customized settings:
Based on reader type, some settings can be customized to control the offline device. The options not supported by the offline reader are greyed out (Picture 5.18).

Time slider
The time sliders offer the same functionality as for online readers (for detailed information see chapter 5.1.16 Door settings for online readers). This allows the option to set different kinds of timeouts for the offline reader devices.

Trace users
To trace users:

- Uncheck the option at Disable events log on the user’s card.
    - The offline reader writes the time of card registration to the user card.
    - This data is copied to the system the next time the user uses this card on an online reader.
    - This option uses more battery on the offline reader.

Transfer of events:
Offline devices have an internal log of all events that are transferred to the system by:

- Using the event's card (for further info see section 4.2.2 Card function assignment). Checking the option **Disable event log on the offline reader** will disable the log.

Increase security:
To increase security, the system can be set to require a PIN when entering a door with a card.

- Check the option Request input of the user’s pin.

NOTE: This option is only available when the offline reader has a keypad.

Toggle mode
To enable toggle mode for the individual user:

1. Navigate to Home > Users & Access Rights > Users.
2. Double click a user and navigate to the **Advanced** tab.
3. Check Toggle output on offline readers.

4. Transfer the settings to the card by placing it on the online reader that has writing to card enabled.
5. Hold the card (2nd read) on the offline reader to toggle it.

If wanting to overwrite toggle mode:

- Check **Ignore Toggle output setting on user's cards** in the settings of the individual offline reader. This prevents the reader from using toggle mode, even if the user has the right to activate toggle mode on readers.

Time intervals

To check the time intervals on user cards:

- Select the **Check schedule on the user's cards** in the settings of the offline reader.
- The schedule can be set in the **Advanced Settings** for the individual user (see Picture 4.6) under **Cards Validity Settings**.

NOTE: Only the first two intervals will apply if more time intervals are defined.

Disable automatic reader activation

This option controls its reading:

- This option is checked: The reader will need to be woken up (turn for a cylinder; a push on handle…) before user cards are presented.
- If this option is not checked: The reader will repeatedly check for any present user card.
  NOTE: This option is more convenient for more "active" doors since the reader always needs to be checking for the card. This also means that the battery consumption is higher than normal.

Automatic schedule

An offline reader has the option to be automatically locked or unlocked by using an automatic schedule:

- Select a schedule from the drop-down list at **Automatic schedule**
    - The reader will use the set schedule after reconfiguration

NOTE: Only the first interval will apply for automatic function if more time intervals are defined in the set schedule.

Public holidays

If the holidays are imported to Nova, they will also be transferred with the offline configuration card.

IMPORTANT! Due to the size limitation on the card, we can only transfer the holidays for the one year ahead. Before that year runs out, the new holidays need to be updated using the configuration card.

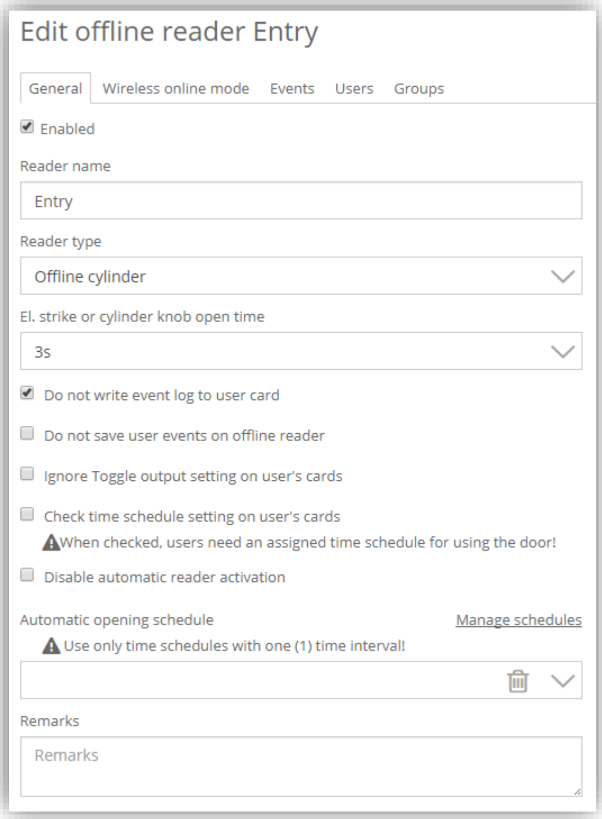
To edit and preview schedules, access the **schedule** editor by:

- Clicking the **Manage Schedules** link (read more in 4.4 Managing schedules).

TIP: The doors can automatically lock doors by assigning them an automatic schedule with a defined time interval that starts and ends at the exact time that they are set to lock the door (E.g. 16:00 – 16:00).

Remarks input field allows saving some information regarding the offline reader. For example, the administrator can write information about the last battery change.

IMPORTANT! Remember to save changes by clicking the **Save** button before closing the editor!



Edit offline reader Entry

☑ Enabled

Reader name: Entry

Reader type: Offline cylinder

El. strike or cylinder knob open time: 3s

☑ Do not write event log to user card

□ Do not save user events on offline reader

□ Ignore Toggle output setting on user's cards

□ Check time schedule setting on user's cards

⚠When checked, users need an assigned time schedule for using the door!

□ Disable automatic reader activation

Automatic opening schedule

⚠ Use only time schedules with one (1) time interval!

Remarks: Remarks

Picture 5.18: Offline reader settings

5.2.1 Offline readers and maintenance cards

Offline reader maintenance is done with special cards. These cards are delivered to the system administrator during system installation and are labeled according to their functionality:

- **BL:** Blacklist card (used for blacklisting user cards)
- **EV:** Events card (used for transferring event list from offline reader to central)
- **CO:** Configuration card (used for transferring configuration settings to an offline reader)
- **B:** Battery card (used for replacing batteries on an offline reader, if applicable)
- **DI:** Disassembly card (used for disassembling an offline reader, if applicable)

IMPORTANT! The cards must be assigned to the system administrator and the matching function for each card must be selected (see the section on adding users for information on how to change the card function).

All cards, except the **configuration card**, work on all offline readers after they are registered on an online reader and data has been written to them.
The **configuration card** must be created for the individual reader every time due to access configuration details.

The function **Format card** clears data content from the card when presented on an online reader.

5.2.2 Creation of configuration cards for offline devices in Nova software

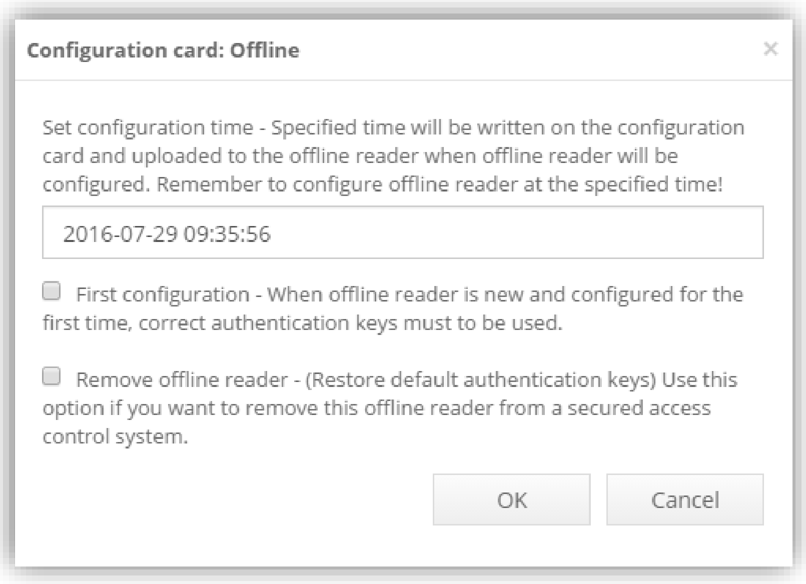
The maintenance card for transferring configuration settings to an offline device must be created for each offline reader.

To create a configuration card:

1. Select the offline reader in the Offline reader editor (Picture 5.16)
2. Click the button Create configuration card
3. Set time of actual device configuration in a popup window – actual time of when the configuration card will be presented to the offline reader (Picture 5.19)
    - This is necessary due to time synchronization between the online system and offline reader (Picture 5.19).

Adding new offline readers to the system:

1. Check the **First configuration** option (Picture 5.19).
    - This will ensure the right authentication keys on the configuration card.
2. **Confirm the settings** of the configuration card.
3. To upload the configuration, put the **configuration card** on an enabled online reader, which can **write data on cards.**
    - The configuration settings are written to the card and three "beep" sounds confirm the successful writing operation.



Configuration card: Offline

Set configuration time - Specified time will be written on the configuration card and uploaded to the offline reader when offline reader will be configured. Remember to configure offline reader at the specified time!

2016-07-29 09:35:56

□ First configuration - When offline reader is new and configured for the first time, correct authentication keys must to be used.

□ Remove offline reader - (Restore default authentication keys) Use this option if you want to remove this offline reader from a secured access control system.

Picture 5.19: Create a configuration card

IMPORTANT! There is a 15 minutes period to register the configuration card on an online reader. After 15 minutes, the procedure will have to be repeated.

NOTE: The configuration card transfers the settings of a particular reader, and it must, therefore, be registered on the offline reader it was created for. The configuration card with a particular setting can only be used once.
Three long beeps, three short beeps, and green LED flash to follow correct configuration.

REMEMBER to configure the offline reader on the set time from the pop-up window, for it to synchronize with the online system.

Restoring default authentication keys
The configuration card also allows removing the offline reader from the system. The procedure is the same as creating the offline reader for the first time; instead, check to **Remove offline reader**. After approaching the configuration card to the online reader and transferring the configurations to the offline handle, its **keys** are **restored** to default ones. Removing the offline device from the system is now safe.

NOTE: This option is only visible when using unique authentication keys in the system.

5.2.3 Lost and blacklisted cards

Lost user cards can be blocked on offline readers to prevent unauthorized entries. Offline readers will ignore cards, which are on their blacklist.
To report a lost card:

- Go to user card settings
- Set function of the card to **Lost card**
    - (See section on adding users for information on how to change card functions)
    - The **Blacklist card** transfers the database of **lost cards** to offline readers.
    - When a **Blacklist card** is registered on the online readers all cards with the function **Lost card** are written to it.
    - Offline readers will read the ID numbers of lost cards from the **Blacklist card**.

NOTE: The same **Blacklist card** can be used on all offline readers.

To remove a card from the blacklist, change **lost card** to usable **card**:

- Change the function to **Card**
- Repeat the procedure described above

Lost cards can be also transferred via user cards. To read more about this setting, please read chapter 5.2.11 Blacklist settings.

5.2.4 Reading events from offline devices

Offline devices keep track of internal events and can keep track of users' events. Events are stored in the internal memory of the device.
Events are written to the card and are then registered in the software when the card passes an online reader.
To transfer events from the offline reader internal memory:

- Use the **Events card** on the offline reader that the events should be transferred from.
    - The events are now transferred to the Events card and deleted from the offline device's internal memory!

REMEMBER to register the **Events card** on the online reader before reading events from another device!

NOTE: Same **Events card** can be used on all offline devices – one at a time.
The tracking of user events on the internal storage of the offline device can be turned off under the settings for the device in Nova.

5.2.5 Configuration of online reader settings for writing access rights

Transfer data between the central and an offline reader by writing data to a contactless card. This data writing usually takes place at building entries to guarantee the best user experience. The offline reader then reads the data.
To enable online readers to write access rights to cards:

- Go to the **Advanced settings** of the reader
- Enable writing with the option in the Card data management dropdown list (See 5.1.15 Reader settings).

5.2.6 Offline readers and Nova software

Offline readers act in the same way as online readers in the Nova software. The only difference is the icon in the hardware tree that:

- It does not show the current door status.
- When assigning access rights to offline readers the administrator does ***not*** have the option to select a schedule, action, and source identification device.
    - These are pre-selected and fixed to a '0-24h' schedule with the actions OPEN and CARD as a source identification device.
    - Limit access using time schedules on the user level.

5.2.7 Battery level on offline cylinders

SensoLock®, the offline cylinder, has built-in battery management that has three different ways to display battery capacity and inform when replacement is necessary. The battery status can be seen in the Nova software if the **Offline+ activation key** is registered in the system.
Discovery of low battery level follows these three phases:

1. Five red flashes and sound signal appear when holding a tag/card in front of the cylinder knob.

    - Change the batteries using the **Battery card** and the battery tool as described in section 5.2.8.

2. A light and sound signal appears when holding a tag/card in front of the cylinder knob. It takes 5 seconds before the cylinder is ready for opening or closing.

    - Change the batteries using the **Battery card** and the battery tool as described in section 5.2.8.

3. The cylinder will not read any activated tags/cards. When the cylinder is in phase 3, it is necessary to use an adapter for battery changes.

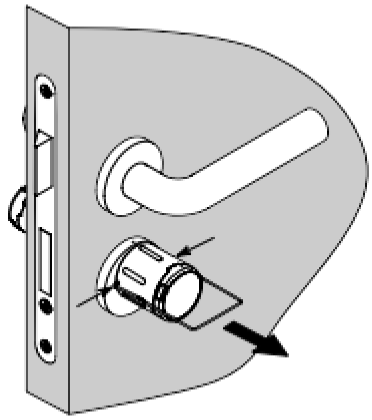
    - Remove the logo-plate and attach the battery-adapter with a 9V battery. Then change the batteries as described in section 5.2.8.

5.2.8 Changing batteries in offline devices

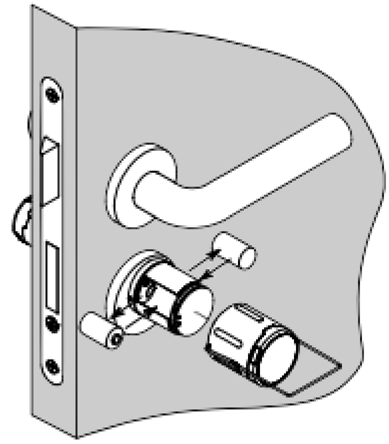
When a card is assigned as **Battery card** (see section 4.2.2), it can be used to replace dead batteries in offline cylinders:

1. Present **Battery card** to the cylinder
    - The two small side tabs on the SensoLock® will loosen

2. Use the battery change tool to push the tabs and remove the cap

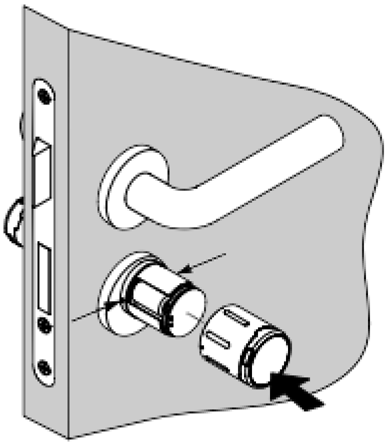


3. Replace the two CR2 3V Lithium batteries



IMPORTANT! Make sure that the batteries are placed in the correct position regarding plus and minus.

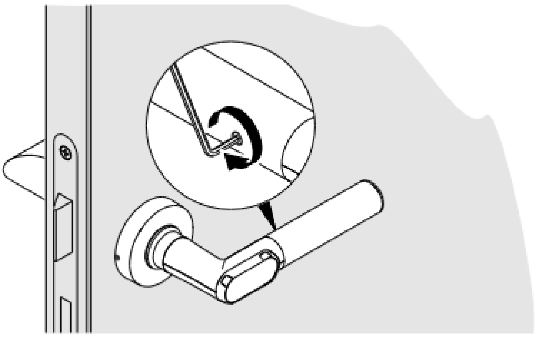
4. Push the cap back on the cylinder



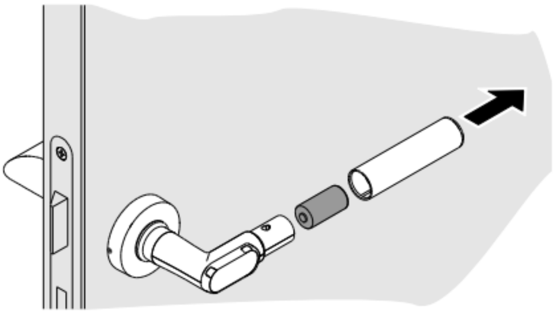
5. Make tabs fit into cap holes
6. Hold **Battery card** in front of the cylinder to lock the tabs

Offline handle battery replacement:

1. Open the door where the handle is located.
2. Use the provided key to screw the screw into the inside of the handle.



3. Remove the gripping sleeve.



4. Remove the battery and insert the new battery. Make sure that the polarity is correct. Insert the battery into the gripping sleeve with the negative pole first.
5. Slide the gripping sleeve back on.
6. Unscrew the screw on the inside of the door handle.

5.2.9 Offline device feedback

Offline devices give feedback to users in the form of sound and light signals in numerous variations:

- Short or long beeps
- Different combinations
- Different variations of green and red LED flashes.

Table 5.1 summarizes different functions and feedback from the device.

	Offline cylinder, OfflineEvoLock cylinder, Offline locker lock, Offline handle				**Nexus offline**		
			LED			LED	
Group	Event	Buzzer	red	green	Buzzer	red	green
User	Card rejected	—	—		—	—	
	Wrong keys					· · · ·	
	Card accepted			—	·		——

	Schedule toggle/toggle			—	—		—
	Battery replacement	—	—	—			
	Response stale PIN				—		
System	Reset	—	—	—			
	Battery low	· · · · ·	· · · · ·				
Service mode	Start	. ·					
	End	· .					
Whitelist mode	Start	— ·					
	Teach-in	· ·					
	Erase	— —					
	Memory full	— — — ·					
	End	· —					
	Read try		· · · · ·				
Transponder	Read/Process		——				
	Accept			—			
	Reject	—	—				
	Toggle start	—		—			
	Toggle end	—	—				
	Configuration change	— — — · · ·		——	— — — · · ·		——
Error	Configuration/Memory	— — — — — ·			— — — — —		· · · ·
	Actuator	— — — — — — · ·					
	RTC	— — — — — — · · ·			— — — — —	· · · · ·	
	Wake-up	— — — — — — · · · ·					
	RFID IC	— — — — — — · · · · ·					
	Radio	— — — — — — · · · · · ·					
	RFID IC	— — — — — — · · · · · · ·					
	Processing response					· · · · · · · ·	

Table 5.1: Functions and feedback of different offline devices

5.2.10 Card segments of offline reader

Nova software version 1.5 or higher support card segment settings for offline readers.
NOTE: To access this option, navigate to the Home > Hardware > Offline Readers and press Menu > Global Settings.
This functionality allows the System administrator to set different writing sectors on the cards.

- This is useful for those who keep other data stored on their cards. E.g.: If there is some 3rd party data already written on sectors seven and eight, authentication segment sectors can set in range 1-5 (5 sequenced sectors needed).
    - This will allow users to keep their data on wanted segments.
    - Additionally, feedback segment sectors can be changed the same way. Feedback sectors are only written on the card if the reader is set to **Write data on the card** and **Read events from user cards** (Please see chapter **4.2.3 Managing users, their access rights**).

IMPORTANT! Whenever sectors are changed, ALL cards need to be reprogrammed! It's recommended to set the different sectors before programming the cards.

IMPORTANT! If the system was already set-up and the card segments were changed after cards were already programmed, the old sectors will remain on the old position, while the new ones will be written on the newly set positions. To ensure enough space on the card for the (offline and 3rd party) data, please follow the examples in the next table:

Default sectors		Newly set sectors			
User data	Feedback	User data	Feedback	Unmodified sectors	
5-9	10-12	1-5	13-15	none	**0 FREE**
5-9	10-12	8-12	5-7	1-4, 14-15	**5 FREE**
5-9	10-12	1-5	6-8	13-15	**2 FREE**
5-9	10-12	8-12	13-15	1-4	**4 FREE**

The above example shows how sectors can be moved and which ones remain unmodified. The first example (the "not ok" one) shows the result of no unmodified sectors, which can be problematic for some people, who want to have some sectors reserved for some other data on the card. The remaining examples show a range of sectors that remain free for others to use.
The offline reader will work regardless of the unmodified sectors as long as it has set sectors "free".

NOTE! Formatting a card will delete all accessible data, while 3rd party data is protected and will not change.

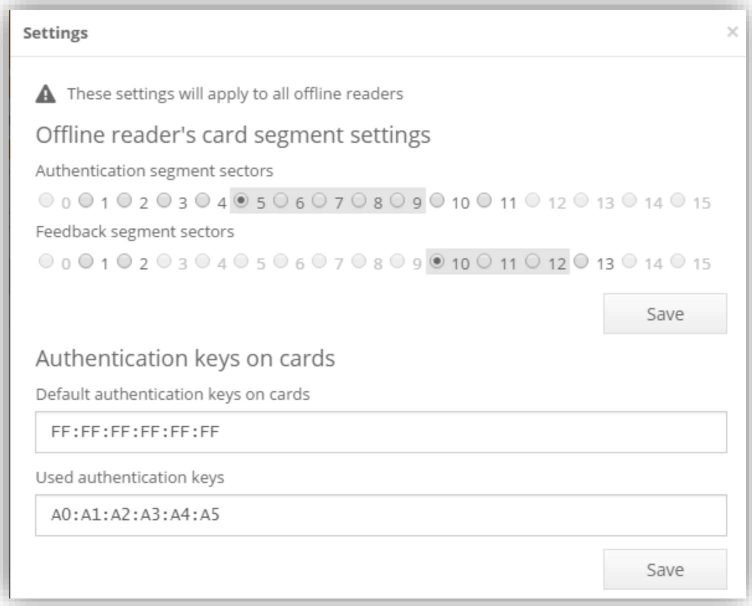
5.2.11 Blacklist settings

By navigating to offline Global settings (**Home > Hardware Offline Readers** and **Menu > Global settings**) a popup window will display the option to enable the Blacklist setting. If the option is checked, the blacklisted cards will be transferred via user cards. The procedure is the same as with blacklisted card – admin sets a card to lost in the user interface. After a user puts a card on the online reader, a lost card is added to his card. When this card is put on the offline reader, the setting is now stored on the offline handle and the access rejected for the lost card.

If the card is later found and set as a standard card again, the access limitation can be removed by updating the Blacklist card and showing it to the offline reader.

5.2.12 Offline authentication keys

NOTE: The option to change the authentication key is limited to the **Super administrator only!**



Settings

These settings will apply to all offline readers

Offline reader's card segment settings

Authentication segment sectors

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ● 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15

Feedback segment sectors

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ● 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15

Authentication keys on cards

Default authentication keys on cards: FF:FF:FF:FF:FF:FF

Used authentication keys: A0:A1:A2:A3:A4:A5

Picture 5.20: Changing authentication keys

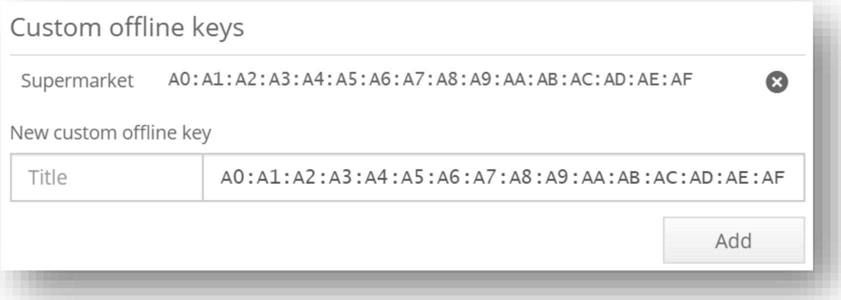
Section **Authentication keys on cards** allow changing authentication keys for protecting data on MIFARE cards.

NOTE: The Authentication keys can only be changed by a Super administrator.

WARNING! After the key change, cards that were configured with the old key will not be recognized by the system as valid cards!

5.2.13 Merging multiple systems into one

Each system is locked with a unique key, so cards that work on one will not work on the other. Merging could be done by resetting the offline keys were to default on one system and adding them as additional keys to the newly (merged) system.
Nova version 3.0 supports the inclusion of multiple keys. **Superadmin** can access the offline settings by navigating to **Hardware > Offline readers > Menu > Global settings**.
In the bottom, he can enter the Title of the merged project and its key.



Custom offline keys

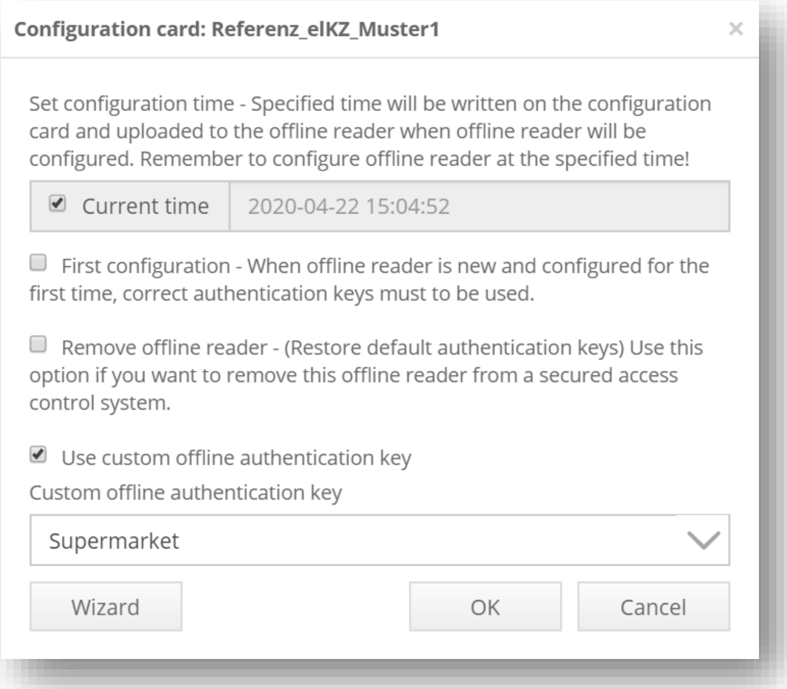
Supermarket A0:A1:A2:A3:A4:A5:A6:A7:A8:A9:AA:AB:AC:AD:AE:AF

New custom offline key

Title A0:A1:A2:A3:A4:A5:A6:A7:A8:A9:AA:AB:AC:AD:AE:AF

Picture 5.21: Adding unique keys from another system during a merger

When creating a configuration card, a **sysadmin** must choose the old project under the custom offline authentication key. Once updated, this will replace the old key with the new one. Once reconfigured, all the user cards will stop working until they are updated on the online reader (that has writing enabled) or the USB reader.



Configuration card: Referenz_elKZ_Muster1

Set configuration time - Specified time will be written on the configuration card and uploaded to the offline reader when offline reader will be configured. Remember to configure offline reader at the specified time!

☑ Current time 2020-04-22 15:04:52

□ First configuration - When offline reader is new and configured for the first time, correct authentication keys must to be used.

□ Remove offline reader - (Restore default authentication keys) Use this option if you want to remove this offline reader from a secured access control system.

☑ Use custom offline authentication key

Custom offline authentication key: Supermarket

Picture 5.22: Using the configuration card to replace the old unique key with a new one (in the merged system)

5.3 Special hardware devices

5.3.1 GSM Gateway

GSM Gateway is an advanced GSM communication device for remote control of the access control system.

How it works:

- A user calls the gateway phone number or sends SMS to (gate) device
  - The system recognizes the user phone number and grants access, if applicable.

GSM Gateway combined with the Scripting module
Combining the GSM Gateway with the **Scripting module** (see chapter 7) it can be used for remote control of different devices connected to the Alpha central outputs.
Connect the GSM gateway to the system like this:

- Install the GSM Gateway to the Alpha central in the same way as contactless card (online) readers.
- Use the Nova software to locate the device in the central editor by using the **Search readers** option.

For more information about adding new devices to the central, see chapter 5.1.13 Adding new readers.

NOTE: The GSM Gateway default **RS485 address** is set to **1,** but can be changed to meet system requirements.

IMPORTANT! A GSM gateway requires a working **micro SIM** card for normal operation (please be aware to insert the SIM card correctly). If the SIM card is not inserted into the device, the Alpha central will not be able to find it on the RS-485 bus.

IMPORTANT! The GSM gateway stores its configuration on the SIM card (e.g. RS-485 bus address). When a pre-configured SIM card is inserted into the device, **the configuration is restored from the SIM card**. Please note that changing SIM cards between devices will also change the RS-485 addresses of those devices and the system requires reconfiguration.
The GSM Gateway reports phone caller IDs in the form with the **country entry code** (e.g. 00386yyyyy for Slovenia). When assigning phone numbers to the user's profile, leading zeroes can be omitted.

5.3.2 Remote control Reader

The remote-control reader is an RF (radio frequency) receiver device used to receive signals from RF remote control key chains. The usual use is for controlling parking ramps or garage doors where usage of traditional contactless cards is not suitable.
The remote-control reader:

- Is installed on the Alpha central in the same way as contactless card readers.
- Can use Nova software to locate the device connected to the central by **Search readers** option.
- Receives RF signal transmitted by remote control when the access giving RF remote control button is pressed down
  - The RF signal is decoded and shown as an integer in the Nova software
  - The integer can be added as an identification device to the selected user

For more information about adding new devices to the central see chapter 5.1.13 Adding new readers.
For more information about adding new cards to users see chapter 4.2.1 Adding unknown card(s) to user.

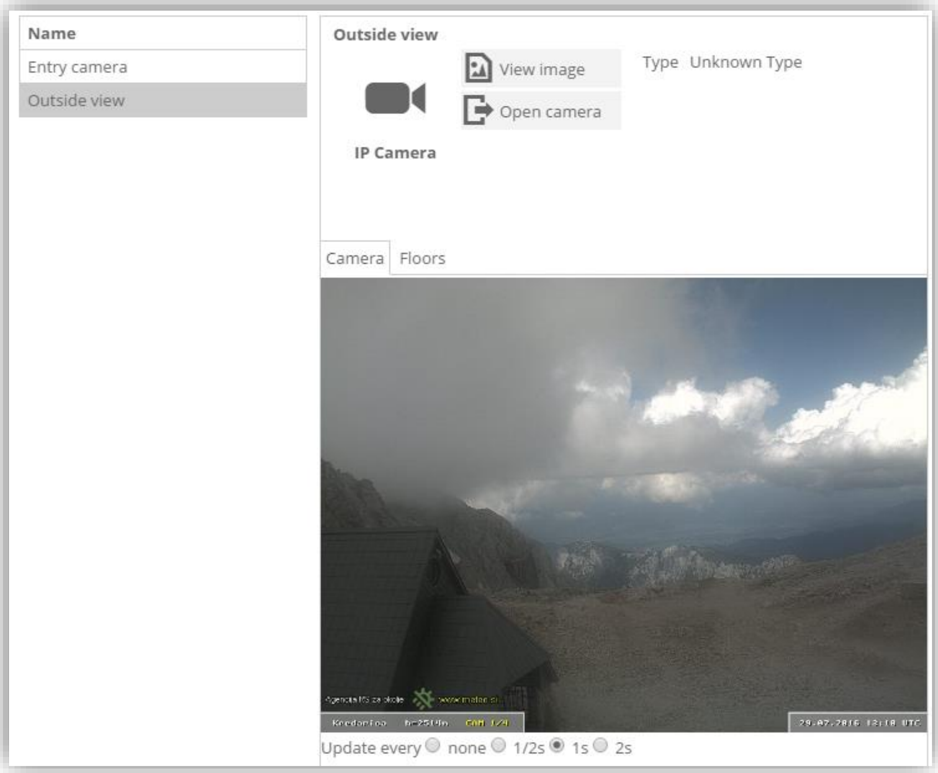
5.3.3 IP Camera

IP cameras can be added by providing direct access to the image.
Most of the cameras are not capturing video, but images every few seconds and are serving them to some IP address. To get the picture from the camera to the Nova software, we need to provide direct (including login if required) link to the software.

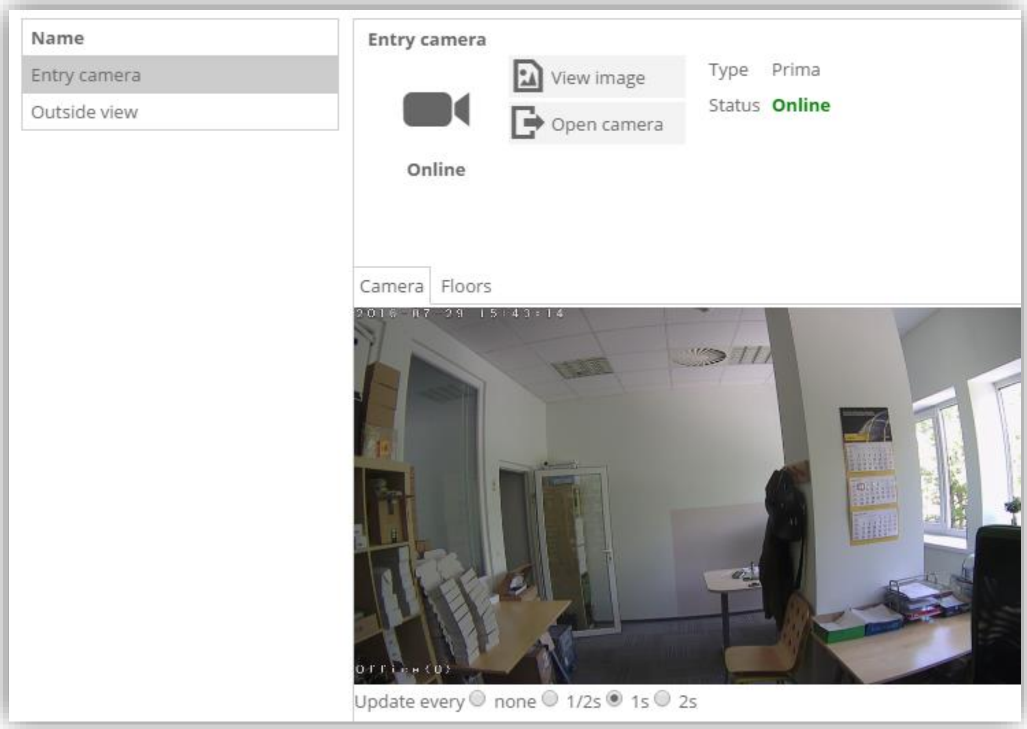
We can add a camera by:

1. Navigating to Home > Hardware > IP Cameras.
2. Press Menu > Add camera.
3. A pop-up menu will require the entry of Camera name, its IP Address, type, and image address.
   - If the camera type is not located in the dropdown menu, only the entry of the image address is required (Picture 5.23).
   - The supported camera type (Picture 5.24) will have a few additional options like detecting if the camera is online, IP change, flipping or rotating the screen, the ability to move the camera (if the camera supports it), the option to display custom text on the image (a preview of the settings is displayed on Picture 5.25) …
     Supported cameras are also found with the **Central discovery tool** (see chapter 25)**.**
4. Pressing **Add** adds the camera to the system.

After the camera is added, its settings open. Navigating one step back: **Home > Hardware > IP Cameras**, and selecting the wanted camera, shows the picture if the provided information was correct.



Picture 5.23: IP camera picture of the unknown type

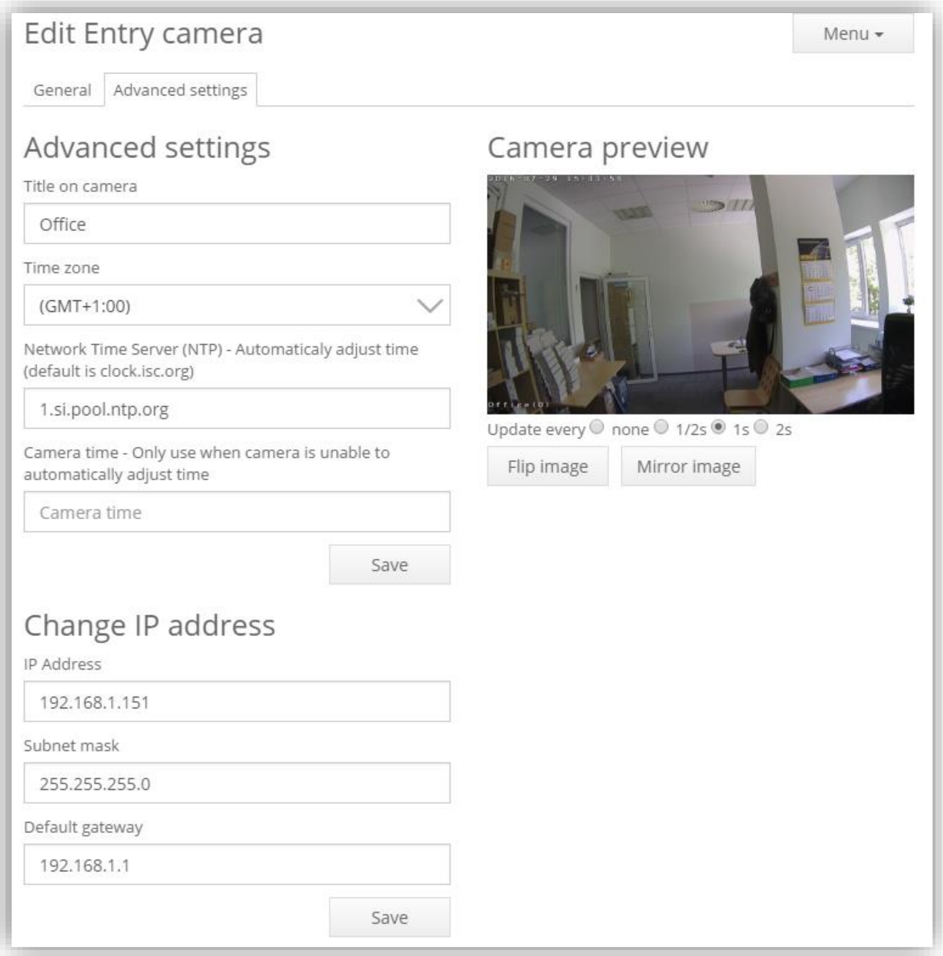


Picture 5.24: IP camera picture from the Prima type

To edit camera data, double click on the camera.

To delete the camera from the system:

1. Select the camera from the camera list.
2. Press Menu > Remove [IP camera name].



Edit Entry camera

Advanced settings

Title on camera: Office

Time zone: (GMT+1:00)

Network Time Server (NTP) - Automaticaly adjust time (default is clock.isc.org): 1.si.pool.ntp.org

Camera time - Only use when camera is unable to automatically adjust time: Camera time

Change IP address

IP Address: 192.168.1.151

Subnet mask: 255.255.255.0

Default gateway: 192.168.1.1

Camera preview

Update every ○ none ○ 1/2s ● 1s ○ 2s

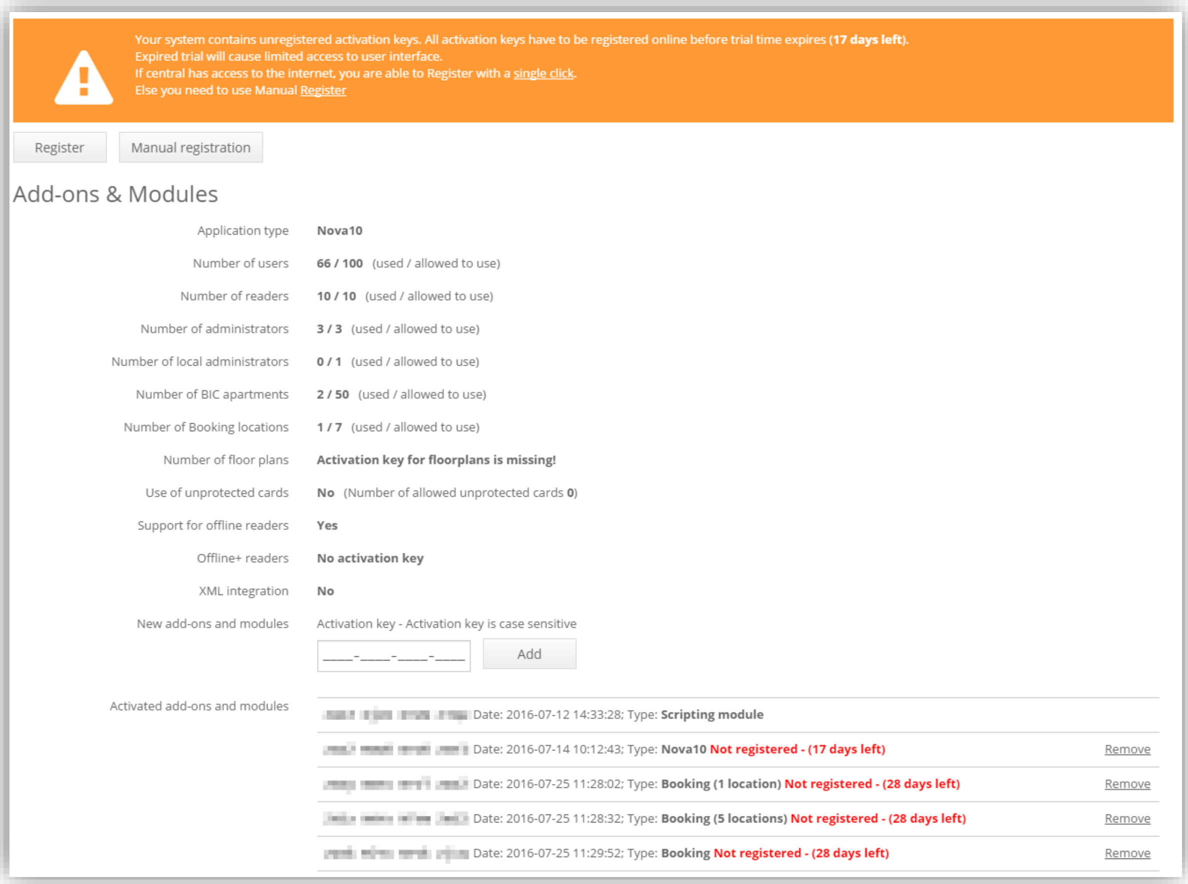
Picture 5.25: Known camera type, advanced settings

6 Settings

6.1 Add-ons and Modules

Add-ons and Modules contain Nova details and input boxes for entering a new activation key (Picture 6.1).
By purchasing the desired activation key, a system upgrade is made for Nova software from NovaSimpli to other Nova versions.

NOTE: NovaSimpli does not require any activation key.



Your system contains unregistered activation keys. All activation keys have to be registered online before trial time expires (**17 days left**).
Expired trial will cause limited access to user interface.
If central has access to the internet, you are able to Register with a single click.
Else you need to use Manual Register

Add-ons & Modules

Application type	**Nova10**
Number of users	**66 / 100** (used / allowed to use)
Number of readers	**10 / 10** (used / allowed to use)
Number of administrators	**3 / 3** (used / allowed to use)
Number of local administrators	**0 / 1** (used / allowed to use)
Number of BIC apartments	**2 / 50** (used / allowed to use)
Number of Booking locations	**1 / 7** (used / allowed to use)
Number of floor plans	**Activation key for floorplans is missing!**
Use of unprotected cards	**No** (Number of allowed unprotected cards **0**)
Support for offline readers	**Yes**
Offline+ readers	**No activation key**
XML integration	**No**
New add-ons and modules	Activation key - Activation key is case sensitive ____-____-____-____ Add
Activated add-ons and modules	[redacted] Date: 2016-07-12 14:33:28; Type: **Scripting module**
	[redacted] Date: 2016-07-14 10:12:43; Type: **Nova10** **Not registered - (17 days left)** Remove
	[redacted] Date: 2016-07-25 11:28:02; Type: **Booking (1 location)** **Not registered - (28 days left)** Remove
	[redacted] Date: 2016-07-25 11:28:32; Type: **Booking (5 locations)** **Not registered - (28 days left)** Remove
	[redacted] Date: 2016-07-25 11:29:52; Type: **Booking** **Not registered - (28 days left)** Remove

Picture 6.1: Add-ons & Modules tab

Upgrading to the NovaSimpli350 software version is free, the activation code is provided by hardware issuer.

- Please remember that with the NovaSimpli350 software, the maximum number of users in the system is limited to 350 and the tracking of the events is disabled
- The only way to see the events flow is through the live events displayed on the home page.

IMPORTANT! After the activation keys are entered, you have 30 days to register your system. During this period, you are free to use your system as you wish. The activation keys can also be deleted from the system if they are not needed (by pressing the **Remove** button next to the key). Once the lowest timer runs out (if you have 3 and 5 days left on 2 activation keys, 3 days will be taken into count), the system will keep working with the set settings, but the access to the GUI will be locked to the **Add-ons and Modules** page until the system is registered. The option to remove activation keys will be disabled as well.

Suggestion: Adding a new activation key after the system was already registered, will require a new registration, so it is advisable to register the system once all activation keys are entered.

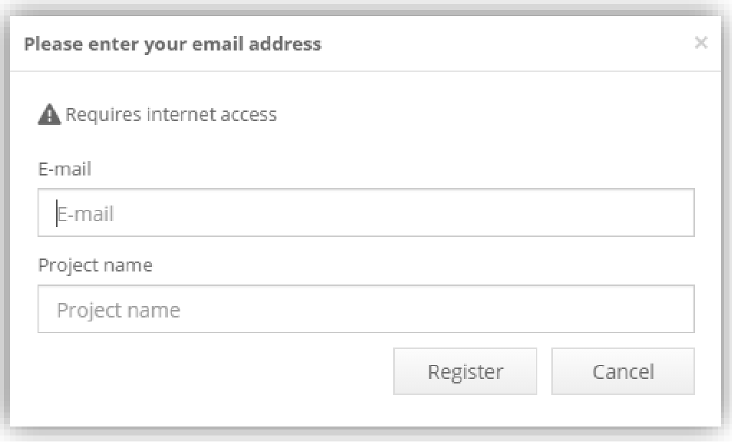
Note: Deleting and re-entering the same keys will not reset the Registration count-down.

The next sub-chapters describe an online/offline activation based on your computer connectivity. If the computer from which the system is managed is connected to the internet, use the online registration (much faster); otherwise, if the connection to the internet fails, the administrator will be redirected to the offline registration procedure.

6.1.1 Online system registration

To register the system online:

1. Press the **Online Registration** button (located at the top of Picture 6.1). A pop-up window will appear (shown in Picture 6.2).
2. Enter e-mail and a project name. Provided data will be used for easier assistance and software update/upgrade notifications.
3. Press the **Register** button. If the registration was successful, the green box will appear with the OK message (Picture 6.4); if there are any issues with the internet connection and the registration fails, it is advised to proceed with manual registration.


Please enter your email address

Picture 6.2: Online system registration form

6.1.2 Offline system registration

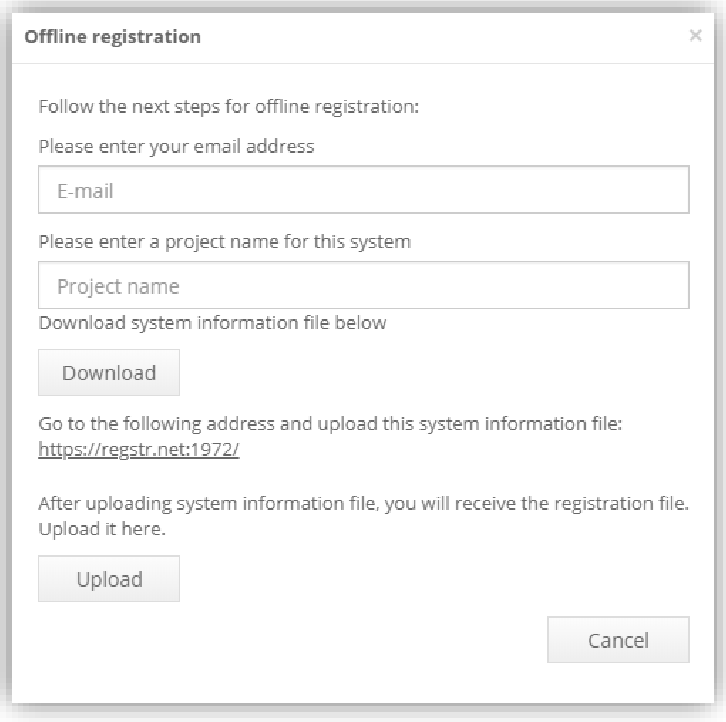
Offline registration steps:

1. Press the **Offline Registration** button (located at the top of Picture 6.1). A pop-up window will appear (shown in Picture 6.2).
2. Enter e-mail and a project name. Provided data will be used for easier assistance and software update/upgrade notifications.
3. Press the **Download** button – a window will open to save the system information file to your computer. Select a folder with easy access.
4. Transfer the file to the USB stick and plug it into a computer with internet access. If the procedure is done on a mobile device (i.e. laptop/tablet/phone …), it is enough to move to a location with internet access.

Navigate to https://regstr.net:1972 and follow the steps:

- Click on the button to **upload the system information** file that was previously downloaded.
- If the upload was a success, continue to download the **Registration file**. Download it to a folder with easy access.

5. Transfer the file **Registration file** back to the USB stick and plug it back to the computer that is connected to the central OR if using a mobile device, go back to the network with central access.
6. Open the Nova 2.0 window and press the **Upload** button. Select the **Registration file.** The system is now registered (Picture 6.4).



Offline registration

Follow the next steps for offline registration:

Please enter your email address

E-mail

Please enter a project name for this system

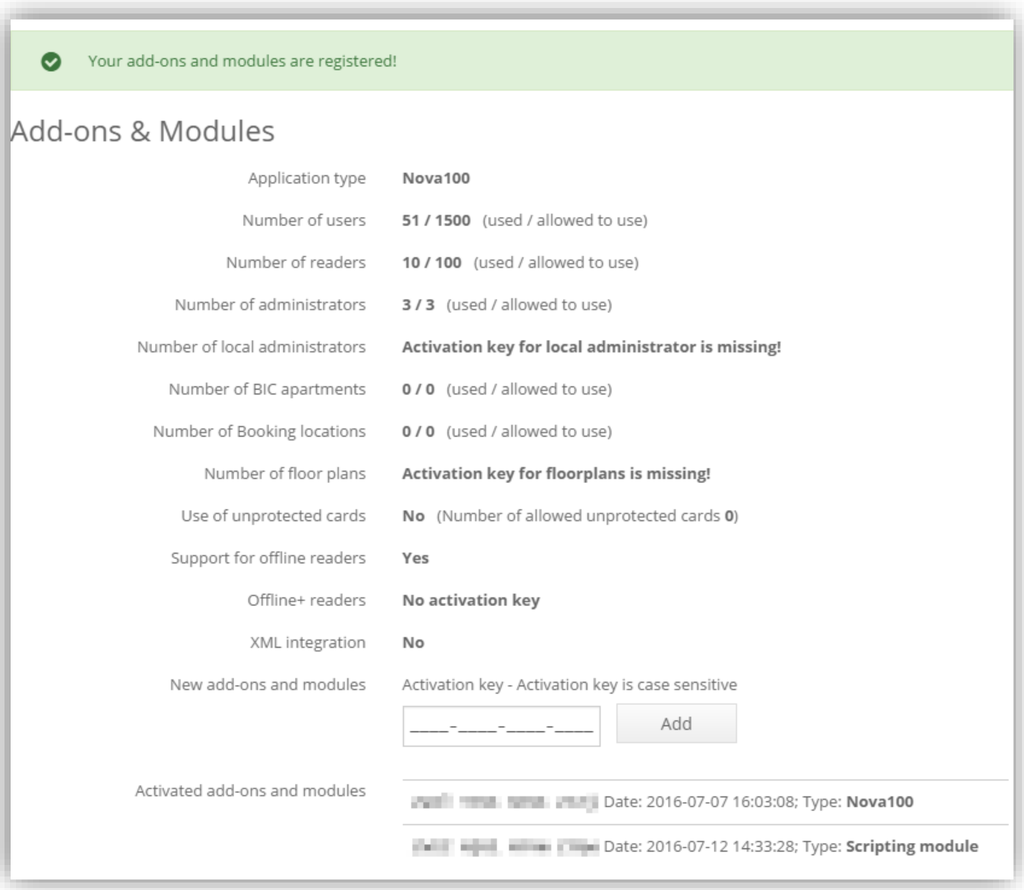
Project name

Download system information file below

Go to the following address and upload this system information file:
https://regstr.net:1972/

After uploading system information file, you will receive the registration file. Upload it here.

Picture 6.3: Offline system registration pop-up



Your add-ons and modules are registered!

Add-ons & Modules

Application type	**Nova100**
Number of users	**51 / 1500** (used / allowed to use)
Number of readers	**10 / 100** (used / allowed to use)
Number of administrators	**3 / 3** (used / allowed to use)
Number of local administrators	**Activation key for local administrator is missing!**
Number of BIC apartments	**0 / 0** (used / allowed to use)
Number of Booking locations	**0 / 0** (used / allowed to use)
Number of floor plans	**Activation key for floorplans is missing!**
Use of unprotected cards	**No** (Number of allowed unprotected cards **0**)
Support for offline readers	**Yes**
Offline+ readers	**No activation key**
XML integration	**No**
New add-ons and modules	Activation key - Activation key is case sensitive ____-____-____-____ Add
Activated add-ons and modules	[redacted] Date: 2016-07-07 16:03:08; Type: **Nova100** [redacted] Date: 2016-07-12 14:33:28; Type: **Scripting module**

Picture 6.4: Completed registration

6.2 Login Settings

- **Default language**: The global settings of the GUI. Users can still set their display language in personal settings. Read about personal settings in chapter 2.1 Account settings.
- The **Maintenance contact** field is used for contact information of the person maintaining the system.
  The field is visible on the login screen for quick access in case of problems.
  The recommended information here is the phone number of the person maintaining the system.
- **Super administrator account suspension**: The option to Enable/Disable Super administrator account. This account is only used by the installers and should be disabled once the system is set up. This way we increase security and prevent unwanted access. Resetting the central to its default IP will enable a Super administrator.
- Password recovery and user registration settings:
  - **Allow forgotten password:** If the option is enabled, a new link shows up that allows password reset. This only works if the user email set in the GUI matches the one in password reset request. The system provides an

example of an email that is sent, but the content can be changed to custom text.

  - **Allow registration of new users:** The installer can allow users to create their account by using this option. Similar to the forgotten password option, an email is sent and its content can be changed accordingly.

6.3 Database Settings

The **Database Settings** widget is used for advanced settings and is only enabled for system administrators.
This widget offers these options:

- Download a backup copy of a configuration database.
- Upload a backup copy of a configuration database to restore it to the previous state.
- Download Event database backup.
- Enable/Disable automatic database backup.
- Turn on/off Event archive.

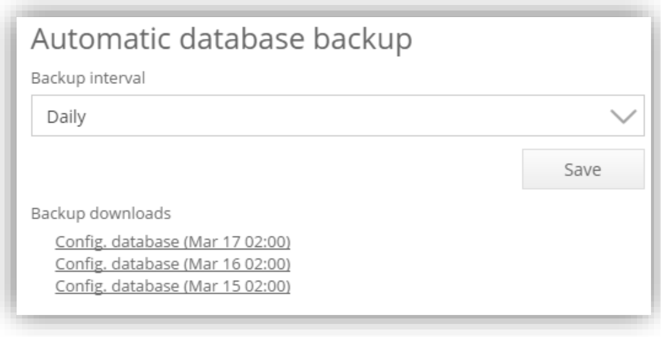
CAUTION: When uploading a configuration database with new settings, be aware that a damaged database file can cause the system to stop working.

RECOMMENDATION: It is recommended to create a backup of the old configuration database before uploading the new file, to avoid system breakdown, just like it is recommended to make a backup of the system after the first complete configuration.
This is done by:

- Clicking the **Create backup file** for the configuration and event database.
  - The database files can now be stored on the local computer

6.3.1 Automatic database backup

Nova version 1.5 and higher support automatic backup of the configuration database as shown in Picture 6.5.



Automatic database backup

Backup interval

Daily

Backup downloads

Config. database (Mar 17 02:00)
Config. database (Mar 16 02:00)
Config. database (Mar 15 02:00)

Picture 6.5: Different copies of backups from central without USB storage

Automatic database backup can be set to:

- Turned off
- Daily
- Weekly
- Monthly

NOTE: Each option represents a period of backup creation. A new copy of the configuration database is created every set period at 2:00 AM.

- *Daily* backup will be created at 2:00 AM.
- *Weekly* backup will be created every Monday at 2:00 AM.
- *Monthly* backup will be created every 1st day of the month at 2:00 AM.
- *Turned off.*

Backup configuration can be set on master central and the rule applies to all centrals in the system.

Backup and local memory

- Centrals with proper **backup USB storage:**
  - Create a copy on them and **save local memory**.
  - Additionally, they will also create a copy of an **events database.**
    - Also, **all of the user pictures** will be saved on it.
    - Centrals with **USB storage** connected will keep up to **seven copies** of **configuration and event databases** (without USB, only three copies of configuration database are made).
- Centrals without USB storage will also store copies of previous backups for a period.

If backups are stored in local memory, it will keep three copies of the last periods (e.g. if the automatic database backup is set to daily, it will keep backups for the last three days; for weekly - last three weeks and for monthly - last three months).

NOTE: At any time, the backup is switched from off to on, it will create a new backup after a few minutes. Backup copies are downloaded by clicking on the corresponding text.

6.3.2 Event archive

Nova Drive has the option to remove events older than N days. This can be enabled by selecting the number of days you wish to keep as an archive.

NOTE: Some countries are required to delete events older than N days. Please check the regulations of the country where the central is located.

6.3.3 GDPR settings

The EU General Data Protection Regulation is the privacy regulation that we need to comply with. The drop-down offers different time options after that:

- User data will be replaced with **Anonymous user** in the Events after the set time.
- The Event data could also hold sensitive information, so it is deleted too.

- Deleted users (whom we keep to check this user's event history), its name, and last name are also replaced with **Anonymous user** text.

6.4 Other Settings

6.4.1 Time zone

Setting the time zone is not mandatory but recommended. Having a track of the local time is important for displaying all events time with the correct timestamp. The setting is global which means that once you set it, the same time zone will be set on all centrals in the system.

NTP server

If the case of NovaServer or central type (you can check the version of the central in **Hardware > Centrals**, next to its type, the hardware version should be at least (3.0)) and has internet access, providing an NTP address will sync the system time with the provided time server daily. It is enough to set this option on master only (the other slave centrals are automatically updated with the master's time – their hardware version does not matter). Many servers provide this service for free, so pick the one that is close to you (less delay).

6.4.2 Web server port

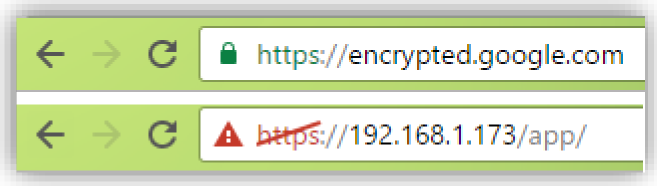
Sometimes the software needs to be accessed from the internet, but in cases where something is already occupying the default HTTP port (80), internal ports can be changed and forwarded to meet the needs.

- The Nova software currently supports five (5) different ports: 80, 81, 8000, 8080, and 8181.
- The GUI will automatically restart, once the port is changed. In a couple of seconds, the new page can be accessed locally on http://<CentralIP>:< port>.
- Ports are now ready and MUST be forwarded on the **router** from a newly changed port on central to external ports.

IMPORTANT! If you are making any changes to the webserver port, please write it down somewhere, because it is easy to forget that the option was changed and the central is not accessed normally, which could cause confusion and thereby waste a lot of time when support is required.

6.4.3 Security settings

IMPORTANT! Accessing any https page with incorrect (self-signed) certificates will display an unsecured connection because the certificates are not signed for the correct web address (usually local IP if the access is from the local network). The connection is encrypted but the target self-signed certificate was not confirmed by a third party. Adding an exception will allow you to visit the site, however, if we want the connection to be secure, the certificates for the web address must be bought and uploaded to the central (example: DNS certificates bought for x-company will allow secure connection for https://x-company.com and the identification is confirmed by the company who issued the certificates).


https://encrypted.google.com

~~https~~://192.168.1.173/app/

Picture 6.6: Difference between HTTPS access with a certificate/site with a self-signed certificate

More on custom certificates and secure connections can be read in 17 Module: High-security module.

HTTPS redirect

The new central types (you can check the version of the central in **Hardware > Centrals**, next to its type, the hardware version should be at least (3.0)) support HTTPS access, which is always turned on (it just depends if you write http or https in front). This option, if enabled, redirects anyone who wishes to access the site from http to https.

Disable SSH access

If the customer is having some issues, we use SSH port (22) to check "behind the curtain" why something is not working. This also presents a security risk when SSH vulnerabilities are discovered. System administrators can choose to turn off SSH access completely if this is a concern.

A secure connection between centrals

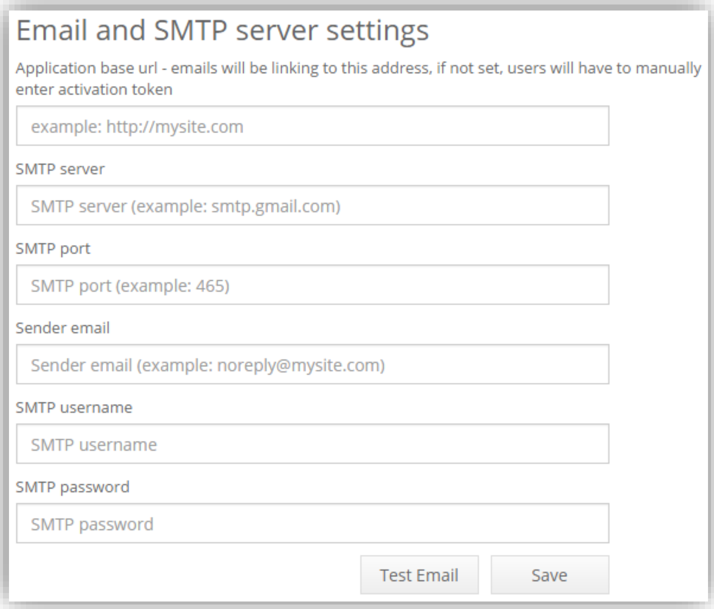
Available options:

- **None –** the communication between centrals will not be encrypted. **NOTE:** The connections between the centrals are unsafe. Using this method is **NOT RECOMMENDED**.
- **Optional –** the communication between centrals will try to be encrypted, but if it can't, it won't be. Since the old type (Hardware < 3.0) of centrals do not support encrypted communication, **any communication with the old central will not be safe**. The communication between the new centrals will remain encrypted.
- **Required –** ignores the centrals that are not able to communicate securely.

To read more about the additional security module, please read chapter **17 Module: High-security module**.

6.4.4 Email and SMTP server settings

With the new Nova 2.0 software, we can send emails to users in the system. This is used in the **Module: Presence, Module: Messaging, New user creation, Password recovery**…
The grey text in the text box is an example of Gmail settings.
IMPORTANT! The google account must **allow less secure apps** to be able to connect to the Gmail account. Please make sure that this is **turned ON,** on your Gmail account that you wish to use in Nova 2.0 for email sending.



Email and SMTP server settings

Application base url - emails will be linking to this address, if not set, users will have to manually enter activation token

example: http://mysite.com

SMTP server

SMTP server (example: smtp.gmail.com)

SMTP port

SMTP port (example: 465)

Sender email

Sender email (example: noreply@mysite.com)

SMTP username

SMTP username

SMTP password

SMTP password

Picture 6.7: Email and SMTP server settings

6.4.5 System PIN settings

Selecting the option to enable **Unique PIN** will prevent users from having the same PIN in the system (more secure).
The alternative option is to disable Unique PIN, which will let users use the same PIN. Users with the same PIN will be able to access areas that they have rights to, but if they enter the doors that multiple users have access with the same pin, an event **Access with common PIN** will be displayed in the event list (the system cannot keep track who entered – this is a less secure option).

Global PIN length – by providing the global PIN length, the software will apply a PIN length to all readers in the system. Whenever adding a new PIN to the user, it's length will be checked. If any of the readers are set to custom PIN length, the user PIN length

check will be disabled; this setting will still apply to other readers. This option can't be turned on until users who have longer PIN shorten it to the same length as a wanted option.
By default, the PIN length is 5.

6.4.6 Show IP camera picture

This option is tied to a script that manages a camera (read more on scripting in chapter 7 Module: Scripting). The script is triggered by different events like entry or unknown cards and takes a picture of a person at the monitored door. Pictures are then saved to that central and displayed next to the events. For someone that is running such a script can enable/disable displaying of the pictures displayed in the events and event history (also displayed/hidden in the report).

7 Module: Scripting

The basic functionality of a central can be extended with **EX|FU module**.
These modules are scripts that can define custom rules and actions to take place when a normal system event or a user-defined custom event occurs.
To enable the script module:

- A valid EX|FU module activation key is needed
- Enter the key under the Home > Settings > Add-ons and Modules widget (chapter 6.1).

7.1 Writing EX|FU modules

EX|FU modules are written in Python programming language and are run on the central:

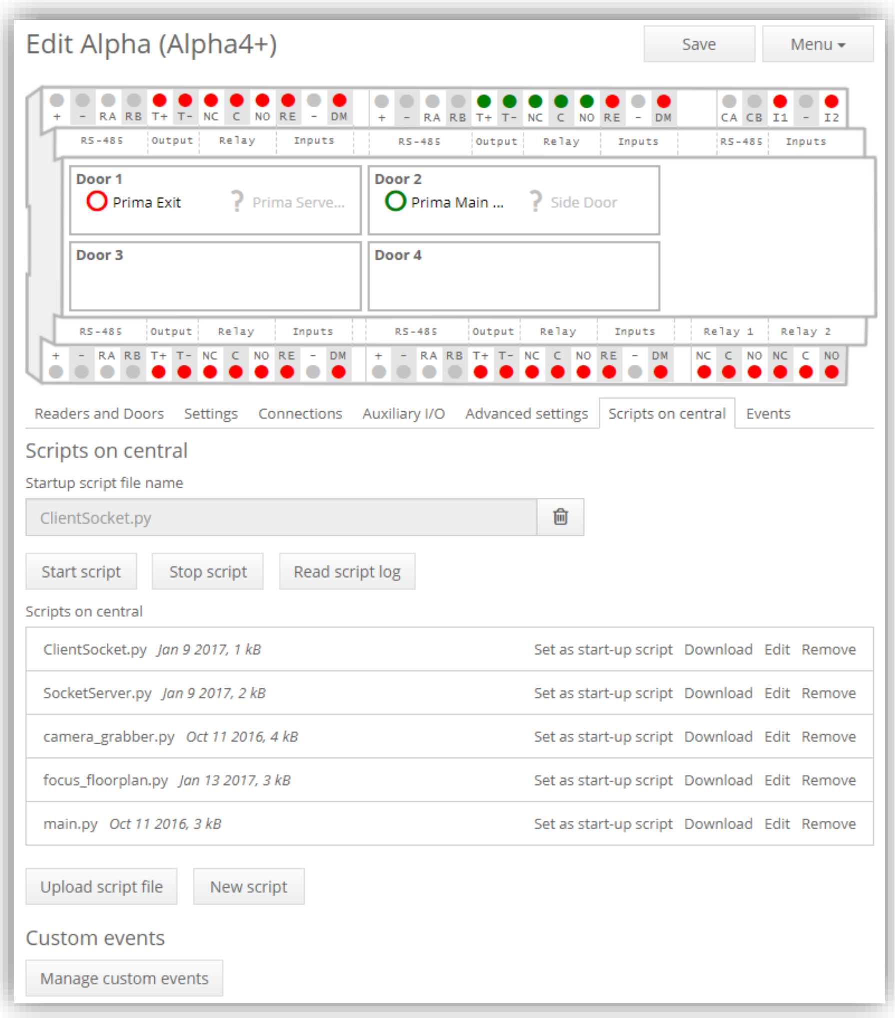
- Which receives events from the system
- Which acts upon events by triggering new events such as:
  - opening multiple doors
  - activating alarm
  - performing other predefined actions

NOTE: It is possible to define custom events that are triggered when a specific event happens. For information about how to write scripts please see the **Scripting manual**, which consists of available **API methods** and practical **examples**.

7.1.1 EX|FU module installation

EX|FU modules are uploaded to the central in the **Central settings** (Picture 5.9) of the central under the **Scripts on the central** section shown in the picture below. This is found by:

1. Navigating to Home > Hardware > Centrals
2. Double click OR select and **Menu > Edit [central name]** the central that you wish to upload the script to.
3. Navigate to Scripts on the central tab



Scripts on central

Startup script file name: ClientSocket.py

Scripts on central

ClientSocket.py	*Jan 9 2017, 1 kB*	Set as start-up script	Download	Edit	Remove
SocketServer.py	*Jan 9 2017, 2 kB*	Set as start-up script	Download	Edit	Remove
camera_grabber.py	*Oct 11 2016, 4 kB*	Set as start-up script	Download	Edit	Remove
focus_floorplan.py	*Jan 13 2017, 3 kB*	Set as start-up script	Download	Edit	Remove
main.py	*Oct 11 2016, 3 kB*	Set as start-up script	Download	Edit	Remove

Custom events

Picture 7.1: Scripts on a central

Upload a script:

1. Select the button Upload script file.
2. Search for the script on a list presented in the browser window.
3. Select the script from a local hard drive.
    - The script is uploaded to the central.
    - The uploaded script is visible in the list above the button **Upload script file**.
    - When the script is uploaded, its additional information and options are shown.

Different options are:

- **Download -** script from central to a local hard drive.
- **Edit –** allows users to edit the script directly on the central.
- **Remove** script from central.
- Set script as a start-up script:
    - A startup script starts together with the central.
    - A startup script file name is listed under the **Startup script file name** field above the list of scripts.

        - This field can only be set through the listed scripts options.
        - To remove the script from this field, click on the trash button next to the file name.

IMPORTANT! The scripting engine of the central re-starts if there is a new start-up script set and it will stop if the script is removed from the start-up script field. The engine also restarts after uploading new script files to the central or after removing scripts from the central.

To manage a start-up script:

1. Click the **Start script** button to start the script manually.
2. Click the **Stop script** button to stop it.
    - Above is useful for testing purposes such as new functionalities and behavior.
3. Click on the button **Read script log** to check a file containing the script log.
    - The log includes the standard output of any running script.

IMPORTANT! If a script crashes, the compilation errors are not present in the script execution log file! One solution to avoid this is to trace script progress to standard output and discover errors based on this.

7.2 Custom EX|FU events

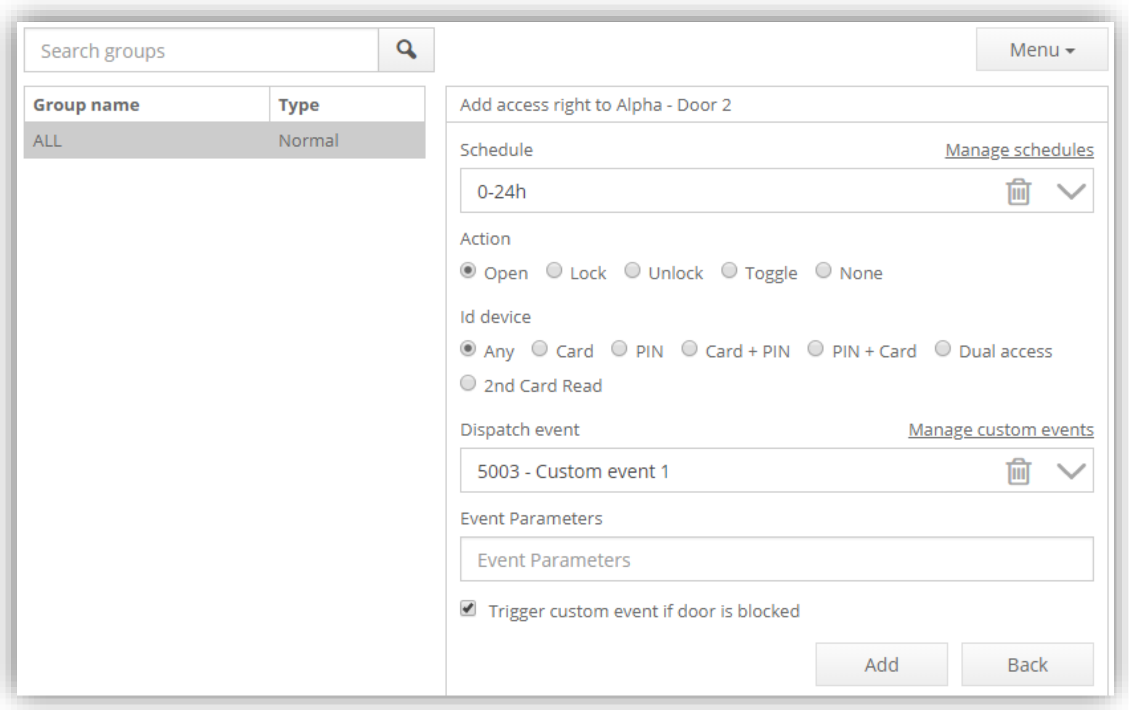
It is possible to add custom events to the Nova system and later dispatch them in the context of user-created events.

7.2.1 Custom events editor

Two ways to access the **Custom events editor***:*

1. Go to Home > Users & Access Rights > Access Groups.
    - Click on the (+) button next to the reader you want to assign a custom event OR click on the pen button for existing rights*.*
    - Click Manage custom events

2. On master central go to Home > Hardware > Centrals > [master central]> Edit
    - Click tab Scripts on central.
    - Click the button Manage custom events



Group name	Type
ALL	Normal

Add access right to Alpha - Door 2

Schedule: 0-24h

Action: ● Open ○ Lock ○ Unlock ○ Toggle ○ None

Id device: ● Any ○ Card ○ PIN ○ Card + PIN ○ PIN + Card ○ Dual access ○ 2nd Card Read

Dispatch event: 5003 - Custom event 1

Event Parameters: Event Parameters

☑ Trigger custom event if door is blocked

Picture 7.2: Select schedule, action, identification device, and dispatch event

Manage custom events

To open the **Custom events editor**:

- Click the **Manage custom events** text displayed on Picture 7.2.

The menu contains options to:

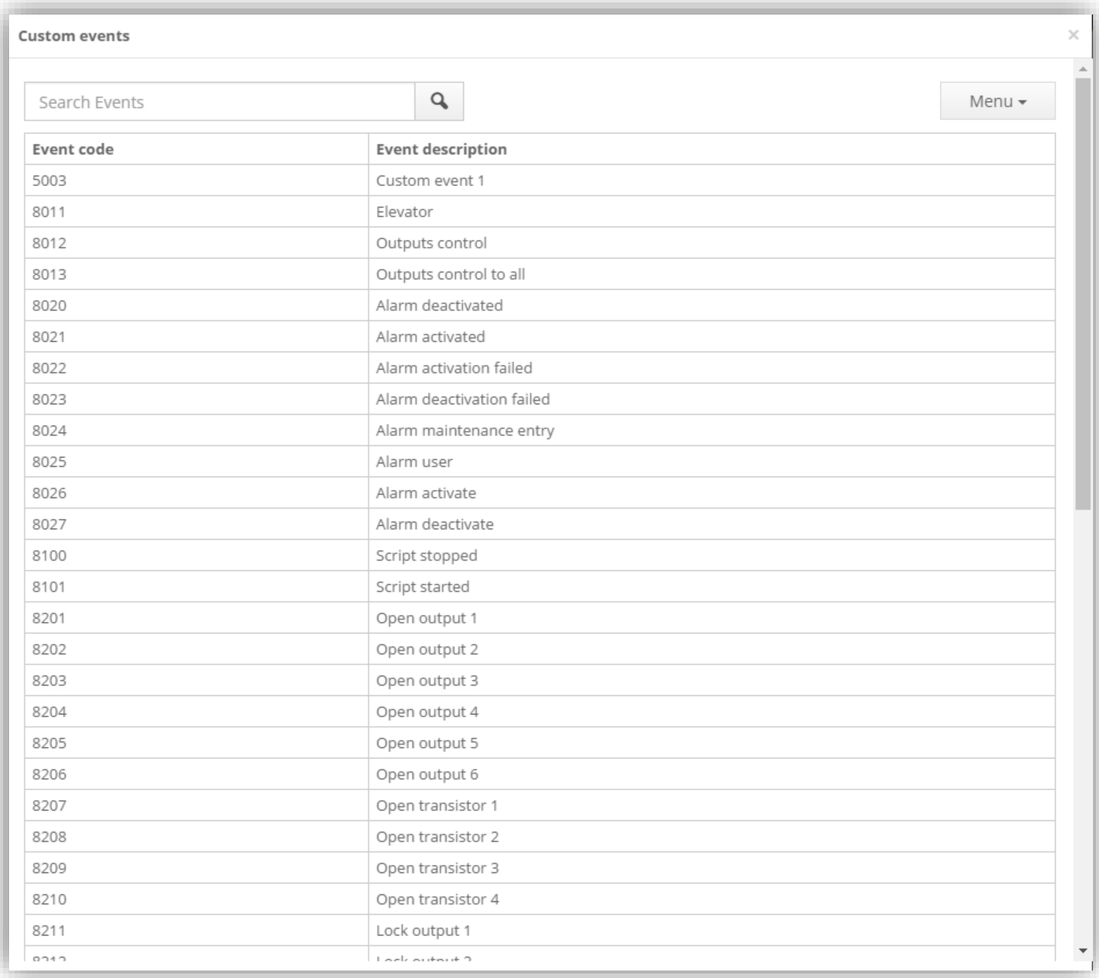
- **Add** user assigned event
- **Edit** an existing event entry (must be selected)
- **Delete** unwanted events (must be selected)

The left panel contains:

- List of all custom event codes in the Nova system

Right panel contains:

- Description of the event codes.



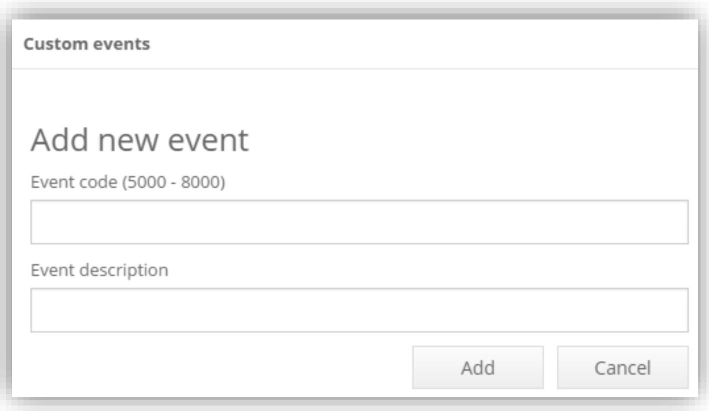
Event code	Event description
5003	Custom event 1
8011	Elevator
8012	Outputs control
8013	Outputs control to all
8020	Alarm deactivated
8021	Alarm activated
8022	Alarm activation failed
8023	Alarm deactivation failed
8024	Alarm maintenance entry
8025	Alarm user
8026	Alarm activate
8027	Alarm deactivate
8100	Script stopped
8101	Script started
8201	Open output 1
8202	Open output 2
8203	Open output 3
8204	Open output 4
8205	Open output 5
8206	Open output 6
8207	Open transistor 1
8208	Open transistor 2
8209	Open transistor 3
8210	Open transistor 4
8211	Lock output 1
8212	Lock output 2

Picture 7.3: Manage custom events

7.2.2 Adding a new custom event

To add a new custom event:

1. Click on Menu > Add
   - A new form will open (Picture 7.4)
2. Enter the required **Event code** number (range: 5000-8000)
   - Event code number must be unique
   - Event description must be unique
3. Pressing the **Add** button will add it to custom events lists in custom events editor



Custom events

Add new event

Event code (5000 - 8000)

Event description

Picture 7.4: Add new event

7.2.3 Editing and deleting custom events

To **edit** custom events:

- Double click on the event in the events list

OR

- Select the event and click on **Menu > Edit** button

NOTE: The description of the event is only changeable after adding it to the system.

To delete custom events:

- Select the unwanted event in the events list
- Click **Menu > Remove** button

NOTE: It is not possible to delete events assigned to the access definition(s).

7.2.4 Dispatching/assigning custom events

A custom event can be assigned to **any access definition** and it will be dispatched when the access definition is matched with an incoming event (e.g. when a user registers the card on the reader, to which the user has access rights).
We also can decide with a checkmark, if we want to trigger the custom event if the door is blocked or no.
To assign a custom event to an access definition:

- **Select custom event** from the dropdown list
- **Save** changes
    - Optionally, by providing additional parameters (arbitrary string values) it is possible to add values to the script when the event is dispatched (see Picture 7.2 for the dropdown list with selected event **Alarm ON**).

7.2.5 Built-in events

Some events are built into Nova and can be used in the same way as manually added events. See the below table for a presentation of these.

IMPORTANT! Note that some events are part of python scripts on the central, e.g. alarm events. Inappropriate use of those events can cause scripts to fail. Please read the event description for more information on how to use them.

IMPORTANT! Using Outputs control or Outputs control for all, the parameters from 1 to 6 represent relays, 7 – 10 are transistors.

Event name	Parameters	Description
Output control	comma separated list of outputs (1-10): [time in ms] : [Open (default) | Lock | Unlock| Toggle]	Advanced output control, e.g.: 1,2,3,4,5,6,7,8,9,10:Toggle toggles all outputs and transistors; 1,2,3:1000 opens output 1,2 and 3 for 1 second, ...
Open output X	[time in milliseconds]	Opens output X for the defined time
Open transistor X	[time in milliseconds]	Opens transistor X for the defined time
Lock output X		Sets output X to a locked state
Lock transistor X		Sets transistor X to a locked state
Unlock output X		Sets output X to unlocked state
Unlock transistor X		Sets transistor X to unlocked state
Toggle output X		Toggles state of output X
Toggle Transistor X		Toggles current state of transistor X
Alarm activate, **Alarm user,** **Alarm ...**		Events are used with simple alarm integration script and SHOULD NOT BE USED DIRECTLY, exceptions are only Alarm activate event and Alarm user event. See chapter 8.3 Simple alarm integration for more information.

Table 7.1: List of built-in events

IMPORTANT! The built-in events are only useable if there is a Scripting activation key entered in the system.

7.3 Simple alarm integration

Alarm integration allows users to:

- Control alarm zones with their cards and online readers
- Get a detailed log of alarm state changes in the form of system events
  - The system events can be printed out

NOTE: A central in the access control system can control one alarm zone. If there is a need to control multiple alarm zones, there have to be other centrals in the system for each alarm zone. Also, note that each alarm zone is controlled independently of other alarm zones.

7.3.1 System prerequisites and alarm script installation

To enable alarm functionality:

- The scripting activation key is required
  - Please see chapter 6.1 Add-ons and Modules for more information on activation key installation
- Scripts **Alarm.py** and **main_simple_alarm.py** are required on central to control selected alarm zone.
- User with system administrator rights must have the **same authentication credentials** as the ones defined in *main_simple_alarm.py* script
- The default user to log-in is defined in the special user known as the **Scripting module.**
  - ⇨ Install the above-mentioned scripts on central and select **main_simple_alarm.py** as **a startup script**. For more information on how to install scripts on the central, please refer to chapter 7.1.1 EX|FU module installation*.*

IMPORTANT! Nova software automatically adds a scripting user to the system when the scripting key is entered. When writing credentials to the script, username can be set to "**scripting**"and the password can be left empty (""). This prevents abuse of a scripting account because the password cannot be gathered from a python script.

IMPORTANT! The added scripting account needs to be set as *the* **system administrator** to be able to log-in to the system and **its credentials need to stay intact**.

7.3.2 Access group configuration

Create special access groups to give users rights to activate or deactivate alarm zones. Some users may only activate alarm while others are also allowed to deactivate it. There is a need for two access groups to achieve described user cases, one for alarm activation and one for alarm deactivation.

To create an **alarm activation access group**, please follow these steps:

1. Create a **new access group** and give it a descriptive name, e.g. Main Door Alarm Activation.
2. **Add a new access definition to the reader** picked to control an alarm zone in the context of the newly created access group.
3. **Select a schedule,** which will define a period for activating an alarm.
4. Set Action to None.
5. Set ID device to 2nd card read.
6. Set Dispatch event to Alarm activate.
7. **Save** changes.

To create an **alarm deactivation access group**, please follow these steps:

1. Create a **new access group** and give it a descriptive name, e.g. Main Door Alarm Deactivation.
2. **Add new access definition to the reader** picked to control an alarm zone in the context of the newly created access group.
3. Select a **schedule,** which will define the period for activating an alarm.
4. Set Action to None.
5. Set ID device to Any.
6. Set Dispatch event to the Alarm user.
7. **Save** changes.

After creating access groups, **assign to users responsible for alarm zone management**. Both of the access groups need to be assigned the users with the right to activate and deactivate the alarm. Some groups can be assigned only to the users who can activate the alarm (**alarm activation access group**).

7.3.3 Activation of alarm

When the alarm is disabled and a user assigned with the **"alarm activation access group"** presents the card on a reader included in the access group, the door will be opened (regardless of **Action** setting of **None**, set under step 4).
At this point the user can:

- Remove his card from the reader and **pass the door.**
- Activate the alarm by holding the card on a reader for two reads (app. 5 sec).
    - The central will send a request signal for an alarm activation and wait for the confirmation signal.
    - Positive confirmation signal: the reader will **beep five times** with a **short OK tone.**
        - Event 8021 – Alarm on is triggered.
    - Negative confirmation signal: the **reader will beep** with a **long ERROR tone.**
        - Event 8022 – Alarm activation failed is triggered.
    - When the **alarm** is **set**, **all readers** on the central are **blocked.**

7.3.4 Deactivation of alarm

All readers in an alarm zone are blocked when the alarm is activated and users are not able to access any doors:

  - Result: **Error sound** will inform that alarm is activated.
  - **Users cannot enter** the doors until the alarm is deactivated.

Users assigned with alarm deactivation access group can **deactivate the alarm by presenting the card on the reader**:

  - The alarm deactivation request is sent to the alarm central when a card is read for the second time.

- Positive confirmation signal: doors will open and the reader will beep three times with short OK signal.
  - Event 8020 – Alarm off will be triggered.
- Negative confirmation signal: the reader will beep with a long ERROR signal.
  - Event 8023 – Alarm deactivation failed will be triggered.

NOTE: If alarm deactivation fails three times in one minute:

  - Doors will be opened.
  - The reader will beep the same way as when the alarm is activated (five short OK beeps) and event 8024 – Alarm maintenance entry will be triggered.

IMPORTANT! Readers do not signalize whether the alarm is ON or OFF due to security reasons.

8 Module: Door stations

- The Door station module in Nova is a part of the door and building information communication system
- The Door station module is installed with the Nova access control system
- The Door station module allows the control of text on various displays e.g. door stations, call buttons and video indoor stations

To use the Door station module in Nova, enabled it by:

1. Enter a valid Door station module activation key (See **Add-ons and Modules** section for help on adding new activation keys)
2. Navigate to **Home > Hardware > Door stations** in the widget menu

8.1 Door station module setup

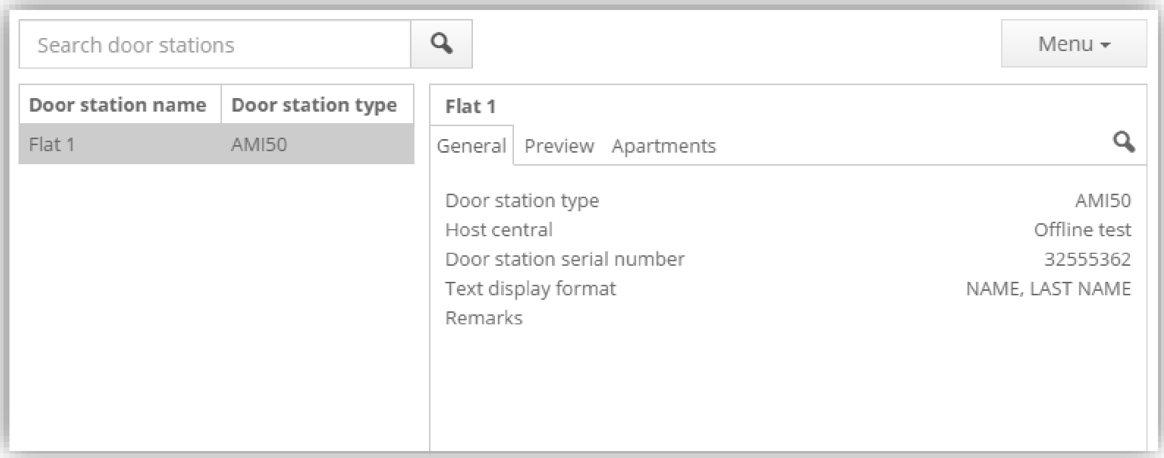
To set-up the Door station module:

1. Import apartments into the Door station module with **Apartments manager**
2. Access **Apartments manager** via widgets **Home > Hardware > Apartments** or directly from the Door-station widget: **Menu > Manage apartments** (Picture 8.1)
3. Insert serial numbers of installed hardware (call button and indoor video station)
   - Serial numbers are required to communicate with apartment hardware
   - For more information, read the **Manage apartments** section
4. Insert serial numbers of door stations
5. Insert names of central connected to door stations
   - See **Adding door stations** section for more information
6. Link apartments and door stations
   - Each door stations must-have apartments assigned to show text on the different displays
   - See the **Assigning apartments to door station** section for more information
7. Assign apartments to users
   - This can be accessed through **Users & Access rights** in the Nova main menu
   - Here a user is selected from the list by clicking on **Menu > Edit User [name]**
   - A user profile will show up
   - Select the button **apartment settings**
   - See section 8.5 Assigning apartments to the users for more information

8.2 Door station manager popup window

Picture 8.1 shows the Door station manager:

- Left panel: All door stations created are listed here with their type.
- Right panel: Details of the selected door station.



Door station name	Door station type
Flat 1	AMI50

Flat 1

Door station type	AMI50
Host central	Offline test
Door station serial number	32555362
Text display format	NAME, LAST NAME
Remarks	

Picture 8.1: Door station manager popup window

8.3 Managing apartments

Apartments need to be added to the software before they can be assigned to door stations or users.

It is possible to manage the apartments by clicking on the widgets **Home > Hardware > Apartments** or directly from the Door-station widget: **Menu > Manage apartments**. This presents the apartment manager (Picture 8.2).

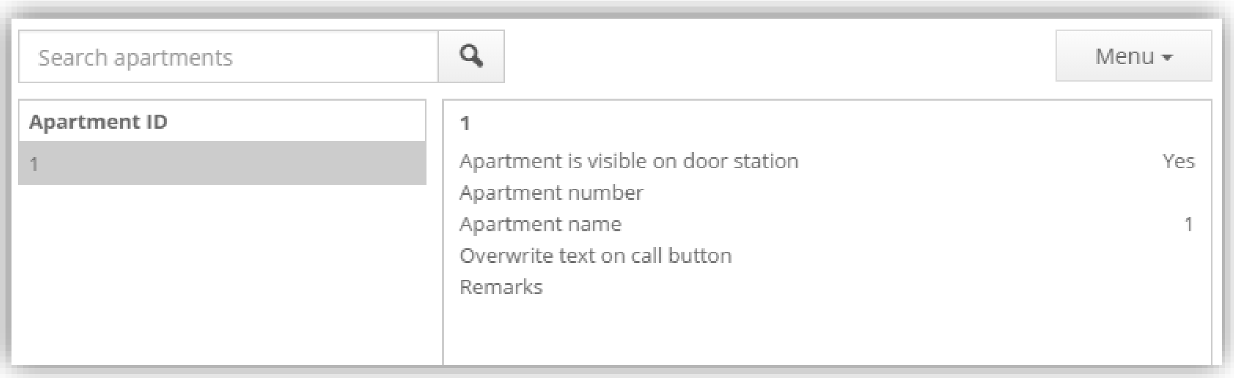
8.3.1 Adding apartments

To add new apartments to the system:

- Click the button Menu > Add apartment
- Enter unique apartment ID
  - The apartment will be added to the apartment list in the apartment manager
  - The apartment list allows to edit or delete apartments

Search function:

- Search in apartment list in the upper corner of the apartment manager
  - Preview of the selected apartment is shown on the right side of the manager window
  - Here important information about an apartment is shown and it is possible to edit it if necessary



1

Apartment is visible on door station	Yes
Apartment number	
Apartment name	1
Overwrite text on call button	
Remarks	

Picture 8.2: Apartment manager

8.3.2 Editing apartment

To edit an apartment:

- Double-click on the apartment ID in apartment list
- OR select the apartment and click **Menu > Edit [apartment ID]** button
    - The apartment editor (Picture 8.3) will open

How it works:

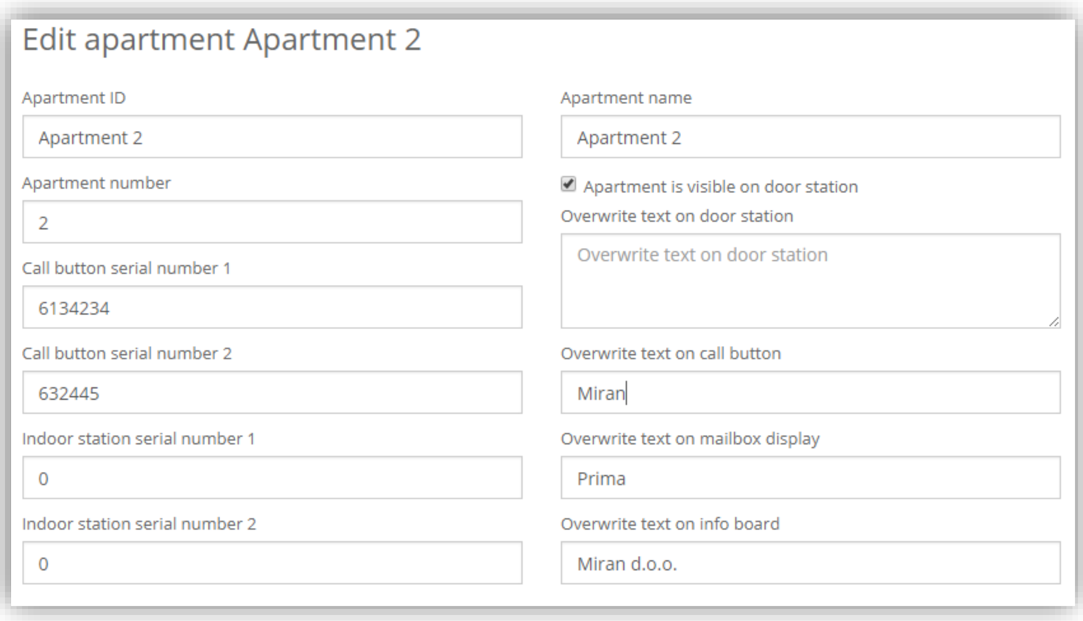
- The hardware components of an apartment (call button and video indoor station) and the Nova software are linked by entering serial numbers of installed hardware into the corresponding input fields in the **Apartment editor**.
- Nova uses serial numbers when relaying information and communicating with door station components.

Important to remember:

- Each apartment needs a unique ID
- The apartment ID is used throughout the software as a reference
- All apartments are listed on the door station by default
    - To change this: <u>un-check</u> the option **Apartment is visible on the door station**
        - The apartment will not be listed on the door station
        - This is relevant in cases where the door station is showing the apartment number (not the resident name)
- Additional information about an apartment can be saved in the **Remarks** field
- Changes made to the apartment must be saved by clicking on the button **Save**.

Door station text and call button:

- Defined by field **Apartment name**
    - The same name will appear on the call button
    - UNLESS it is overwritten: Entering a custom name in **Overwrite text on call button** field.


Edit apartment Apartment 2

Apartment ID	Apartment 2
Apartment name	Apartment 2
Apartment number	2
☑ Apartment is visible on door station	
Overwrite text on door station	Overwrite text on door station
Call button serial number 1	6134234
Call button serial number 2	632445
Overwrite text on call button	Miran
Indoor station serial number 1	0
Overwrite text on mailbox display	Prima
Indoor station serial number 2	0
Overwrite text on info board	Miran d.o.o.

Picture 8.3: Apartment editor

8.3.3 Removing apartments

Apartments can be removed when they are no longer needed, e.g. they are not assigned to any door stations and not assigned to any of the users.
To remove the apartment from the Door station module:

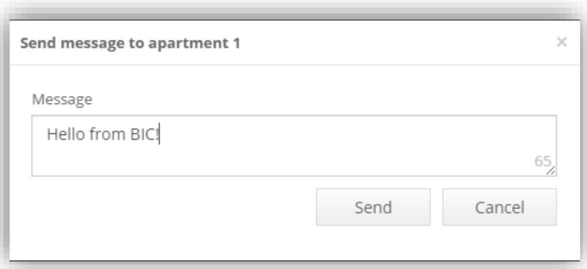
- Click the **Menu > Remove [apartment ID]** button in the **Apartment editor** (Picture 8.2)
    - After removal confirmation, the apartment is removed from the list

8.3.4 Sending messages to apartments

- Short messages can be sent to each apartments' video indoor station where users can read them
- Each message can contain up to 80 characters

To send messages:

1. Select apartment(s) from the apartment list
    - Use the **shift** button (on your keyboard) to select multiple apartments
2. Click on **Send a message to apartment** button (see Picture 8.2; the same button is also present in the apartment editor)
3. Type message into popup window (Picture 8.4)
4. Click on **Send** a message to apartment button



Send message to apartment 1

Message

Hello from BIC!

Picture 8.4: Message input popup window

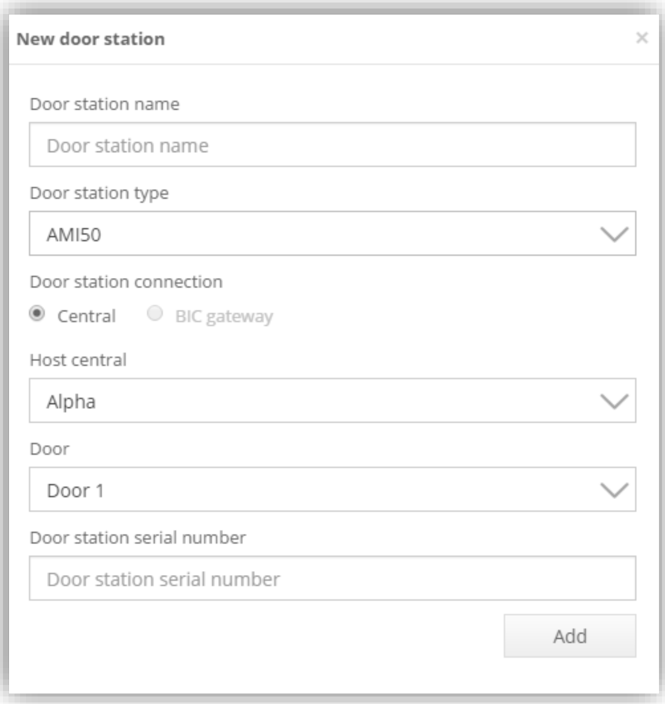
8.4 Door station management

Enter settings for door stations in the door station manager.

8.4.1 Adding door stations

To add door stations:

1. Click the **Menu > New door station** button in the Door station editor
   - Opens up popup window (Picture 8.5)
2. Enter the name, serial number, and type for the new door station
3. Select host central and door of selected central that is wired to the door station
4. Save door station by clicking on **Add** button
   - The newly created door station will be added to the door stations list where it can be selected and managed



New door station

Door station name: Door station name

Door station type: AMI50

Door station connection: ● Central ○ BIC gateway

Host central: Alpha

Door: Door 1

Door station serial number: Door station serial number

Picture 8.5: New door station popup window

8.4.2 Editing door station

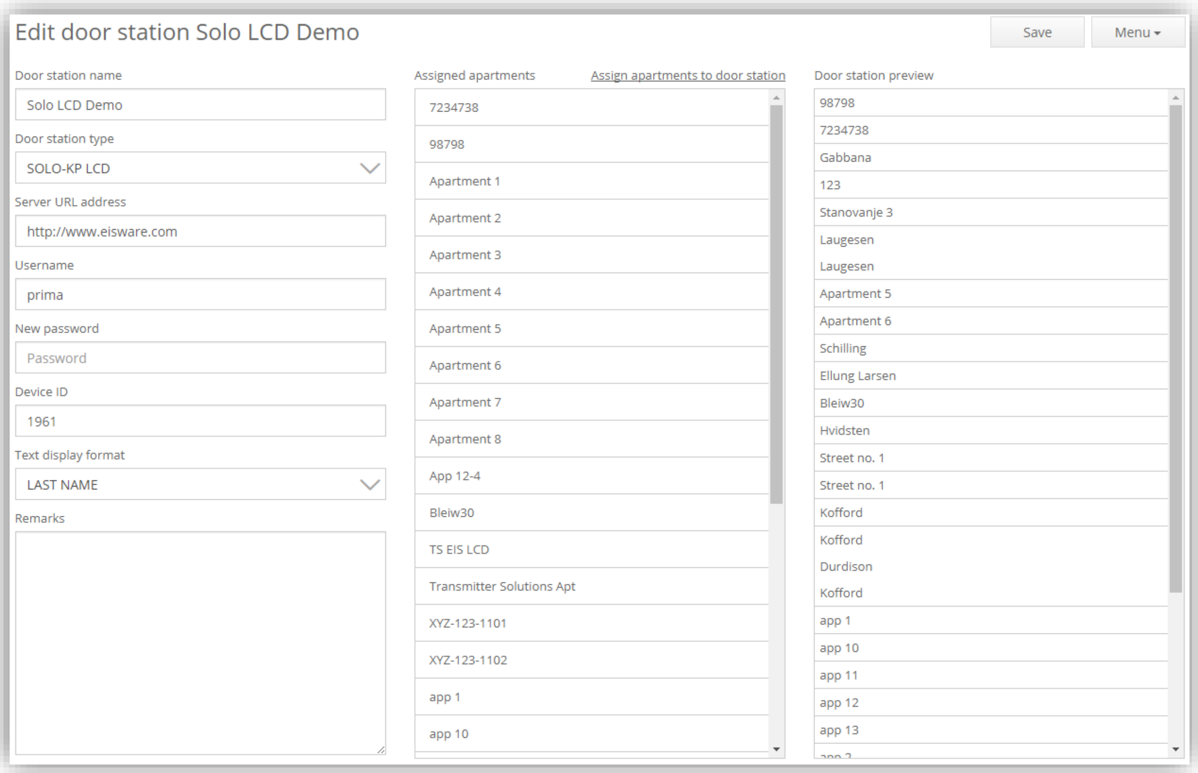
To edit door station (Picture 8.6):

- Select the door station and **Menu > Edit [door station name]** button
- OR double-click on the door station name on the list

In the Door station editor, the central panel allows a user to modify:

- Name
- Type
- Host central
- Host door, that the central is connected to
- Serial number or RS-485 address
- Text display format

Remember to save any changes!



Edit door station Solo LCD Demo

Door station name: Solo LCD Demo

Door station type: SOLO-KP LCD

Server URL address: http://www.eisware.com

Username: prima

New password: Password

Device ID: 1961

Text display format: LAST NAME

Remarks:

Assigned apartments

- 7234738
- 98798
- Apartment 1
- Apartment 2
- Apartment 3
- Apartment 4
- Apartment 5
- Apartment 6
- Apartment 7
- Apartment 8
- App 12-4
- Bleiw30
- TS EIS LCD
- Transmitter Solutions Apt
- XYZ-123-1101
- XYZ-123-1102
- app 1
- app 10

Door station preview

- 98798
- 7234738
- Gabbana
- 123
- Stanovanje 3
- Laugesen
- Laugesen
- Apartment 5
- Apartment 6
- Schilling
- Ellung Larsen
- Bleiw30
- Hvidsten
- Street no. 1
- Street no. 1
- Kofford
- Kofford
- Durdison
- Kofford
- app 1
- app 10
- app 11
- app 12
- app 13
- app 2

Picture 8.6: Door station editor

8.4.3 Removing door stations

Door stations can only be removed from the system if there are no apartments associated with them. For details on assigning and un-assigning apartments to the door station, please see the section **Assigning apartments to the door station**.

To remove a door station:

- Select the Door station and press **Menu > Remove [door station name]** button from the drop-down menu
    - The door station will be removed from the list and the system

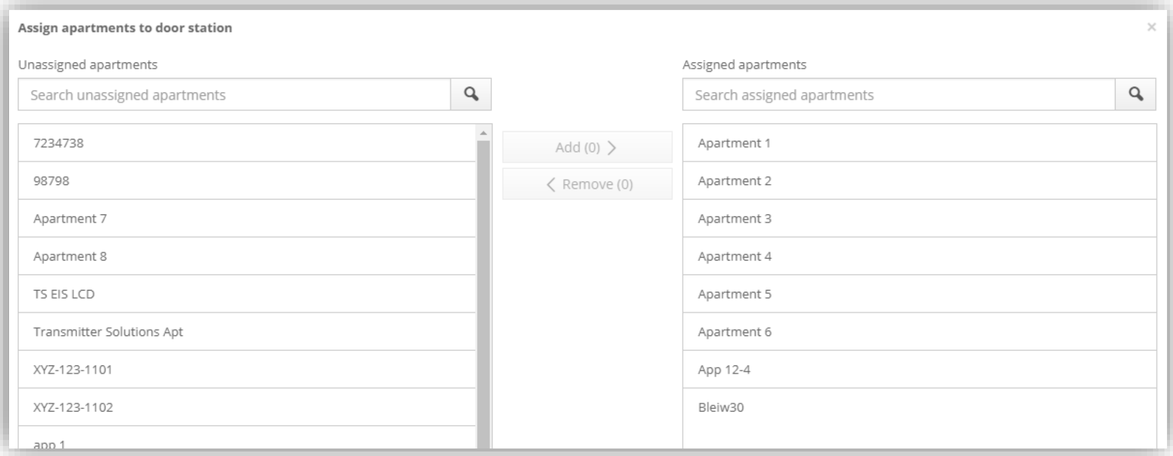
8.4.4 Preview of door station information

Preview of display text on the edited door station is visible in the **Door station preview** tab in the **door station editor.**
It contains the apartments associated with the edited door station, the users that are associated with the apartments, and on the option selected in the **Text display format** drop-down menu.
For more information on the apartment assignment, see section **8.5 Assigning apartments to the users**.

8.4.5 Assigning apartments to the door station

Before assigning apartments to the door station, add all apartments to the system that should be visible on the door station. See the explanation in the previous section. In the following, it is assumed that all apartments are already present in the system.
To assign apartments to door station:

- Enter the Door station settings – select the text box **Assign apartments to door station** that is located in the middle column.
    - A new pop-up will appear with the display of all un-assigned apartments noted in the left column and assigned apartments in the right - see Picture 8.7.



Assign apartments to door station

Unassigned apartments	Assigned apartments
7234738	Apartment 1
98798	Apartment 2
Apartment 7	Apartment 3
Apartment 8	Apartment 4
TS EIS LCD	Apartment 5
Transmitter Solutions Apt	Apartment 6
XYZ-123-1101	App 12-4
XYZ-123-1102	Bleiw30
app 1	

Picture 8.7: Assigning apartments to the door station

Assigning apartment(s) to door station:
Start typing Apartment ID into the search field on the left, and when it is shown in the list, select it and press the Add button. The apartment(s) will be assigned to the door station and will appear in the list of assigned apartments.
Un-assigning apartment(s) from the door station:

Select apartments from the right panel and by pressing the **Remove** button. The apartment (s) will be unassigned from the door station.

NOTE: Multiple apartments can be selected using the "Shift" or the "Ctrl" key.

Search function:

- If any of the lists contain a lot of apartments, it can be narrowed by entering the apartment name into the search field. Once the correct apartment is displayed, it can be easily assigned or removed.

8.4.6 Updating content on the door station

NOTE: The sysadmin can always manually update data from GUI. If the user's data or apartment is changed by the administrator, its data will be updated the next day. In the morning hours, the system will check if any changes were made in the previous day and automatically apply them. The data is not updated immediately because on some devices this takes a long time and during that time the device is inaccessible.

When all settings for the door station are saved and the apartments are assigned, this data needs to be updated on the display of the door station.
To update content on door station:

- **Select the Door station** from the Door station editor.
- Click the button Menu > Update data on the door station.
  - Updated data is sent to the door station.
  - The door station replaces old data with new.
  - Door station device is restarted

NOTE: Sending data and updating information on the door station can take some time. It takes approximately 10 minutes to send and update data of 100 users/apartments.

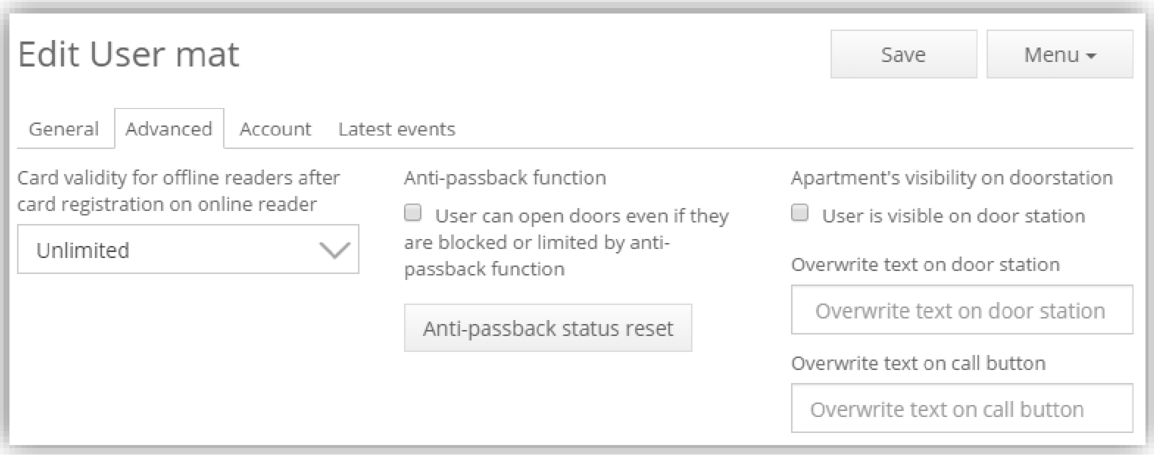
8.5 Assigning apartments to the users

The user needs to have an **apartment assigned** to be visible on the display of the door station/mailbox/info board.

To assign apartment settings to a user:

1. Navigate to **Users** widget.
2. Select a user from the list.
3. Double click on the user or select **Menu > Edit user [Name].**
   - The user's profile is displayed.
4. Enter the Apartment's name to the **User's apartment** field.

8.5.1 Advanced text manipulation



Edit User mat

Card validity for offline readers after card registration on online reader: Unlimited

Anti-passback function

□ User can open doors even if they are blocked or limited by anti-passback function

Apartment's visibility on doorstation

□ User is visible on door station

Overwrite text on door station: Overwrite text on door station

Overwrite text on call button: Overwrite text on call button

Picture 8.8: Advanced apartment settings for a user

Advanced settings for door stations and call buttons

To leave out username from door station:

1. Navigate to the specific user and select its **Advanced** tab like shown in Picture 8.8.
2. Un-check the field User is visible on the door station

To overwrite text on door station or call button:

- The fields **Overwrite text** directly changes the settings for the assigned apartment (it overwrites text on door station/call button) and it is meant for custom text changes.

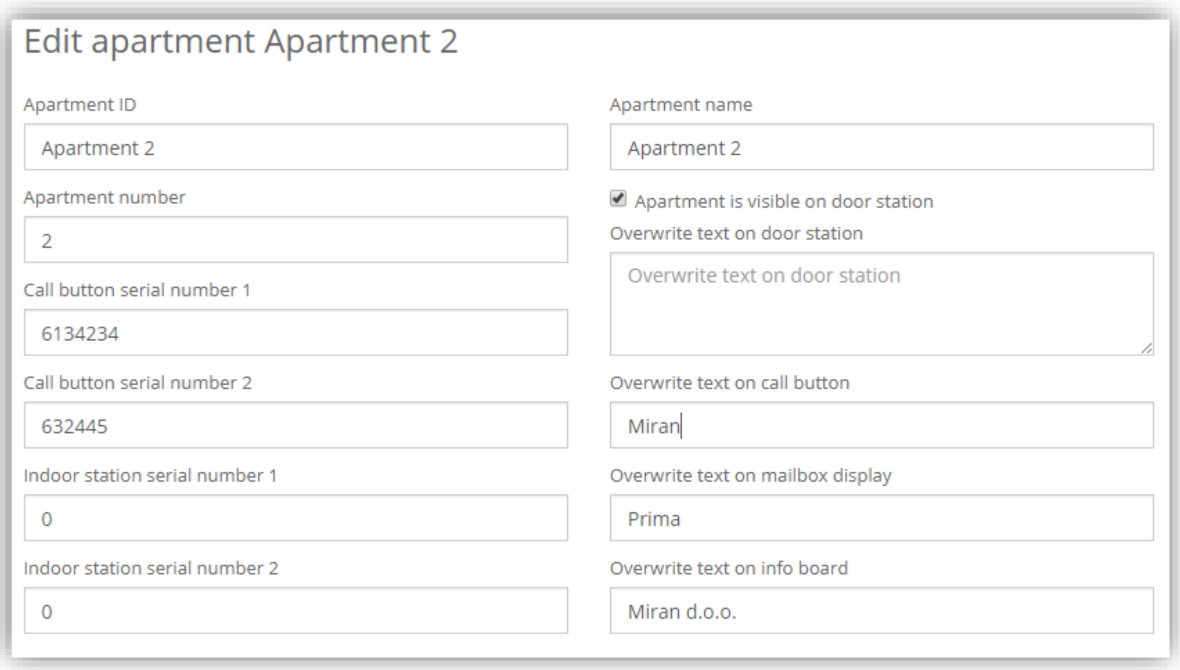
Useful for: Situations where an administrator is administering users but has no privileges to alter the hardware settings.

IMPORTANT! Remember to update all data on door stations after changing any of the **Apartment settings** for a user.

Advanced settings for door mailbox display and info board

To provide a custom text on mailbox display/info board:

1. Navigate to **Apartments** widget and access the specific apartment
2. Change the **Overwrite text** entry like shown in Picture 8.9.



Edit apartment Apartment 2

Apartment ID	Apartment name
Apartment 2	Apartment 2
Apartment number	☑ Apartment is visible on door station
2	Overwrite text on door station
Call button serial number 1	Overwrite text on door station
6134234	
Call button serial number 2	Overwrite text on call button
632445	Miran
Indoor station serial number 1	Overwrite text on mailbox display
0	Prima
Indoor station serial number 2	Overwrite text on info board
0	Miran d.o.o.

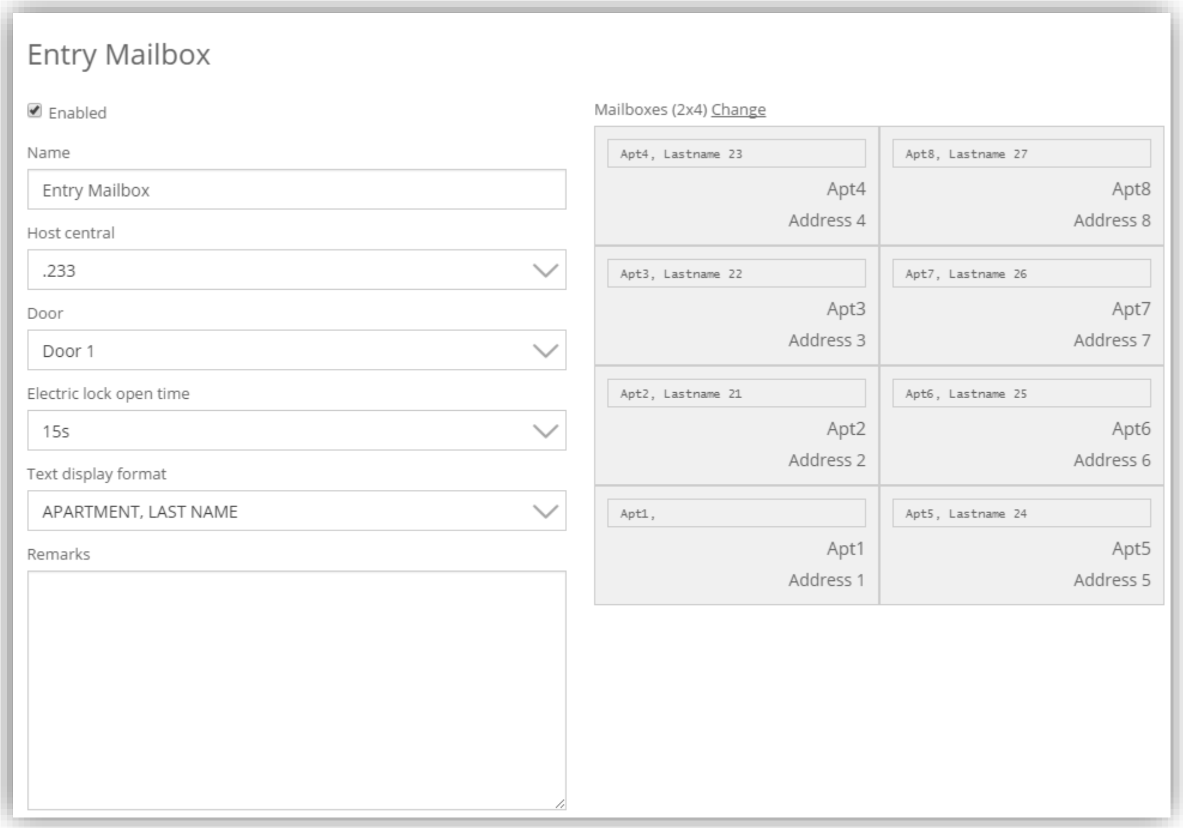
Picture 8.9: Apartment management

IMPORTANT! If there are **multiple users assigned** to the **same apartment**, some of the display options allow displaying text for more than one person.
If more than two persons with different last names are assigned in the same apartment, the software will use the data from the first two created (for any modifications, please use the overwrite function explained at the beginning of the sub-chapter).

9 Module: Mailboxes

Use the **Mailbox module** for managing mailbox units. It goes hand in hand with a **Door station module** since they both use the same apartment structure.
To read about apartment creation and management, please read chapter 8.3 Managing apartments and 8.5 Assigning apartments to the users.

After creating and assigning the apartments, it is possible to create a mailbox unit in the software.



Entry Mailbox

☑ Enabled

Name: Entry Mailbox

Host central: .233

Door: Door 1

Electric lock open time: 15s

Text display format: APARTMENT, LAST NAME

Remarks

Mailboxes (2x4) Change

Apt4, Lastname 23 Apt4 Address 4	Apt8, Lastname 27 Apt8 Address 8
Apt3, Lastname 22 Apt3 Address 3	Apt7, Lastname 26 Apt7 Address 7
Apt2, Lastname 21 Apt2 Address 2	Apt6, Lastname 25 Apt6 Address 6
Apt1, Apt1 Address 1	Apt5, Lastname 24 Apt5 Address 5

Picture 9.1: Mailbox settings

9.1 Managing mailbox units

To create a mailbox section:

1. Navigate to Home > Hardware > Mailboxes.
2. Press Menu > Add a new mailbox.
3. Set its name and provide data about its master central, which door socket it is connected to, its text display format, and its dimensions.
4. After adding all the information, press button **Add**.

If some mistakes occur during creations, correct by navigating to:

1. Select the mailbox from the list.
2. Press Menu > Edit [mailbox name].

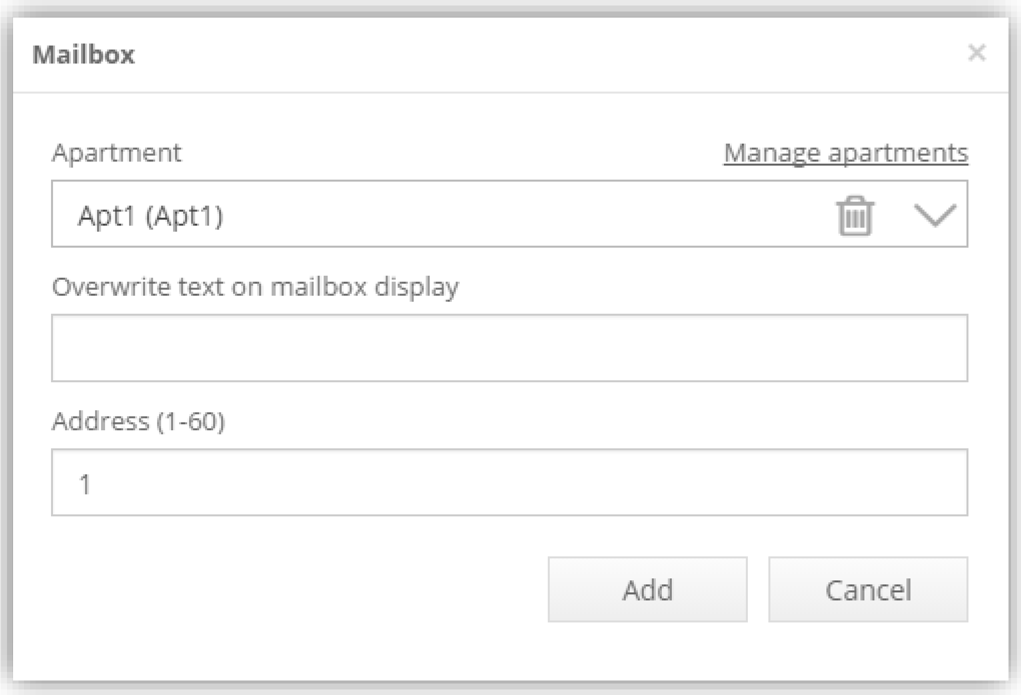
To remove mailbox:

1. Select the mailbox from the list.
2. Press Menu > Remove [mailbox name].

9.2 Assigning mailboxes to apartments

Assigning an apartment to the mailbox:

1. Enter the **mailbox** settings by double-clicking on its name found in the list or by clicking **Menu > Edit [mailbox name].**
2. On the right panel, there is a visual presentation of the mailbox with the dimensions provided when created.
3. By clicking on the single entity, a pop-up window displays, asking for **Apartment**, **overwritten text on the display** and the **mailbox address -** Picture 9.2 (displayed on the screen if nothing is sent as a replacement).
4. Once everything is set-up, press button **Add**.



Mailbox

Apartment

Apt1 (Apt1)

Overwrite text on mailbox display

Address (1-60)

1

Picture 9.2: Assigning mailboxes to apartments

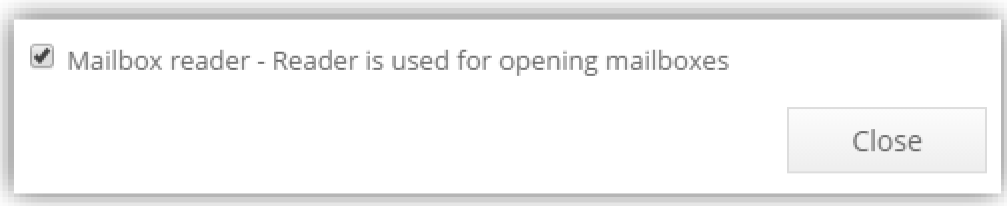
NOTE: The apartment and the mailbox address must be unique for every mailbox unit (can only be assigned to a single entity).

NOTE: The addresses on the old mailboxes varied from 1-64 based on the deep-switches on the mailbox board, while the new mailboxes are automatically numbered starting from addressing 50 to 80 (depending on how many mailbox interfaces there are – 10 addresses per interface).

9.3 Setting the reader to work with the mailbox

To assign a reader for opening the mailbox, navigate to its Advanced settings (Home > Hardware > Centrals > Edit > double click on reader > Advanced tab).

On the bottom of the popup menu, there is an option: Mailbox reader. Ticking this checkmark assigns the selected reader to mailbox handling.

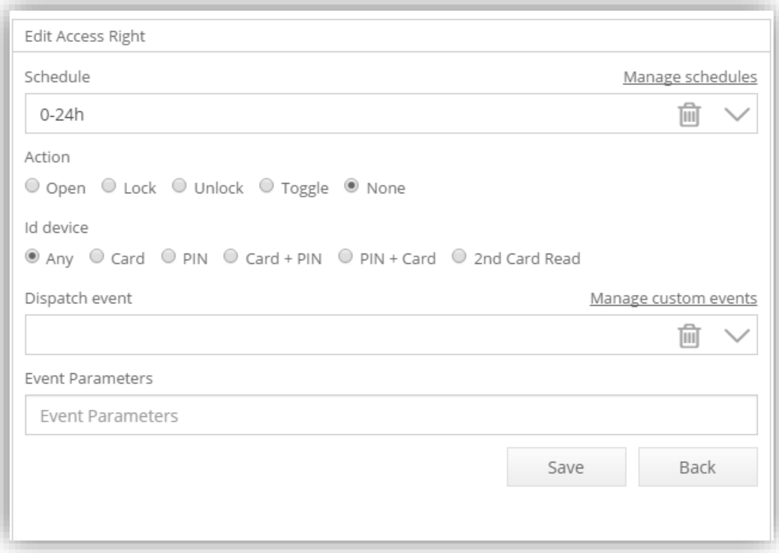


☑ Mailbox reader - Reader is used for opening mailboxes

Picture 9.3: Assigning the reader for mailbox handling

9.4 Creating and assigning mailbox access rights

By assigning access rights to the reader previously set as **Mailbox reader**, and assigning the correct access group to the user with the apartment, allows the user to access the mailbox by showing the card to the mentioned reader.



Edit Access Right

Schedule: 0-24h

Action: ○ Open ○ Lock ○ Unlock ○ Toggle ● None

Id device: ● Any ○ Card ○ PIN ○ Card + PIN ○ PIN + Card ○ 2nd Card Read

Dispatch event:

Event Parameters: Event Parameters

Picture 9.4: Access rights of the mailbox access reader

NOTE: The mailbox reader does not have to be connected to the central that has a mailbox unit connected to it.

IMPORTANT! Only 1 entity can be opened at a time. If someone tries to open a second mailbox, the reader will sound an error message, until the first lock is closed.

IMPORTANT! Lower hardware centrals (sold before August 2016) **only** support connections of mailboxes on Door 1 & 2!

After all, mailboxes are assigned to apartments, they should update with the correct text on the display. Moreover, the option to **Open** a mailbox from the GUI becomes available when opening the mailbox entity popup. To replace the text on the mailbox display, fill in the text in the field.

The mailbox displays should update automatically, but to update them manually, just press the **Save** button.

If the communication between the central and the mailbox drops, there will be a warning sign next to the display text in the Mailbox preview.

Whenever making any changes to the users who have an apartment assigned, their display on the mailbox should update immediately.

10 Module: Floor plan

The floor plan module is an overview of the set system. Import own building blueprint and visually place hardware objects onto it. Moreover, control the set object.
NOTE! To have a larger overview of the Floor plan, the left menu is automatically hidden. To show it again, just click the down-pointing arrow on the left corner of the screen.

10.1 Managing floor plans

To create a floor plan:

1. Navigate to Home > Monitoring > Floor plan.
2. On the right panel make sure that the tab **Floors** is selected.
3. Press Menu > New floor plan.
4. Set its name and provide a picture from the local computer or from the internet (in both cases, the picture will be downloaded to the central).
5. Press button **Add** to save the changes.

If there were some mistakes made during creations, correct by:

1. Select the floor plan from the **Floors** tab.
2. Press Menu > Edit [floor plan name].

To remove the floor plan:

1. Select the floor plan from the **Floors** tab.
2. Press Menu > Remove [floor plan name]

10.2 Floor plan hardware

To add items to your floor plan:

1. Navigate to the **Hardware** tab on the right panel.
2. Press Menu > Add item to the floorplan.
3. The software will offer three options to choose from:
   - Reader
   - IP Camera
   - Label

To add a **Reader** to the floor plan, select the wanted reader from the dropdown list and press **Add**. Clicking on the image places the wanted reader to a position on the image.

To add **IP Camera** to the floor plan, an IP camera must first be installed in the Nova software (more on IP cameras and their implementation in chapter **5.3.3 IP Camera**).

Select the wanted camera from the dropdown list and press **Add**. Clicking on the image places the wanted camera to a position on the image.

By selecting a **Label,** first, give the label a proper name, then select its type:

- Link to URL web address will redirect anyone who will click on it to the URL provided in the bottom entry.
- Link to floor plan will make a mesh of easier navigation between floors (create at least two-floor plans to link between them). It is a good idea to make it both ways (ex. Main floor link to the 1st floor of the floor plan and on the 1st floor of floorplan link back to the main floor).
- Link to the central: If there is a massive installation of separate systems, it is possible to navigate to another central without remembering its correct IP address by providing it here with the username (if the username and password are the same on both centrals, the administrator is directly logged-in when pressing this widget).

Press **Add**. Clicking on the image places the wanted label to a position on the image.

Navigating to the **Hardware** tab, all the added hardware shown on the floor plan is visible. By selecting one, it will be displayed in bold on the image for easier recognition, and the tabs next to **Hardware** will change based on the hardware type.

- Selecting a Reader will display:
  - **Events** tab (displays last events of the reader)
  - **Users** tab (displays users that have access to the reader)
  - **Groups** tab (displays Access groups that have access to the reader)
- Selecting an IP camera will display:
  - **Camera** tab (displays camera's picture)

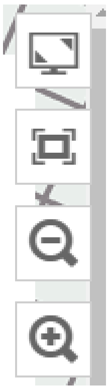
10.3 Floor plan navigation

The navigation on the Floorplan is similar to navigation on mobile devices. Click and drag to move over different areas of the image. Scrolling in and out will zoom the image (on mobile devices use pinch and stretch gestures to get the same result).
Moving Hardware objects around can be done by clicking on them – a menu will show:

- Reader menu:
  - Open
  - Unlock/Lock
  - Block/Unblock
  - **Move** – allows relocation of the reader to some other location on the floor plan.
  - **Remove –** removes the hardware from the floor plan.
- IP camera menu:
  - **View image –** will open a new pop-up with the camera image.

    - **Open camera –** will open the GUI of the camera (only for the known types).
    - **Rotate –** will rotate the **icon of the camera ONLY!** for easier determination to where the camera is pointed at.
    - **Move** – allows relocation of the camera to some other location on the floor plan.
    - **Remove –** removes the hardware from the floor plan.
- Label menu:
    - **View –** will redirect anyone to the provided target.
    - **Edit –** allows edition of the Label.
    - **Move** – allows relocation to some other location on the floor plan.
    - **Remove –** removes it from the floor plan.

Here are the descriptions of the buttons displayed next to the floor plan image:

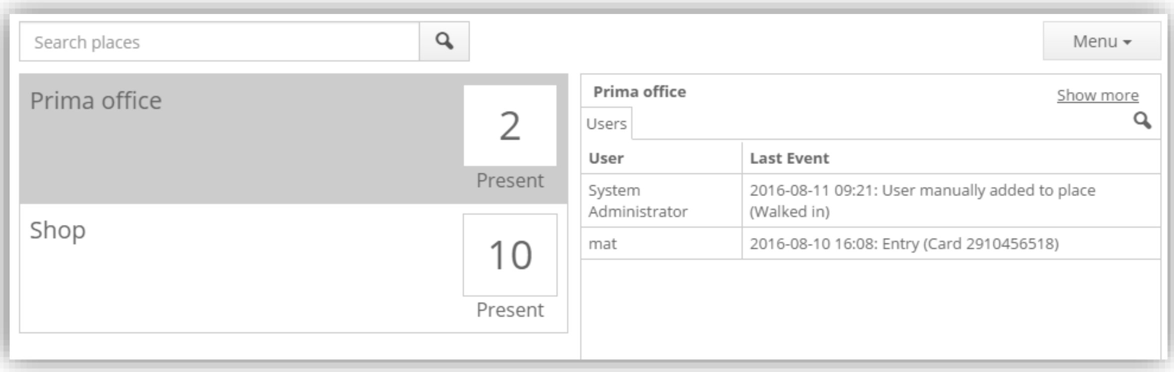


- Full-screen mode
- Fit image to the size of the screen
- Reduce zoom
- Increase zoom

11 Module: Presence

The presence module is a great way to keep track of how many people enter or exit predefined facilities. Determine people who are still located within the premises with the help of direction set on the readers. Also, if adding the user telephone numbers in the software and connecting a **GSM module** (chapter 5.3.1) to the central, the administrator can send them an SMS with a prompt to answer with a **keyword**. Based on the answer, it is possible to check if they are still inside, otherwise, they will be removed from the group of people listed as present.
This module is activated with the activation key (read about activation keys and how to enter them in chapter **6.1 Add-ons and Modules**).

11.1 Managing presence places



User	Last Event
System Administrator	2016-08-11 09:21: User manually added to place (Walked in)
mat	2016-08-10 16:08: Entry (Card 2910456518)

Picture 11.1: Presence locations

To add a new place:

1. Navigate to Home > Monitoring > Presence.
2. Press Menu > Add a new place.
3. Enter:
   - **Name** of the place.
   - Hardware list that includes all readers that belong to that place (read about creating a new Hardware list in chapter **Error! Reference source not found. Error! Reference source not found.**)
   - **Past Days** – determines how long the history of user entries should be kept.
   - **Entry keyword** – in case a user telephone number is correctly set up and if the user was not added to the list of present persons, the user can send an SMS with keyword and be added to the list.
   - **Exit keyword –** in case someone left the location without registering on the exit reader, it is possible to respond to a warning message by SMS and be removed from this location.
   - **Template message** – An SMS template that should explain why the user received this message and how to respond (which keywords to use).
4. Click the **Add** button to create a new presence location.

To edit an existing place:

1. Select the place from the menu.
2. Click on the button Menu > Edit [place name].
3. Update settings and **Save**.

To delete an existing place:

1. Select the place from the menu.
2. Click on the button Menu > Remove [place name].

11.2 Managing users in places

Users who enter through readers with a set direction entry/exit (check on how to set **Reader direction** in chapter **5.1.15 Reader settings**) and the readers are included in the Hardware list of the Location are automatically added/removed from the place.

Manually add or remove users from a specific location by:

1. Entering the location by double-clicking on it.
2. User management:
    - To manually add a user to the list (Picture 11.2), click on **Menu > Manually add users**
        - Select the user to add (selecting multiple users can be done by holding Ctrl or Shift key). Press **Add selected (number of users)** and provide a reason when asked in the pop-up window.
    - To remove the user(s) from the list, select them from the list and press **Menu > Manually remove users (number of users)**.

By default, only users who are inside are shown. To also display users that left, a couple of options exist when pressing the **Menu** button:

- **Hide all** options, turned on by default, and hides users who left.
- **Today's** option displays users who are inside, and users who left in the last 24 hours are displayed in red.
- **Last N days** option, displays users who are inside and users who left in the last N days (set in the Location settings).

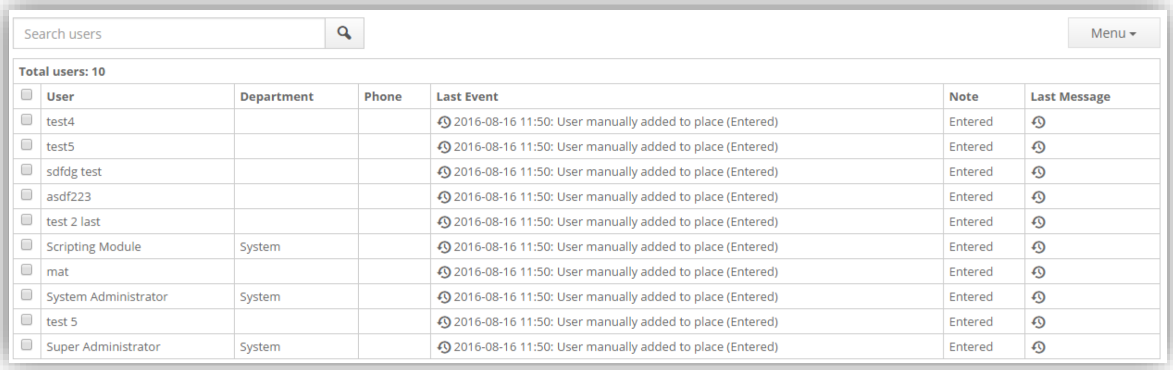
To send an SMS to the user:

1. Select the user(s) in the location.
2. Press Menu > Send a message to users (number of users).
    - If there is a template message for the location, it will be entered automatically.
3. Press **Send** to send the message.

IMPORTANT! If the keywords are the same in multiple locations, a user will be added/removed from all of them.

IMPORTANT! If there are two locations and the keyword for one of them is a sub-string from another (ex. "OUT" and "OUTSIDE"), and a user replies "OUT", the user is removed from both locations; but if the user replies "OUTSIDE", it will only be from the single location.

IMPORTANT! If the user SMS does not include the keyword at the beginning of the message, it will not affect the user presence and the message will be displayed next to the user name.



Total users: 10

□	User	Department	Phone	Last Event	Note	Last Message
□	test4			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	test5			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	sdfdg test			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	asdf223			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	test 2 last			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	Scripting Module	System		↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	mat			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	System Administrator	System		↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	test 5			↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺
□	Super Administrator	System		↺ 2016-08-16 11:50: User manually added to place (Entered)	Entered	↺

Picture 11.2: Presence user list

11.3 Setting up global Anti passback

Anti passback is a function to prevent the cardholders from entering the premises using the same card(s). Access will be granted only to the first person and then if he lends his/her card to some other person, the access won't be granted until the "original" person is checked-out at the Exit reader.

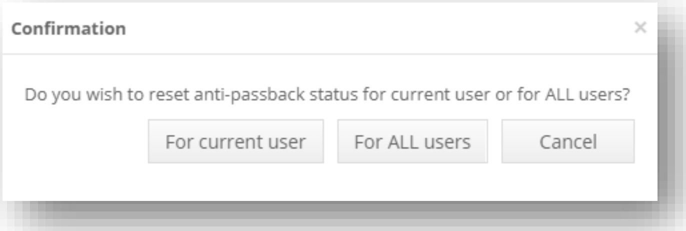
IMPORTANT! The readers need to have the Entry/Exit direction set! The description on setting the reader direction is described in chapter **5.1.15 Reader settings** under Advanced settings.

IMPORTANT! Readers must be assigned under a special hardware list. The set-up of those is described in the chapter **14.1.2 Hardware list**.
The user list can also be assigned to the location – this will count the number of the specified users from the user list. This way we can limit the presence max user count for specific presence location.

Once the Anti passback function is enabled, there are some additional settings we can set:

- Error duration (in minutes) – the time duration before the user’s card is acceptable again. Default 00:00 means that the card will be rejected until the card is set to Exit reader or user’s Anti passback status has been reset.
- Allow exit on error – the user can always leave (no matter if the card was registered on the Entry reader or not).
- Allow entry on error – The Anti passback will still be reported in Nova as events but will allow users to enter the location even if the card was already presented to that Entry reader.

IMPORTANT! Status of a single user or a complete status reset can be done by navigating to that user -> Advanced tab and pressing on the Anti passback status reset button. The options for reset are displayed in Picture 11.3.



Confirmation

Do you wish to reset anti-passback status for current user or for ALL users?

Picture 11.3: Options to reset Anti passback status

12 Module: Wireless online

In some cases, it is not possible to mount a wired reader (due to lack of space, door material, etc.) and in some cases, the customers want to monitor the offline door(s) from the software. For such mounts, special hardware called the **Antenna module** is needed for the conversion of the offline readers. To make this option work in the software, provide the activation key (read about activation keys and how to enter them in chapter **6.1 Add-ons and Modules**).

IMPORTANT! If the connection between the wireless online reader and the Antenna module is lost, the reader will flash green/red LED and the reader will beep whenever the card is shown for a few seconds. After that, it will switch to offline mode until the wireless connection is established again. That is why **it is recommended that the reader is set-up as an offline reader first!** before proceeding with the wireless upgrade.

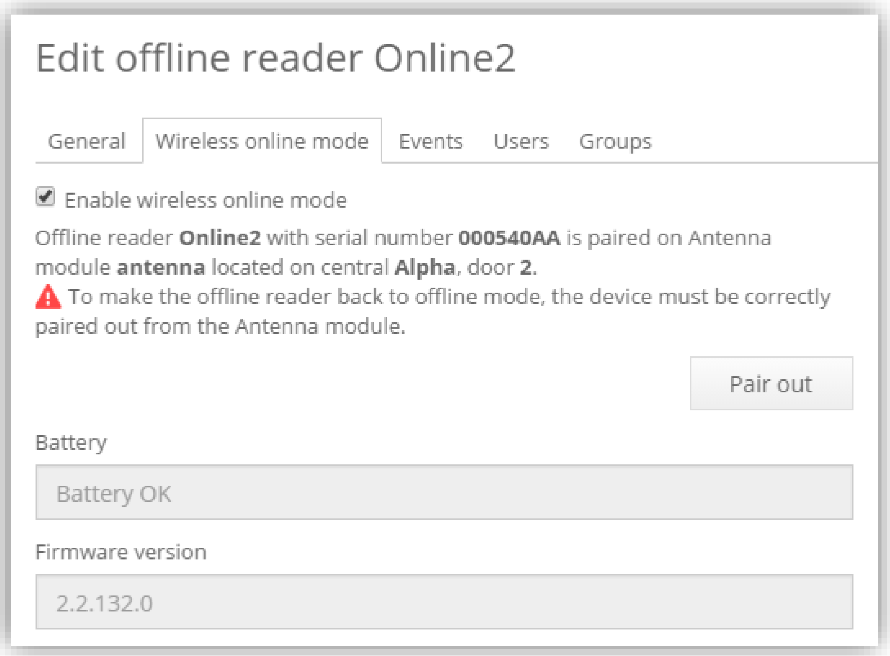
IMPORTANT! Nexus offline does not support this functionality.

12.1 Offline to online reader conversion

In the Offline reader settings, a new tab is displayed – **Wireless online mode**. Checking the **Enable wireless online mode** will show additional options to connect the current offline device with the Antenna module. A new button **Pair** will appear. Click it to open a pop-up wizard that will help pair the Antenna module and the offline reader. This is done in three steps:

1. First, add a new Antenna module by clicking on **Menu > Add new Antenna module**.
   - A pop-up will require Name, Serial number, and information regarding which central and what door socket Antenna module is connected to.
   - The Test device option can test the connection between the Antenna module and the Alpha.
   - After entering the data, select the new device in the list and press the **Next** button.
2. Put the **Wireless service card** on the offline handle and press the button **Pair**. A green LED will flash and a sound confirmation will notify you of a successful pair. The GUI will display the OK message and automatically redirect you to step 3.
3. To confirm the offline reader, a **serial number** from the reader **needs to be checked** and selected from the list. By pressing Finish, the offline reader and the Antenna module will try to establish a connection.

NOTE: The wireless online reader data (battery and firmware version) updates every time the reader is used.



Edit offline reader Online2

☑ Enable wireless online mode

Offline reader **Online2** with serial number **000540AA** is paired on Antenna module **antenna** located on central **Alpha**, door **2**.

⚠ To make the offline reader back to offline mode, the device must be correctly paired out from the Antenna module.

Battery

Battery OK

Firmware version

2.2.132.0

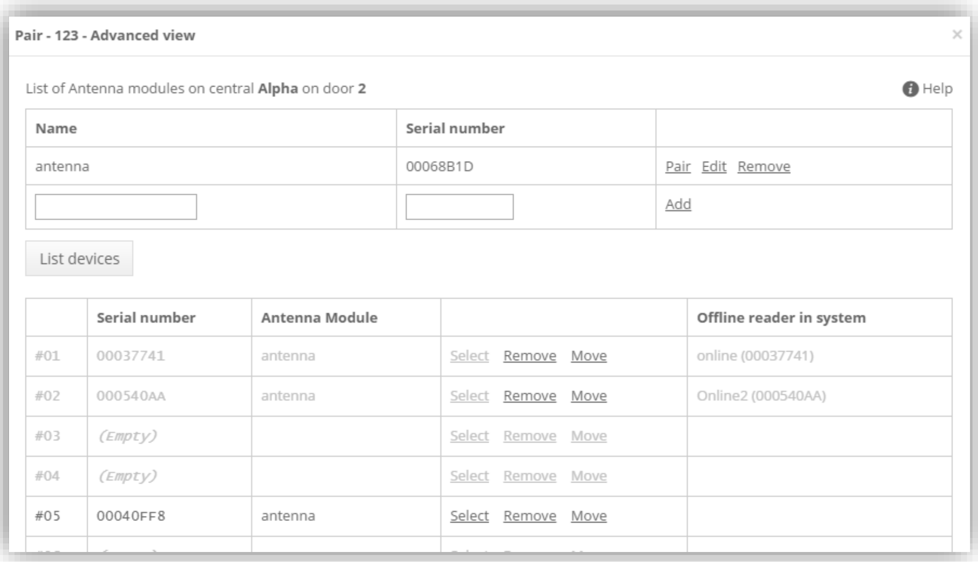
Picture 12.1: Wireless online mode

12.1.1 Advanced view

In the second step after selecting the Antenna module, it is possible to select the **Advanced view.** From here, there is a table displaying different information about the connected and assigned wireless online readers.
Columns description:

- Wireless offline address (from 1 to 16).
- The serial number of the Antenna Module.
- Name assigned to the Antenna Module.
- The options to Select, Remove, Move Readers
- The name of the Wireless online reader and its serial number.

If there are any errors like address collisions, a wireless online reader that has no antenna module set, wireless online reader connected to multiple antenna modules, etc., these are visible from **Advanced view**. Detectable errors like address collision will also display in a red marked row and an error message.



Pair - 123 - Advanced view

List of Antenna modules on central **Alpha** on door **2**

Name	Serial number	
antenna	00068B1D	Pair Edit Remove
		Add

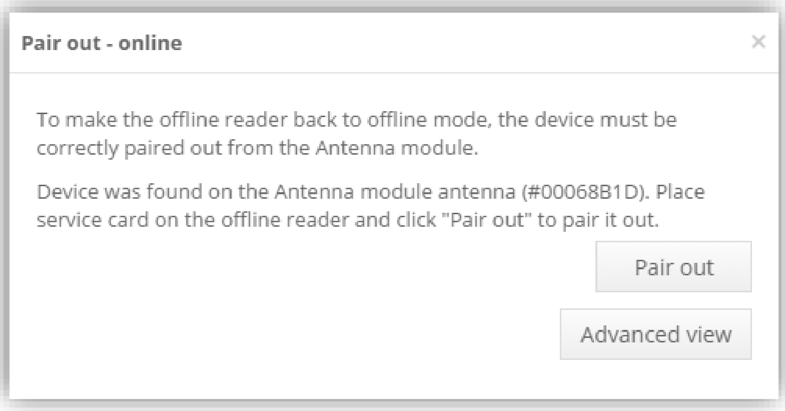
	Serial number	Antenna Module		Offline reader in system
#01	00037741	antenna	Select Remove Move	online (00037741)
#02	000540AA	antenna	Select Remove Move	Online2 (000540AA)
#03	*(Empty)*		Select Remove Move	
#04	*(Empty)*		Select Remove Move	
#05	00040FF8	antenna	Select Remove Move	

Picture 12.2: Wireless online advanced view

12.2 Removing function from wireless online readers

To remove the wireless functionality:

1. Navigate to the **Home > Hardware > Offline Readers**, double click on the wanted wireless online reader, click on the **wireless online mode** tab and press the **Pair out** button.
2. Put the **Wireless service card** on the wireless online reader and press the **Pair out** button in the GUI. A green LED, sound, and GUI message will display the successful pair-out.



Pair out - online

To make the offline reader back to offline mode, the device must be correctly paired out from the Antenna module.

Device was found on the Antenna module antenna (#00068B1D). Place service card on the offline reader and click "Pair out" to pair it out.

Picture 12.3: Wireless online reader pair-out

12.3 Wireless online reader functionalities

Having a reader activated in the system, we can:

- See the battery status next to its name (located in **Home > Hardware > Offline Readers**).
- Actively edit its schedule (only 1 allowed).
- Use the Open, Un/Lock, Un/Block functions. IMPORTANT! Whenever one of these commands is sent to the wireless online reader, it needs to be woken up (turn it a few times) before the setting changes.
- Active door events are displayed in the **Events** list.
- If the Antenna module is disconnected, it is displayed under the **Disconnected centrals and readers.**

IMPORTANT! Maximum readers that can be connected to a single Antenna module is 16.

13 Module: Booking

The booking module is for reservation of the premises at the specified date for a defined period.
Add booking activation key to the system:
The booking activation key must be added to the system as described in **6.1 Add-ons and Modules** along with the booking software that can be found on the vendor's homepage.

> When the package is downloaded to the local storage, upload it to the central the same way upgrade package is uploaded – described in the caption 5.1.9 Online System-wide software upgrade and single upgrade .
>
> **IMPORTANT!** The booking module must be uploaded and used on the **master central**; otherwise, no reservations can be done (the feedback will be "Error! User privileges are not sufficient").

NOTE! The booking can only be set to work with online readers.

13.1 Booking access groups

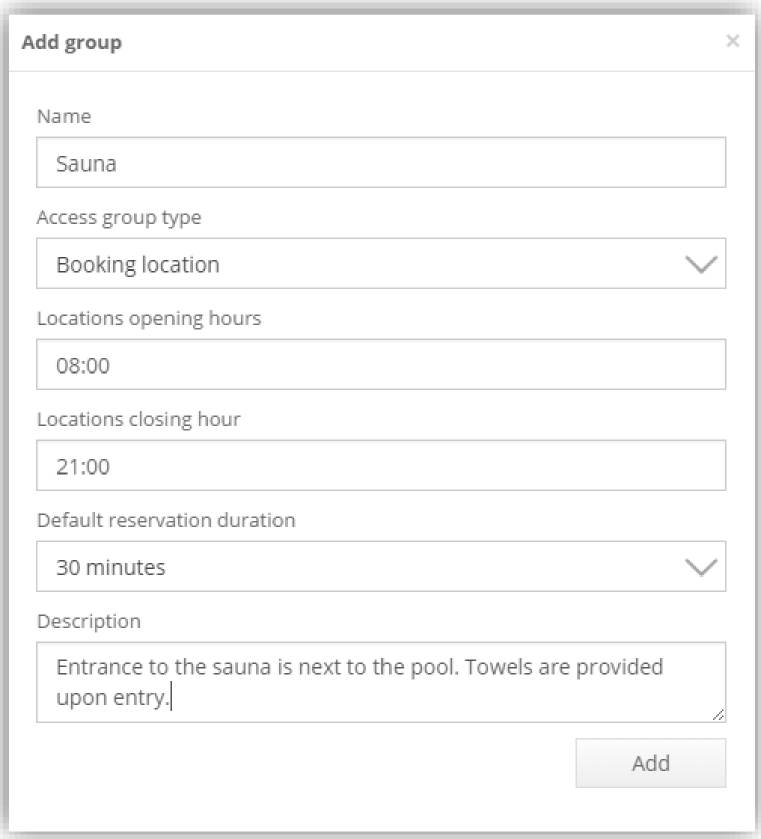
After activation and software update:

1. Click on the Menu > Add group
    - A new type of Access group type, called **Booking location**, is now added to the list of access groups
2. Click the **Add group** button to create a new booking location.
   NOTE: It is recommended to name the access group according to the booking resource.

Picture 13.1 shows additional parameters that must be filled for each booking access group:

- **Location opening hours** – defines the working hours of the resource, e. g. opening and closing time of the Sauna.
- **Default reservation duration** – represents the period of how long can users use the premises after claiming the reservation.
- **Remarks** – displays a custom message to users who are making the reservations. The message should provide additional guides to users and their reservation (e.g. location of the entrance to the facility, where to park, etc.).

- When the booking access group is created, it will be added to the list with other access groups. For the easier distinction between user access groups and booking access groups, the type of group is displayed next to the group name.



Add group

Name

Sauna

Access group type

Booking location

Locations opening hours

08:00

Locations closing hour

21:00

Default reservation duration

30 minutes

Description

Entrance to the sauna is next to the pool. Towels are provided upon entry.

Picture 13.1: Adding a new booking location

Picture 13.1 shows an example of:

- New Booking access for "Sauna" that opens at 8 a.m. and closes at 9 p.m.
- Each user can make a reservation for 30 minutes.

Assigning the booking access group to a reader:

- Each booking access group can be associated with an existing reader in the Nova system.
- Assigning the booking access group is the same as assigning any other group to the reader (see **chapter 4.2.3**).
- Assigning one or more readers to a booking access-group creates a new access zone thus granting access in the selected zones during the time interval defined by user reservations.

13.2 Reservation creation and cancellation in Booking module

After access group configuration in Nova, the Booking module can be accessed with a web browser on address:

- http:// <IP of the central> / Booking
  - (Replace the text inside <> with IP address of the specified central).

  - A new login page will appear and grants access with the same credentials as in Nova.

NOTE: For basic reservations, use an administrator type of account for creating or canceling the existing reservations.

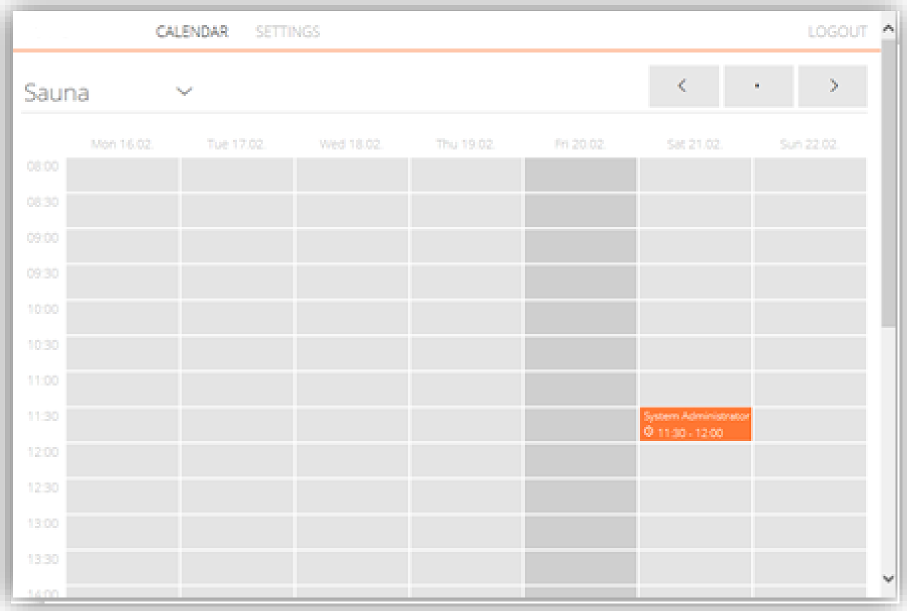
Example in Picture 13.2 shows:

- A calendar page of the Booking application where the resources are listed in the top left corner.
- Currently, the location is set to Sauna as added in the previous example:
  - Switch locations by clicking on the name and selecting the other location from the list.
  - The calendar is set by days, marking the current day in darker gray color. Reservation times are separated depending on the ”Default reservation duration” set (Picture 13.1).
  - The buttons on the top right above the grid are used for switching between different weeks.
  - The middle button resets the overview of the current week.

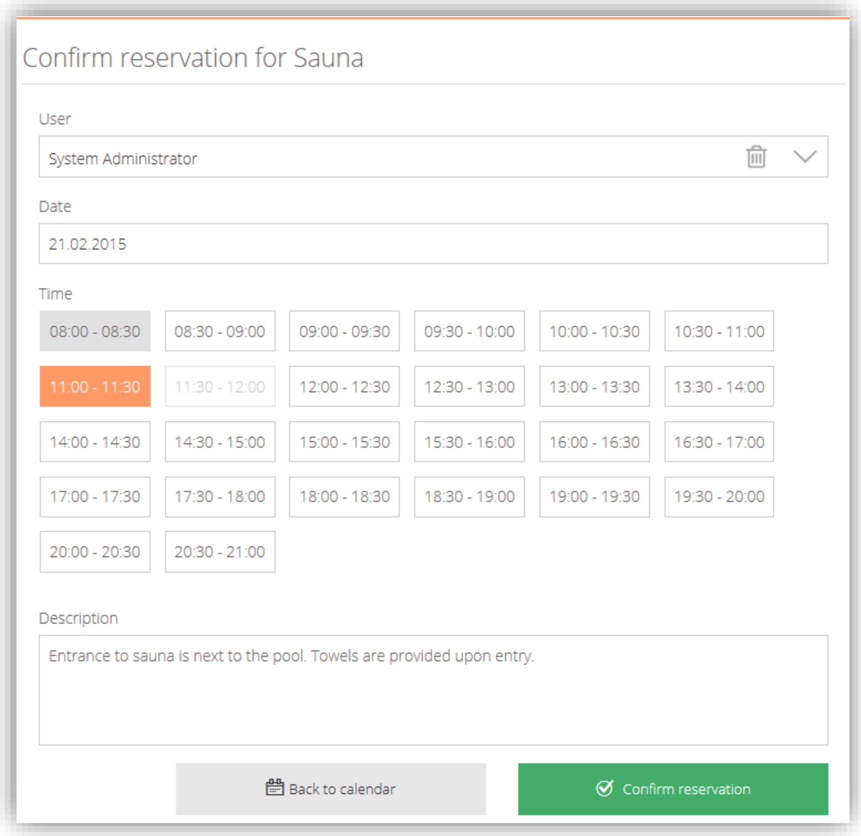
Creating a new reservation

Creating a new reservation requires a user to select the corresponding part of the calendar.

- Click the **Confirm reservation** button to confirm the reservation (Picture 13.3)



Picture 13.2: Calendar page of Booking module



Confirm reservation for Sauna

User

System Administrator

Date

21.02.2015

Time

08:00 - 08:30	08:30 - 09:00	09:00 - 09:30	09:30 - 10:00	10:00 - 10:30	10:30 - 11:00
11:00 - 11:30	11:30 - 12:00	12:00 - 12:30	12:30 - 13:00	13:00 - 13:30	13:30 - 14:00
14:00 - 14:30	14:30 - 15:00	15:00 - 15:30	15:30 - 16:00	16:00 - 16:30	16:30 - 17:00
17:00 - 17:30	17:30 - 18:00	18:00 - 18:30	18:30 - 19:00	19:00 - 19:30	19:30 - 20:00
20:00 - 20:30	20:30 - 21:00				

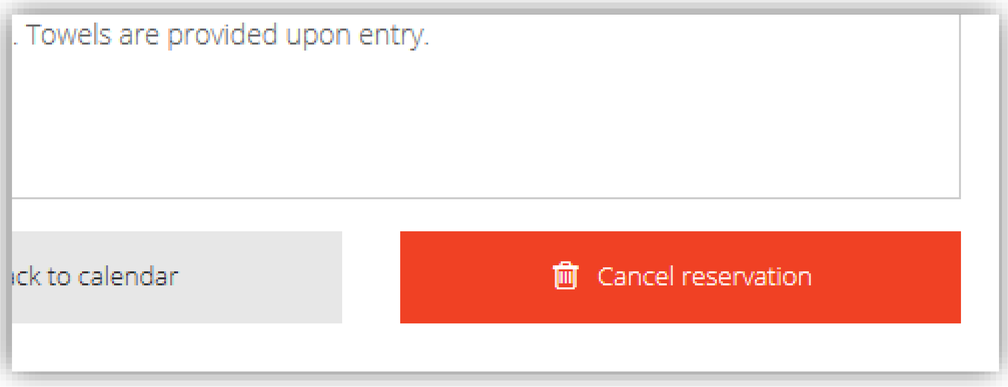
Description

Entrance to sauna is next to the pool. Towels are provided upon entry.

Picture 13.3: Reservation confirmation (system administrator can see all-time reservation hours, while a user only sees the one that was selected)

- It is only possible to make reservations in the future and not for elapsed time. **Confirm reservation** window has previously set reservations grayed out which cannot be selected.

- Click the **Cancel reservation** button to cancel the reservation selected in the calendar (Picture 13.4).



. Towels are provided upon entry.

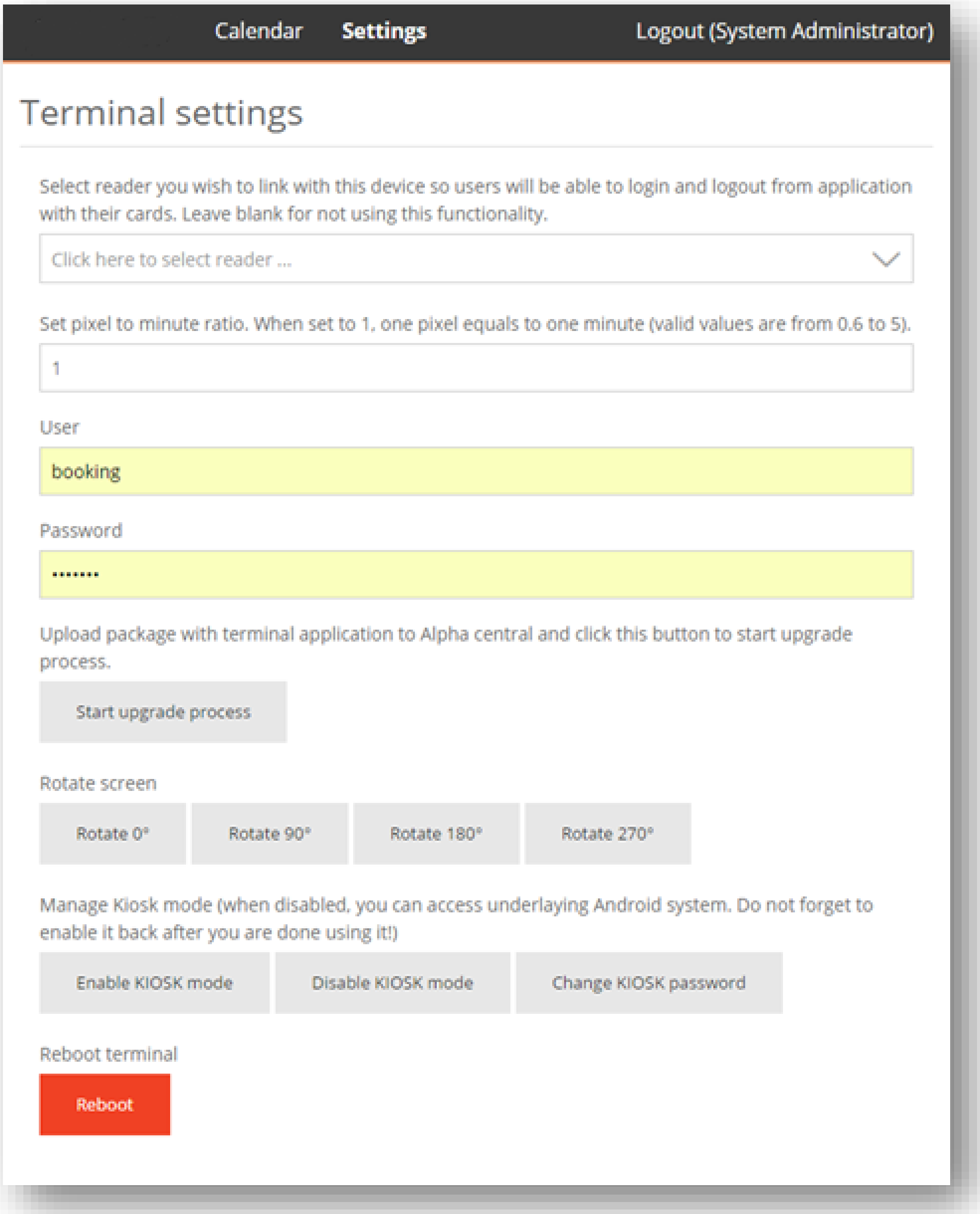
Picture 13.4: Cancelling a reservation

13.3 Booking as a terminal application

- The booking module can be run standalone in terminal mode.
- Suggested prerequisites for this mode are touch capabilities of the terminal screen and a Nexus reader connected to the central (Android standalone booking terminal requires a special *booking.apk* installed, the device must also be rooted for kiosk mode where users have no access to underlying Android platform).
- Users can use their RFID (Radio frequency ID) – cards to log-into application and confirm their reservations.

To enable terminal mode:

1. Start the **Booking** application on the terminal
2. Log into application as the **System administrator**
3. Select a reader in the settings menu (Picture 13.5) - to provide user authentication and access to the Booking page.
4. User and Password provide account information with at least Administrator privileges – this is a security feature that prevents other users from amending any unwanted requests.
    - Entered data is automatically saved.



Terminal settings

Select reader you wish to link with this device so users will be able to login and logout from application with their cards. Leave blank for not using this functionality.

Click here to select reader ...

Set pixel to minute ratio. When set to 1, one pixel equals to one minute (valid values are from 0.6 to 5).

1

User

booking

Password

•••••••

Upload package with terminal application to Alpha central and click this button to start upgrade process.

Rotate screen

Manage Kiosk mode (when disabled, you can access underlaying Android system. Do not forget to enable it back after you are done using it!)

Reboot terminal

Picture 13.5: Booking terminal settings (Android booking terminal has a few extra settings)

Pixel to minute ratio allows adjustment of the calendar grid to actual screen size. This way all of the bookable time slots are displayed on the screen without the need for scrolling.

booking.apk can be upgraded by pressing on the Start upgrade process button. For the upgrade to work you need to upload upgrade package to central (same central to which Booking is connected). Correct files will then be downloaded from central and existing applications will be replaced by a new one.

You can also upgrade terminal by copying booking.apk to the terminal via USB flash drive and manually install it

The setting menu also provides functions to work with Android OS trough the Booking application. You
can change screen orientation, disable and enable Kiosk mode and reboot terminal if needed. Some described features are also accessible by swiping two fingers on the terminal screen. List bellow summarizes swipes on-screen and corresponding actions:

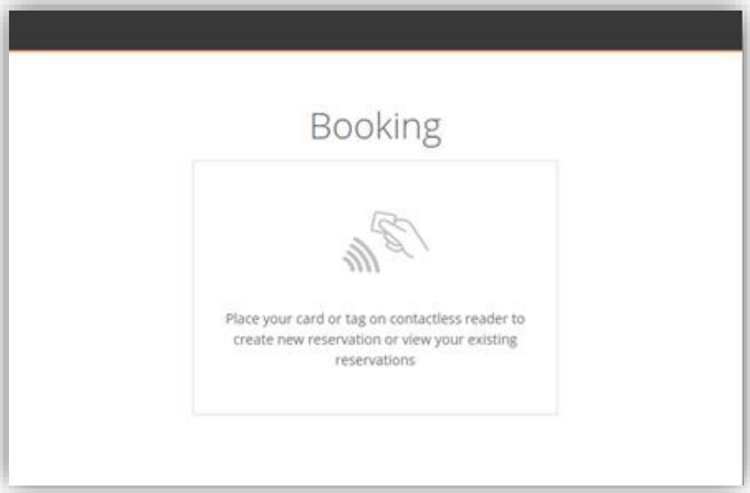
- Two-finger swipe from BOTTOM to TOP: Disable Kiosk mode
- Two-finger swipe from TOP to BOTTOM: Enable Kiosk mode
- Two-finger swipe from RIGHT to LEFT: Set the central IP address
- Two-finger swipe from LEFT to RIGHT: Reload Booking application
- Slow (> 5 sec.) two-finger swipe from LEFT to RIGHT: Reboot terminal

NOTE! Swipes are accessible from all screens of Booking application and are password protected. You do not need to be logged into the application to use them. The default password is set to 267267, but it is **strongly recommended to change it** by tapping on the Change KIOSK password button (Picture 13.5).

Log-in when the terminal mode is enabled. Picture 13.6 shows a preview of the login-screen when in terminal mode.
To log in the user needs to:

- Place the card on the Nexus reader.
  - When the reader detects the card, the Booking application will take care of the login and redirect the user to the Calendar page after a few seconds.

NOTE: The maintenance contact information set in Nova is shown on the terminal login screen.



Booking

Place your card or tag on contactless reader to create new reservation or view your existing reservations

Picture 13.6: Terminal login screen

Alternative login:

- In case of troubles, the normal login form is accessed by tapping on the RFID icon seven times.
    - Login proceeds normally as described in the first paragraph of chapter **13.2**.

Log-in credentials and user access:

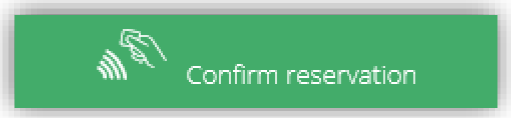
- Regular users can also enter the Booking application with the same credentials as they have in Nova when their account type is at least **User**.
- Account type can be set in Nova – see 4.2.3 Managing users, their access rights:
    - Double click the user field to access the user information and then navigate to the **Account** tab on the left menu.

- The drop-down menu at the top of the window enables the setting of the user access to the application.

Confirm reservation on terminal:

When trying to confirm the reservation on the terminal, a button with an RFID icon will appear (Picture 13.7).

- To confirm, users must place their cards on the Nexus reader to finish the process.



Picture 13.7: RFID icon on Confirm reservation button in terminal mode

- Inactive users will receive a warning about automatic sign-out after 30 seconds.
- If there is no interaction with the application for another 10 seconds, they will be automatically logged out to prevent any unauthorized access.

Note! Booking also detects user inactivity and it knows how to start daydream mode (part of Android OS which acts as a screensaver). Daydream has to be enabled in the Android settings application under the Screen section. Daydream will be canceled when the user places her card on the reader or when the screen is touched.

14 Module: Advanced admin rights – local admins

List editor is a perfect module for buildings with several smaller companies. It allows the system administrator to create groups and assign them specific hardware that they have access to. This way there are no unauthorized accesses because the local company administrators only have control over their users/readers.

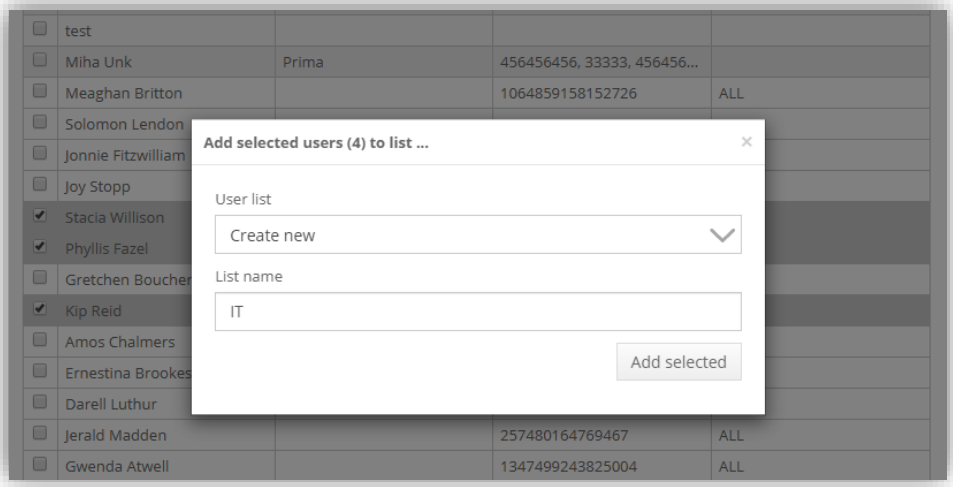
To get started with the List editor, install **Nova 2.0** or newer. The latest software package can be found on the vendor’s web page.

14.1 Management of different lists

14.1.1 User list(s)

Creating and adding users to list:

1. Navigate to **Users** section and select users by ticking the checkmarks in front of their names.
2. Press **Menu > Add selected users to list**.
3. Provide the name for the **new list** or select the **existing one** from the dropdown menu.



□	test			
□	Miha Unk	Prima	456456456, 33333, 456456...	
□	Meaghan Britton		1064859158152726	ALL
□	Solomon Lendon			
□	Jonnie Fitzwilliam			
□	Joy Stopp			
☑	Stacia Willison			
☑	Phyllis Fazel			
□	Gretchen Bouche			
☑	Kip Reid			
□	Amos Chalmers			
□	Ernestina Brookes			
□	Darell Luthur			
□	Jerald Madden		257480164769467	ALL
□	Gwenda Atwell		1347499243825004	ALL

Add selected users (4) to list ...

User list: Create new

List name: IT

Picture 14.1: Creating new user list, selecting users and assigning them to the new list

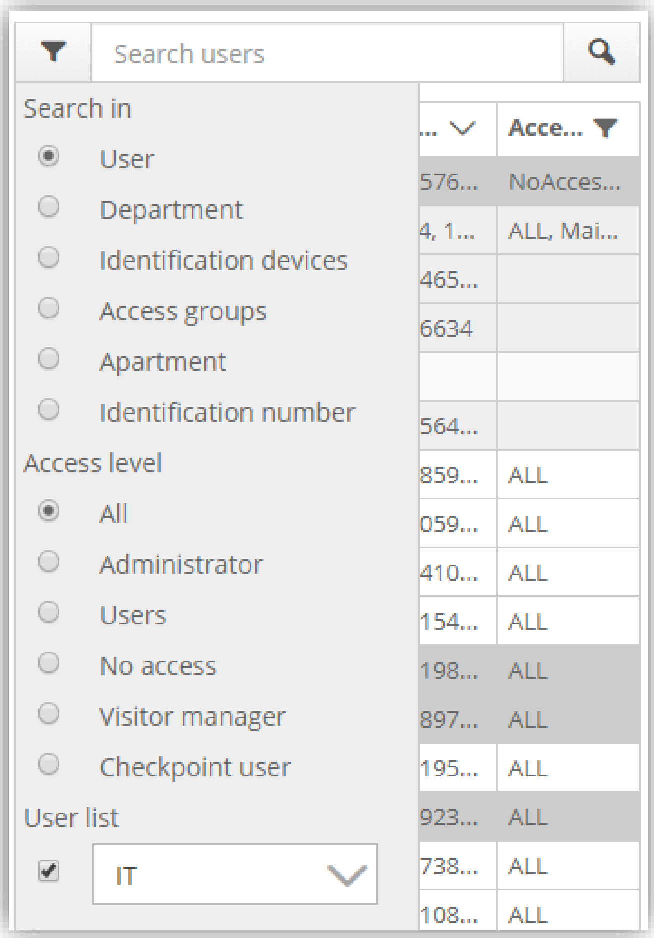
Displaying users in list:

1. Navigate to users.
2. Select the Filter icon (before the search bar).
3. Check the box at User lists and find the requested list as displayed on Picture 14.1. Press **Apply** at the end of the menu.

Removing users from the list:

1. Make sure you select and show the users in the user list.
2. Select the users you wish to remove by setting checkmarks in front of their names.

3. Press **Menu -> Remove selected users from the list.**



Search users

Search in

- ● User
- ○ Department
- ○ Identification devices
- ○ Access groups
- ○ Apartment
- ○ Identification number

Access level

- ● All
- ○ Administrator
- ○ Users
- ○ No access
- ○ Visitor manager
- ○ Checkpoint user

User list

☑ IT

...	Acce...
576...	NoAcces...
4, 1...	ALL, Mai...
465...	
6634	
564...	
859...	ALL
059...	ALL
410...	ALL
154...	ALL
198...	ALL
897...	ALL
195...	ALL
923...	ALL
738...	ALL
108...	ALL

Picture 14.2: An example of a user list of employees

Removing or editing lists:

1. Navigate to Users.
2. Press **Menu > User lists** and select the wanted list.
3. a) Remove list by pressing **Menu > Remove list.**
   b) Edit list name by pressing **Menu > Edit list** and provide a new list name.

14.1.2 Hardware list

Creating and adding readers to Hardware list:

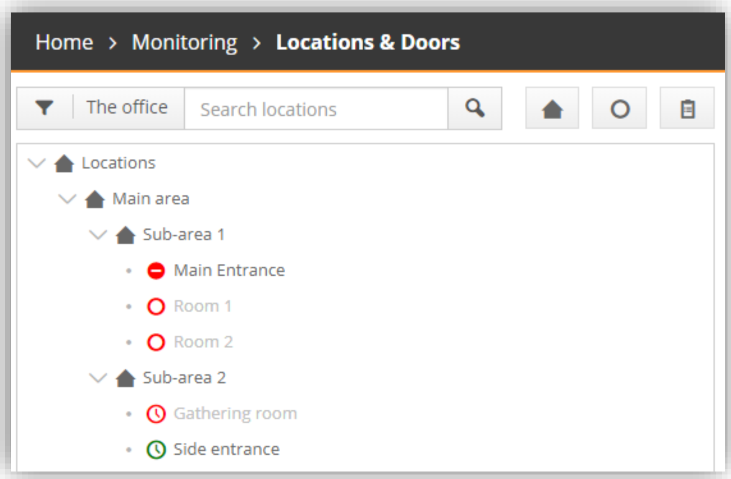
1. Navigate to **Locations & doors** and select readers (multiple can be selected by holding down the Ctrl key).
2. Press **Menu > Add selected readers to list**.
3. Provide the name for the **new list** or select the **existing one** from the dropdown menu.
4. Pressing the ⊕ button next to the selected reader will add it to the currently selected list. ⊗ will remove the reader from the current list.

Displaying readers in list:

1. Navigate to **Locations & doors**.

2. Select the Filter icon (before the search bar).
3. Check the box at User lists and find the requested list as displayed on Picture 14.3. Press **Apply** at the end of the menu.

IMPORTANT! Only readers marked in black text are in the selected list, others are there just for easier perception of their location.



Picture 14.3: An example of a reader list

Removing or editing lists:

1. Navigate to **Locations & doors**.
2. Press **Menu > Reader lists** and select the wanted list.
3. a) Remove list by pressing **Menu > Remove list.**
   b) Edit list name by pressing **Menu > Edit list** and provide a new list name.

14.1.3 Info board list

Info boards can also be added to their lists and the list can be created/edited/deleted the same way as Hardware list except it is done in the **Info boards** section. Multiple devices can be selected using the Ctrl (single select) or Shift (sequence select) key on the keyboard.

Grouping info boards allow users to send a message to multiple devices at the same time - **21.3 Info board messages**. To learn more about Info boards and how to create message areas, navigate to **16.2 Info board layouts**.

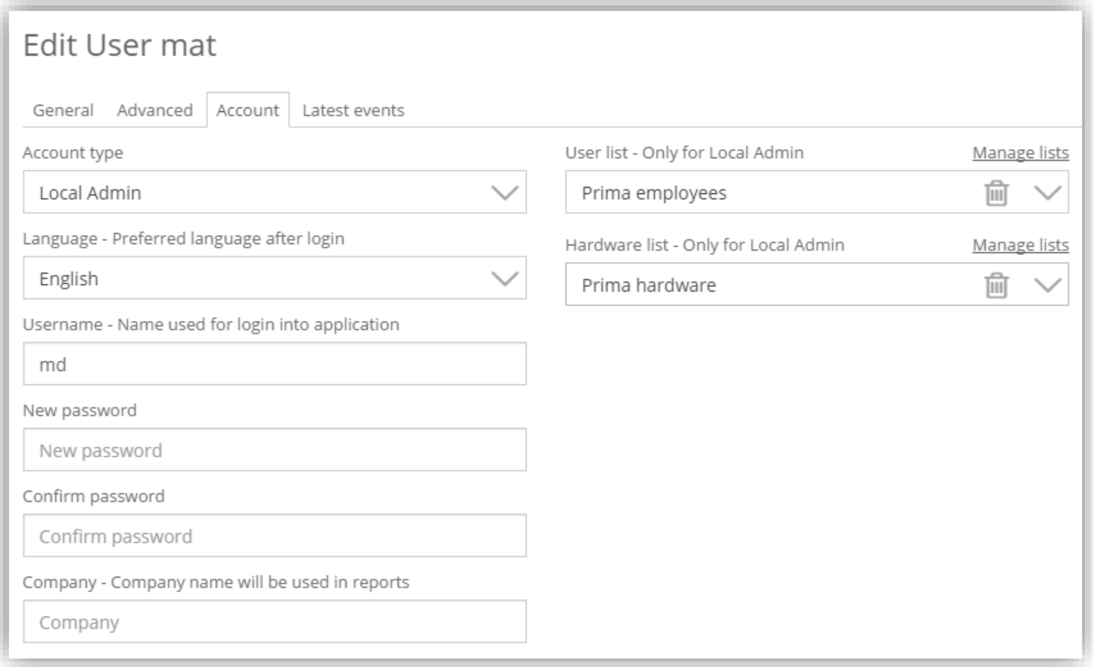
14.1.4 Apartment terminal list

Apartment terminals can also be added to their lists and the list can be created/edited/deleted the same way as Hardware list except it is done in the **Apartments terminals** section. Multiple devices can be selected using the Ctrl (single select) or Shift (sequence select) key on the keyboard.

Grouping apartment terminals allows sending the message to single or multiple apartments at once. You can read more about it in chapter **21.2 Apartment messages**.

14.2 Assigning local administrators and their lists

After creating the user and reader lists, they can be assigned to local administrators. To do so, navigate back to **Users and access rights** in the Nova software, Edit the selected administrator, and switch to the Account tab as shown in Picture 14.4. The account type must be set to "*Local admin*". By doing so, two dropdown menus become available under Local admin settings at the bottom of the pop-up. Select the desired lists and do not forget to save the new settings.



Edit User mat

Account type: Local Admin

Language - Preferred language after login: English

Username - Name used for login into application: md

New password: New password

Confirm password: Confirm password

Company - Company name will be used in reports: Company

User list - Only for Local Admin: Prima employees

Hardware list - Only for Local Admin: Prima hardware

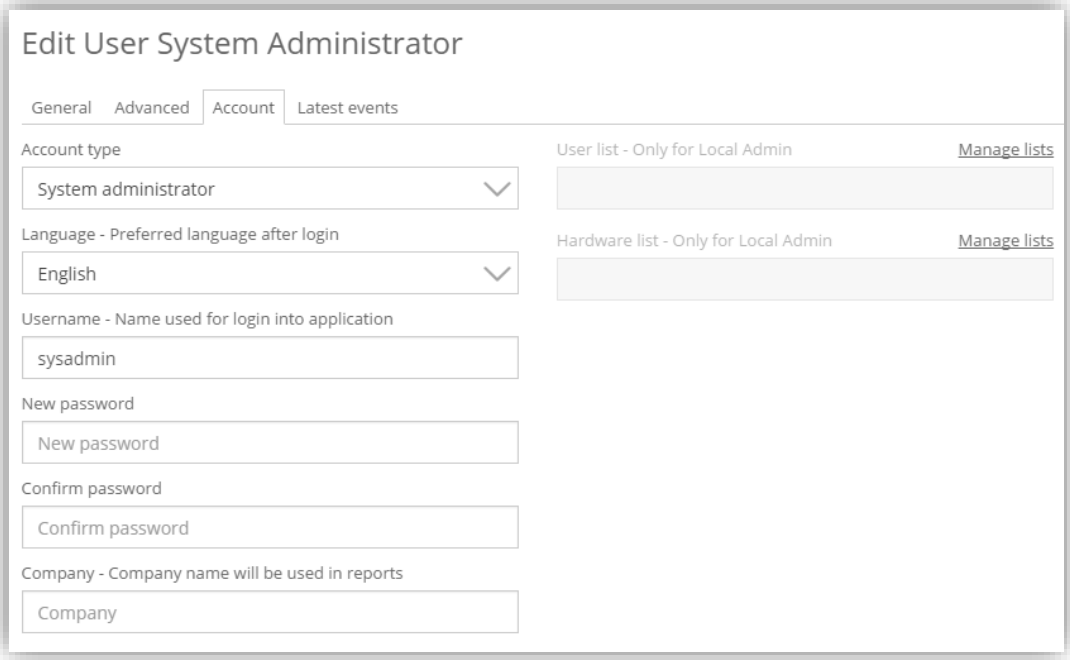
Picture 14.4: Assigning account type and corresponding lists

Local administrators are now able to log-into the Nova software and manage the assigned users, access groups, and time schedules. They can also see current events and already created floor plans along with the listed hardware.

IMPORTANT! Local administrators have the same rights as administrators in Nova but are limited to users and hardware from the assigned lists.

14.3 Module installation and location

To enable the List editor module, apply the activation key to the system. The procedure of adding an activation key is described in **6.1 Add-ons and Modules**. After activation, the List editor can be accessed by navigating to **Home > Settings > List Editor** or by navigating to **Manage lists** link in the user **Account tab** by selecting and editing one of the users, as displayed on Picture 14.5.



Edit User System Administrator

Account type

System administrator

Language - Preferred language after login

English

Username - Name used for login into application

sysadmin

New password

New password

Confirm password

Confirm password

Company - Company name will be used in reports

Company

User list - Only for Local Admin

Hardware list - Only for Local Admin

Picture 14.5: List editor accessed through user settings

15 Module: Card designer

If we have intentions of printing custom cards, the Card designer module can help us with that. The procedure of adding an activation key is described in chapter **6.1 Add-ons and Modules**.

To access the software, we need to navigate to the User list, select the users that we wish to create custom designs for and press **Menu > Card designer.**

15.1 Designing a card

On the left side, we are presented with an edit box, while on the right side will be displayed the preview of the current card for every user that we have selected.
NOTE! In the beginning, the backside of the card is not displayed, because it's empty. After we populate it, the preview will expand, showing us both sides.

Card size
By selecting the element, we are offered an option to use "Card bleed" which helps get rid of the empty card edges due to some printer limitations.
Clicking on the **Advanced** button will display the current(default) card size. From there, a custom card size can be entered.

The other items that can be added on the card by pressing on the **New field** button. When the items are put on the layout, they are displayed on the list – the right side of the card. By clicking on them, their settings are brought up. Common settings for all fields are:

- The field can be moved by clicking on it and dragging it to the wanted position. The position can also be set by offsets: **From top** and **from left**.
- Resizing the field can be done by clicking on the edge and drag or by changing the values in the **Width** and **Height** fields underneath.

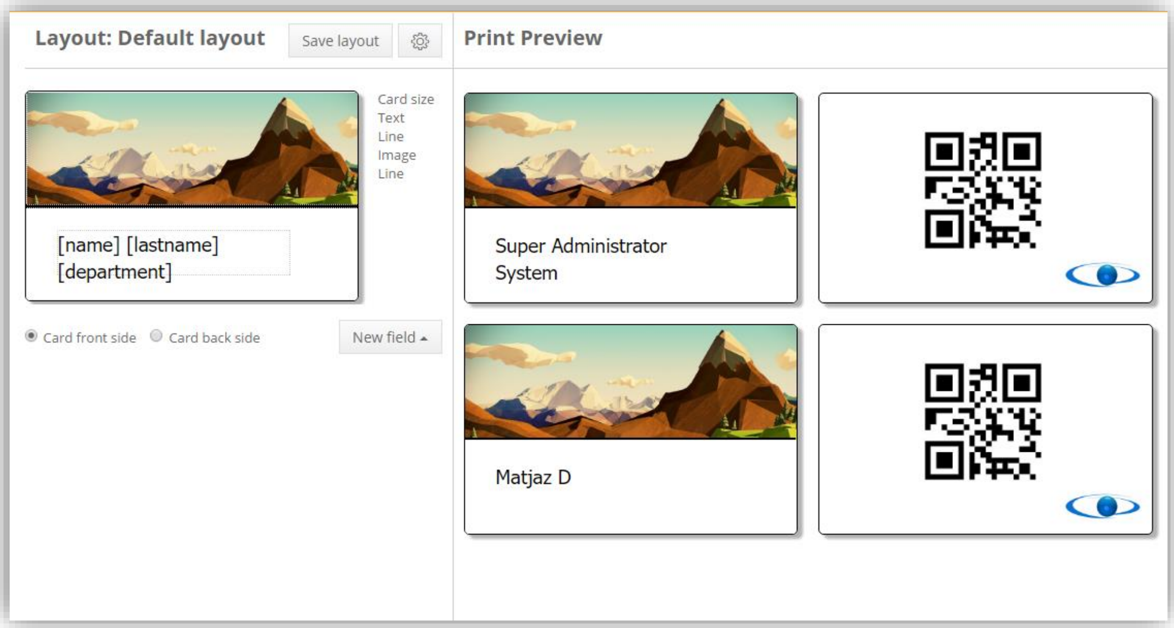
- **Depth** represents a value that defines which field is displayed under or over another. Lower number depth is displayed behind the others with a higher value.
- **Colour** will open a color palette to choose a color for the field background (behind the text, image...). To remove the color from the background field, just delete the text.

Some settings are dependent based on the selected field:

- Text – additional settings are **text font**, **size**, **color** and **align**. To change the text, simply replace the text in the text field. To make text **bold** or **italic**, select it and press the corresponding button on the left. To enter user-dependent text, press on the button **Insert**. The options are Name, Last name, Department, User ID, E-mail, Phone, Company.
- Image
- Profile Image

- Horizontal line
- Vertical line

To remove a field, click it and press the **Remove** button.
When everything is done, do not forget to **Save the layout**!



[name] [lastname]
[department]

Super Administrator
System

Matjaz D

Picture 15.1: Front and back side preview of a card design

15.2 Card layouts

After a layout is completed it will be saved as a default layout. If we wish to manage multiple layouts, we can do so by selecting the **cogwheel** (next to the Save layout button) and create a new layout. This opens a pop-up with the request with:

- Layout name.
- Make a copy of the current layout – creates a copy, so you can preserve the original layout and make changes to a new one.
- Save changes before creating a new layout.

Once there is more than one layout present in the system, we can switch layouts by pressing on the cogwheel and click on the name of the other layout you wish to use. The currently active layout has a grey block in front of its name. The other options that are available from the same dropdown menu once a new layout is created and active:

- New layout
- Rename
- Remove

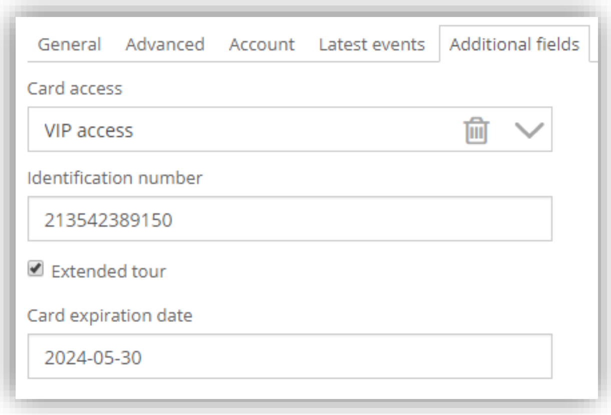
15.3 Additional user fields

Nova 2.2.10 and higher versions support creating additional fields that can be displayed on the card designer preview. Additionally, we can integrate some logic into card creation.
The fields can be accessed by navigating to **Users > Menu > Manage additional fields**.
A new pop-up will open showing any already created fields.

A new custom field can be created by pressing **Menu > Add**.

There are different types of fields:

- Text – a custom text can be provided/displayed.
- Date time – Entry can be filled with the set date and time text.
- Date – Custom date can be set.
- Time – Custom time.
- Checkbox – We can react if the checkbox is enabled or not.
- Dropdown – Multiple predefined choices can be made.



Card access
VIP access

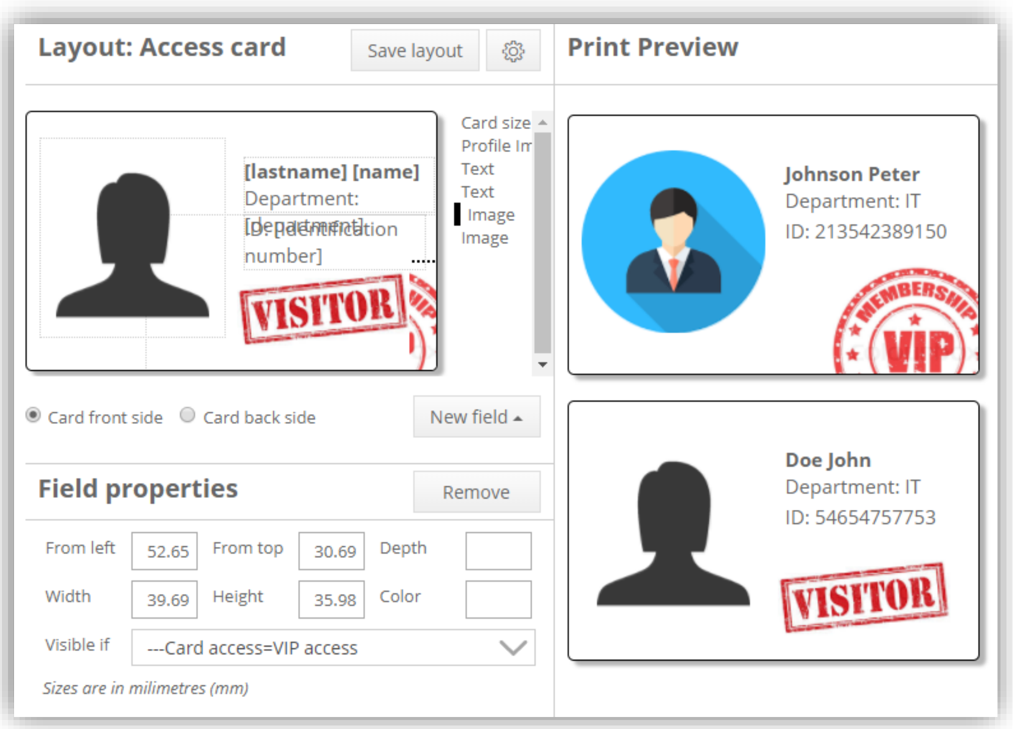
Identification number
213542389150

☑ Extended tour

Card expiration date
2024-05-30

Picture 15.2: An example of additional user fields

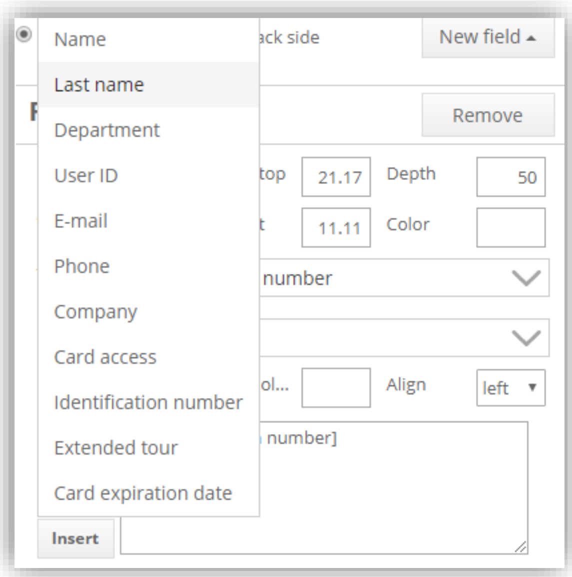
In the card designer, we can invoke the custom fields by selecting the "Visible" field properties. This way we can display a picture if the user has the correct checkbox filled or if the selection from the dropdown menu is valid.
This does not only affect the pictures, but we can also manipulate text too. e.g. The text in the text field is present we can display it on a card.



From left	52.65	From top	30.69	Depth	
Width	39.69	Height	35.98	Color	
Visible if	---Card access=VIP access				

Sizes are in milimetres (mm)

Picture 15.3: With custom fields, we can create one layout with different custom content



Picture 15.4: Additional text options are displayed because of custom fields

16 Module: Info board driver

Note: The info board module should only be used with NovaServer or with Alpha with external USB storage connected to the top master central.
This module enables users to create, assign, and change the display of an Info board.
Note: The Info board module requires separate hardware – info board driver and a display.
To enable the Info board module, apply an activation key to the system. The procedure of adding an activation key is described in chapter **6.1 Add-ons and Modules**. After activation, the Info boards widget can be accessed by navigating to **Home > Hardware > Info boards.**

IMPORTANT! The default IP of the Info board driver is 192.168.1.101.

16.1 Managing info board driver

When all hardware is set up, search for info board in the network by clicking **Menu > Search info board.** If the central and info board are connected to the same network, it will be displayed in the left side list along with its version, IP, and MAC address.

- If the info board driver is in a different network from the central, it needs to be moved to the same network as the central. This can be done by using the Central discovery tool (you can read more about it in chapter **25 Central discovery tool**).

To add it to the software:

1. Double click on the found info board driver or
2. Navigate to Menu > Add [info board name] or
3. Add it manually by navigating to **Menu > Add info board.**
4. Provide/make sure that the name is entered and its IP address is correct.

To edit the info board:

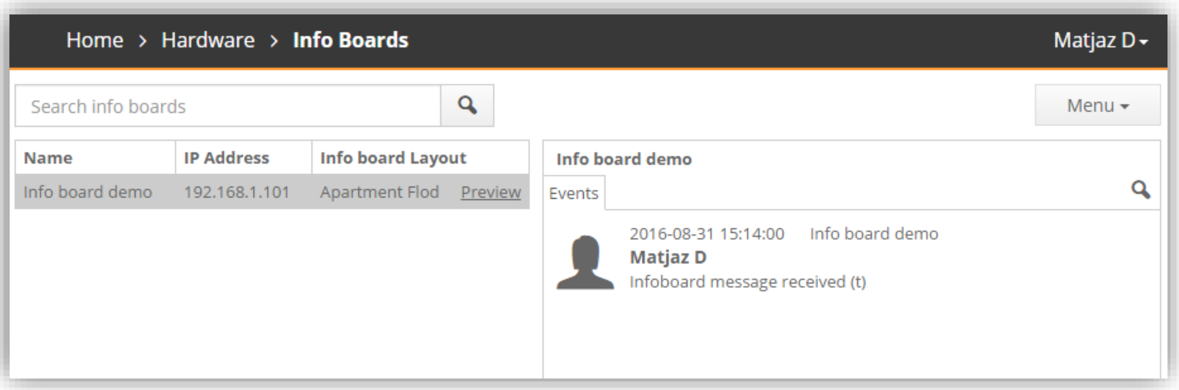
1. Select the existing info board and press **Menu > Edit [info board name]** or
2. Double click to edit.

IB update:

1. Select the info board you wish to update.
2. **Menu > Update info board display.**
3. Select the package from the PC and wait for events to report the finished update.

IB Removal:

1. Select it from the list and press **Menu > Remove [info board name].**


Home > Hardware > Info Boards — Matjaz D

Search info boards — Menu

Name	IP Address	Info board Layout	
Info board demo	192.168.1.101	Apartment Flod	Preview

Info board demo

Events

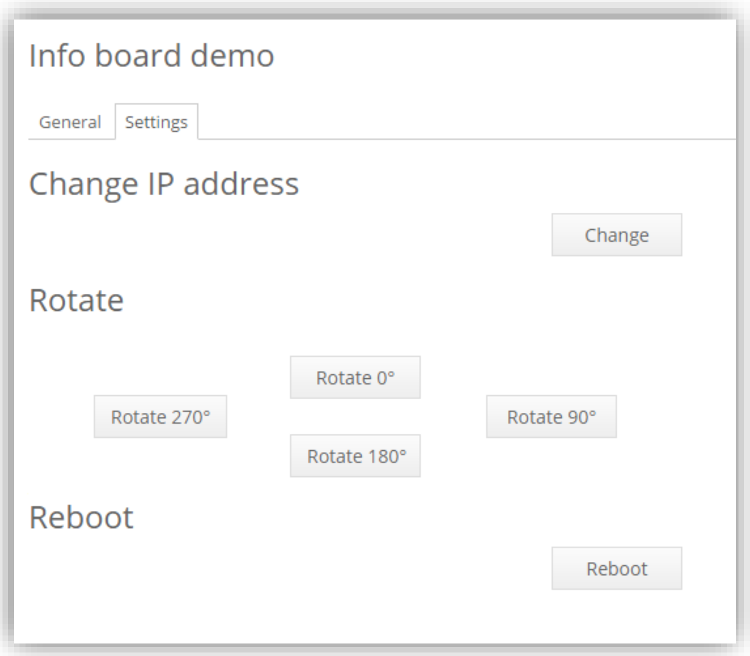
2016-08-31 15:14:00 Info board demo
Matjaz D
Infoboard message received (t)

Picture 16.1: List of info boards

16.1.1 Info board driver settings

To access the settings of the info board driver, simply double click on the info board in the list or select it and navigate to **Menu > Edit [info board name].** The general tab will open by default. Selecting the **Settings tab** gives the next options:

- Change the info board IP address (make sure that the info board is located on the IP provided when added to the software).
  - Enter the new IP address.
  - Enter the subnet mask.
  - Enter the default gateway and press the **Change** button to send the command.
- Rotate option:
  - Rotate 0° - For standard mounting.
  - Rotate 90° - Rotate the image for 90° CW.
  - Rotate 180° - Rotate the image upside down. Appropriate for ceiling mount.
  - Rotate 270° - Rotate the image for 270° CW.
- Reboot option- Sends a reboot command to the info board driver.



Info board demo

Change IP address

Rotate

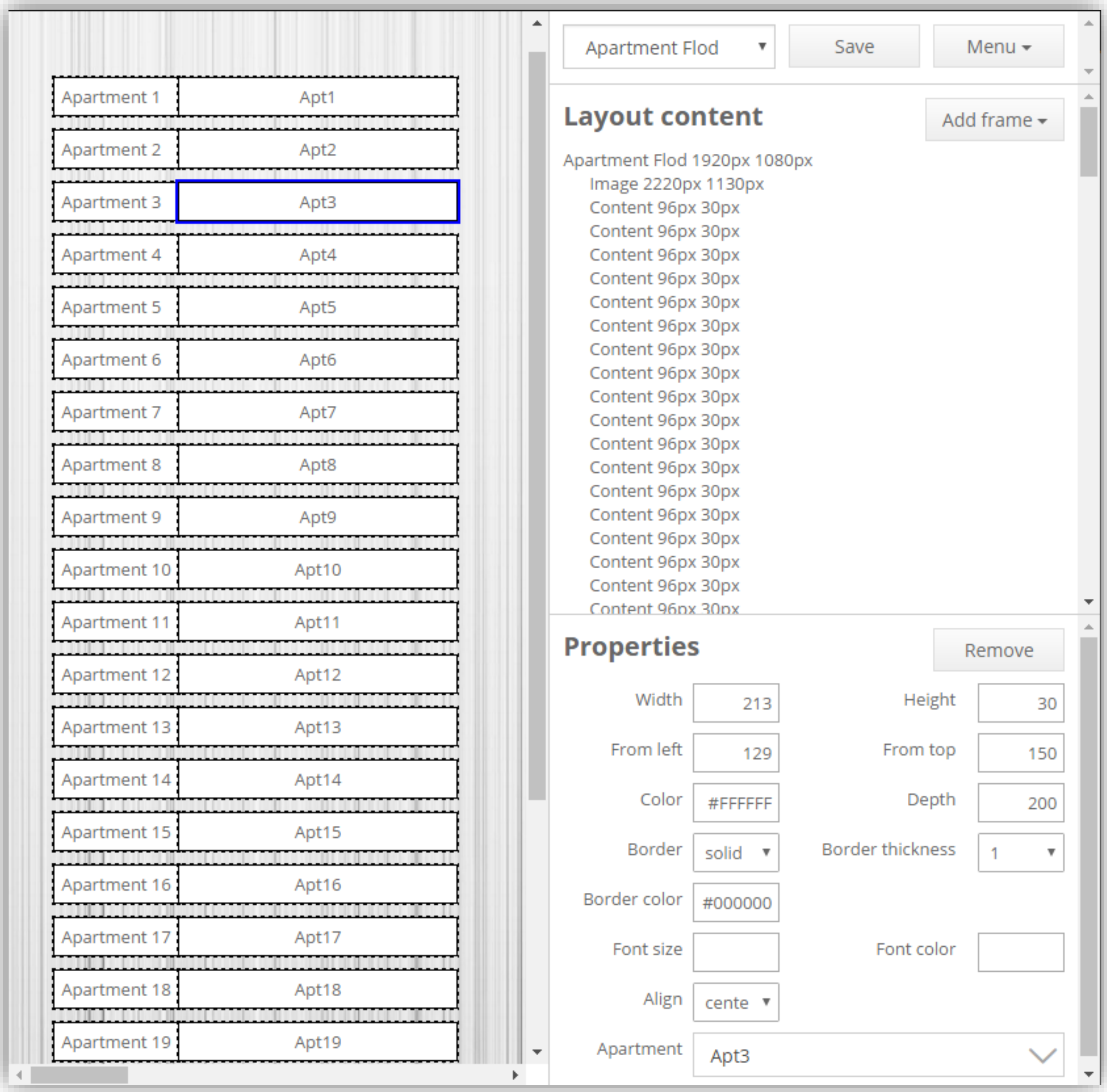
Reboot

Picture 16.2: Info board settings

16.2 Info board layouts

Layouts are the web pages created in the Nova software. After creation, preview them in the browser before uploading them to the info board.

To create a new layout, please navigate to **Menu > Manage Layouts** from Info Boards widget**;** a pop-up window will open with the canvas on the left side and the settings panel on the right.



Apartment 1	Apt1
Apartment 2	Apt2
Apartment 3	Apt3
Apartment 4	Apt4
Apartment 5	Apt5
Apartment 6	Apt6
Apartment 7	Apt7
Apartment 8	Apt8
Apartment 9	Apt9
Apartment 10	Apt10
Apartment 11	Apt11
Apartment 12	Apt12
Apartment 13	Apt13
Apartment 14	Apt14
Apartment 15	Apt15
Apartment 16	Apt16
Apartment 17	Apt17
Apartment 18	Apt18
Apartment 19	Apt19

Layout content

Apartment Flod 1920px 1080px
Image 2220px 1130px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px
Content 96px 30px

Properties

Width	213	Height	30
From left	129	From top	150
Color	#FFFFFF	Depth	200
Border	solid	Border thickness	1
Border color	#000000		
Font size		Font color	
Align	cente		
Apartment	Apt3		

Picture 16.3: Info board layout example

Description of panel sections:

- On the top, there is a text field with the layout name. Before creating a layout, please name it first.
  NOTE: To rename a layout, make sure that the first entry in the Layout content is selected – this will display the Name property that needs to be filled.
  Once there are multiple layouts created, it is possible to select a single one from the dropdown menu.
  Next to the Name, there is also a layout orientation, its resolution, and its color.
  NOTE: The max resolution supported is FHD (1080p). Upscaling to 4k resolution is done by the TV.
  - To close the pop-up window, navigate to **Menu > Close window.**

    - **Menu > Preview** will open a new web page that will show a preview of the created layout.
    - Removing a layout can be done by pressing **Menu > Remove [layout name].**
    - **Menu > Duplicate layout** will create a copy of the currently selected layout. This can be helpful if similar layouts are needed with different information.
- In the middle, a **Layout content** includes the list of items placed on the canvas.
    - Multiple frames can be added to the canvas. The following items can be chosen from, by clicking on **Add frame:**
        - **Content**: Most common item, that either can include a text or can be used as a background colored object. To add/edit text to the content, please press the **Edit content** button. A new pop-up editor will open to freely edit the text font, size, etc. Content can also display HTML code or video (Source code and Insert/edit video buttons).
        - **Image**: Adds an image from your computer.
        - **Iframe**: Enables display of web-pages that are enabled for Iframe like booking, videos… If the web-page is designed with the Iframe in mind, this is the best solution to implement it.
        - **Embed**: Enables adding embedded HTML code – used for YouTube videos (navigate to video and under it press Share and Embed tab; copy generated code to the text embed entry), Twitter (use external sites to generate a custom twitter feed that can be embedded into the info board) …
          IMPORTANT! Twitter videos do not support auto-play, so tweets that include GIF-s or videos will not play.
          IMPORTANT! High-quality videos are demanding and might not play smoothly. To fix the issue, please embed the video that plays a lower resolution video. YouTube and other HTML5 videos might need some additional parameters like autoplay and loop to keep them going.
        - **Apartment label:** When selected, an apartment can be assigned and the text from the apartment will be displayed the same way as it is on the Door stations or Mailboxes. The apartment text display format can be set under info board driver general settings.
        - **Message:** Local admin, Administrator, and the System administrator can all send messages to the info board, which will be displayed and updated in this frame.
        - **Slideshow:** Designed to display multiple frames in an endless loop. Each slide can have a custom timer assigned. By selecting Slideshow settings, slides can be added/removed/reordered.
        - **Copy selected:** Creates a copy of the currently selected frame. Very useful for creating multiple objects with the same content.

- The first item is always the canvas. Clicking on it will bring different settings to the **Properties** panel – the layout name, its size in pixels (make sure to enter the resolution of the display that will be connected to the info board driver). You can also select a background color.

Note: To remove any color from the object, delete the text field contents, and press Enter.

- Clicking on the different objects from the Layout content will select it on the canvas (blue border color) and bring the object properties in the bottom panel – general settings:
    - **Width**: frame width.
    - **Height**: frame height.
    - **From left**: distance (in pixels) of the frame from the left side.
    - **From top**: distance (in pixels) of the frame from the top side.
    - **Colour**: color of the frame (if the text is empty, it is see-through).
    - **Depth**: determines which frames are displayed in front (frames with the highest number, will appear on top).
    - **Border**: border type – solid, dashed, or dotted.
    - Border thickness.
    - Border color.
- To remove a frame, select it from the **Layout content** and press the **Remove** button in the **Properties tab.**

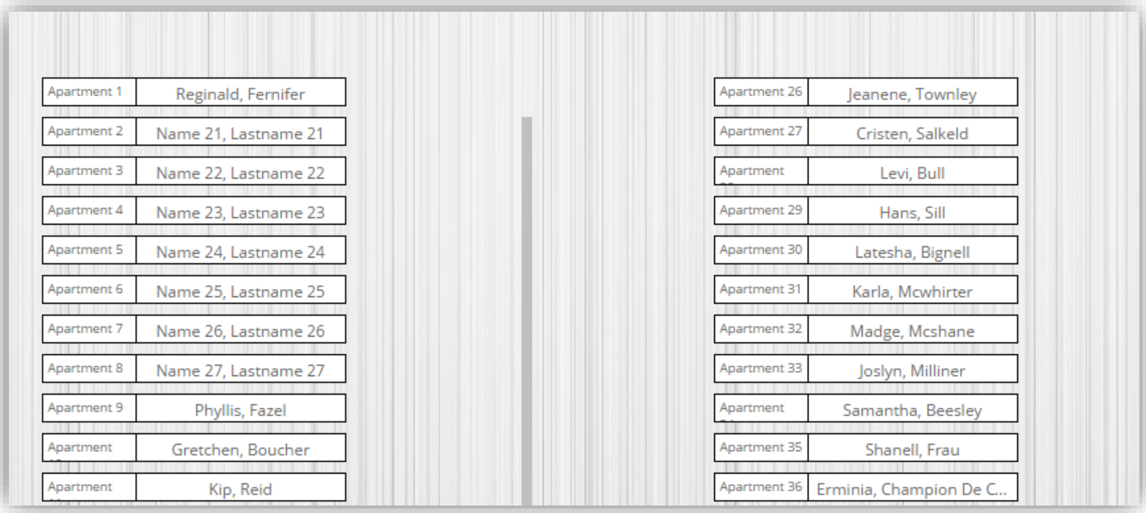
Frames can be dragged and dropped anywhere on the layout. To access a frame that is covered with other frames, you can give those temporary lower Depth or you can just move them to the side, re-position the troubled frame and return the top frame to the previous position.

Note! When dealing with multiple frames, select them using the Ctrl key and click more frames into selection. Once selected, move all selected at once by moving them the same way.

Sometimes the frame cannot be moved due to its content (ex. Videos have click to start/stop and do not allow mouse drag). To move such frames, use the **From left** and **From top** properties.

Note! Some property fields can be increased or decreased by clicking on them and pressing the up/down arrows. A single press on the up arrow on the keyboard will increase the current field by 10; this also works when selecting multiple frames – it is good for increasing the width or height of selected objects.

When done editing, press the **Save** button and close the layout pop-up.



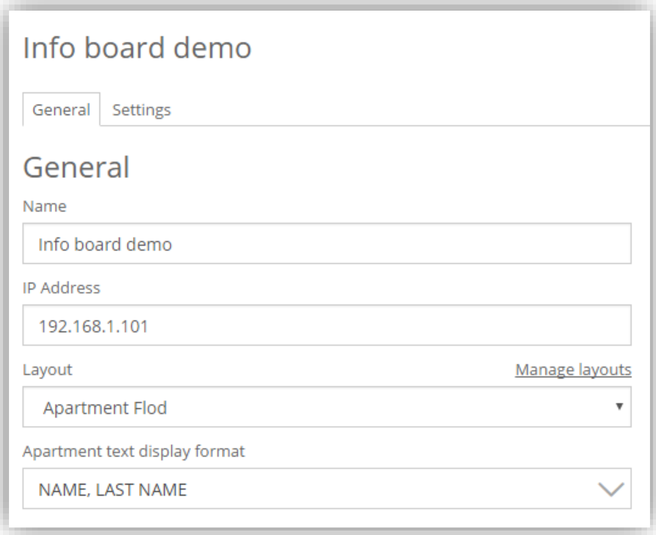
Apartment 1	Reginald, Fernifer	Apartment 26	Jeanene, Townley
Apartment 2	Name 21, Lastname 21	Apartment 27	Cristen, Salkeld
Apartment 3	Name 22, Lastname 22	Apartment	Levi, Bull
Apartment 4	Name 23, Lastname 23	Apartment 29	Hans, Sill
Apartment 5	Name 24, Lastname 24	Apartment 30	Latesha, Bignell
Apartment 6	Name 25, Lastname 25	Apartment 31	Karla, Mcwhirter
Apartment 7	Name 26, Lastname 26	Apartment 32	Madge, Mcshane
Apartment 8	Name 27, Lastname 27	Apartment 33	Joslyn, Milliner
Apartment 9	Phyllis, Fazel	Apartment	Samantha, Beesley
Apartment	Gretchen, Boucher	Apartment 35	Shanell, Frau
Apartment	Kip, Reid	Apartment 36	Erminia, Champion De C...

Picture 16.4: Info board layout preview

16.3 Assigning layouts to info board drivers

To select which layout will be displayed on the info board, navigate to **Home > Hardware > Info Boards** widget and double click on the wanted widget.
From here, select the Layout to display from the dropdown menu. If there are any apartments set on the active layout, also choose the appropriate display format.
Once all is set, it is possible to:

- Preview the currently assigned layout: **Menu > Preview.**
- Upload the layout to the info board by pressing **Menu > Update display.**



Info board demo

General

Name: Info board demo

IP Address: 192.168.1.101

Layout: Apartment Flod

Apartment text display format: NAME, LAST NAME

Picture 16.5: Info board General settings

16.4 Sending a message to info board driver

Along with the info board widget, a **Messaging** widget becomes visible too. Navigate to **Home > Messages**.
To create a new message press Menu > New info board message.

Click on the **To:** label to display available info boards, select the correct info board from the dropdown menu, provide a Title for your message (only displayed in the software and not on the info board) and create a new message that can include text, picture or a video.

Once done with message creation, click the button to preview it on the info board. This will open layout from the selected info board and put the message inside the **Message** frame (if it exists) and open a preview page in another window. If satisfied with the result, close the preview window and send the message. The display should update with the new message after a couple of seconds.

17 Module: High-security module

This module makes some software changes, that improve overall security. To activate this key, please follow the instruction in chapter 6.1 Add-ons and Modules.
By entering this module, a new section: **Security settings** and **Reader encryption** will be displayed in the Other Settings menu.
Enable HTTPS redirect
Centrals with hardware version 3.0 support HTTPS access by default. Navigation on HTTP protocol is unsafe – the data between the computer and the central can be monitored by someone else on the network. Using HTTPS protocol (**https://<cental-IP>**) will create a secure handshake with the target central. After the handshake is done, the connection will be encrypted.
NOTE: When accessing the webpage via HTTPS, the browser will report that the site is untrusted due to the self-signed certificates that are provided by the central. The site can still be accessed by putting the site to ignore the list – the connection is encrypted, but there is no way to check if the target recipient is the central or not. To avoid the browser warning, the custom certificates need to be uploaded to the central for a unique and secure connection. Details are better described in chapter 17.1 Uploading custom certificates.
In the **Other Settings**, there is an option under **Security settings** to redirect all traffic from HTTP to HTTPS. After this setting is set, anyone who wishes to access the central via unsafe connection will be automatically redirected to a secure one.

Disable webserver port on slave centrals
Access on all slave centrals is usually read-only, but to increase security, we can disable the GUI access on all slave centrals at once. The software must be at least version 2.1 installed on all centrals for this feature to work. If the central is reset to defaults, the GUI becomes accessible again. Adding new centrals into the system while having this option enabled, will automatically disable access to that central's GUI.

PIN changes
The PIN codes are hidden from all users for security purposes.
Additionally, **PIN only access can be DISABLED**, Card + PIN and PIN + Card combination require **PIN** length can be **set to require at least 4 numbers**.
Due to the security reasons, if the PIN on the reader is entered incorrectly, it won't be displayed it the event.
Entering the faulty PIN multiple (5) times, the reader will report a faulty pin even if it's entered correctly until the end of the time (1 minute).
Password changes
The system will require a password length of at least 8 characters. Additionally, the password cannot contain more than 2 repeated characters and cannot include sequential numbers or characters (ex. **111**OX12 – not suitable, AgEf**432** is not suitable, 65g**bca**539 is also not suitable).
Idle log-outs

If this option is checked, the account type: **system administrator** will be automatically logged out of the system after 10 minutes of inactivity. The timer is not active if the GUI is opened on **Events** or **Floor plan** page (for monitoring reasons).

Reader encryption

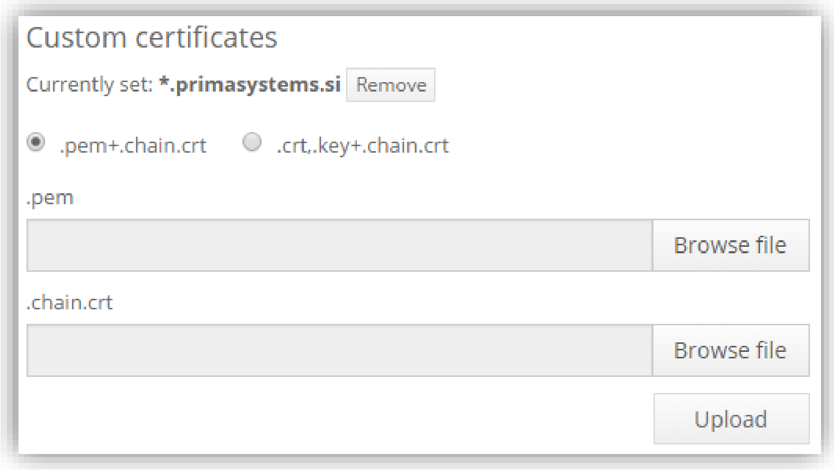
This option enables encryption on the wire between the central and the reader. Enabling this option will result in reader working a bit slower, but more secure.

17.1 Uploading custom certificates

The option allows custom certificates to be uploaded to the master central and creates a correct introduction when accessing the application. To upload personal certificates, navigate to **Home > Settings > Other Settings**. There is the option to upload multiple files. Please select all the files you have regarding certificates. The software will extract the needed information and use it to provide secure access to the central.

The custom certificates will replace the self-signed ones and ensure a secure connection to the master central.

After certificates are uploaded, the URL of the safe access will be displayed, along with the currently set common name (as shown in Picture 17.1).



Custom certificates

Currently set: ***.primasystems.si**

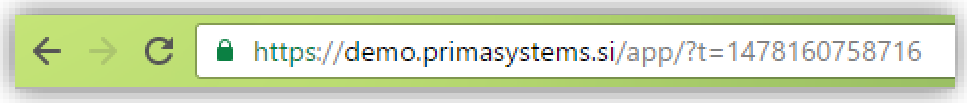
● .pem+.chain.crt ○ .crt,.key+.chain.crt

.pem

.chain.crt

Picture 17.1: The uploaded certificates provide a secure connection to the top master central

Central access should now be displayed with the secure connection icon:



https://demo.primasystems.si/app/?t=1478160758716

Picture 17.2: Secure connection to the site (top master)

17.2 Custom certificates removal

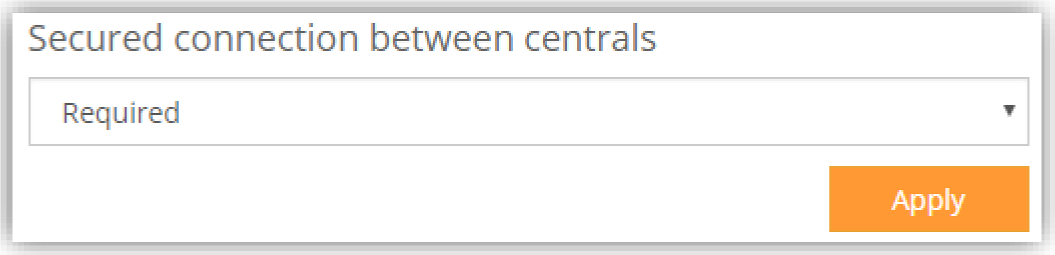
If we do not wish to keep the personal certificates on the central, they can be deleted with the press of the **Remove** button as displayed on Picture 17.1.

After the certificates are deleted, the centrals will continue to work using the default self-signed certificates.

IMPORTANT! Central reset (the left button held for more than 20 seconds) will also delete personal certificates and continue to use the self-signed ones.

17.3 Providing a secure connection between centrals

The module allows an option for a **Required** secure connection between the centrals. This ensures that there are no plain connections between the centrals. The connection uses a secure protocol TLS 1.2.



Secured connection between centrals

Required

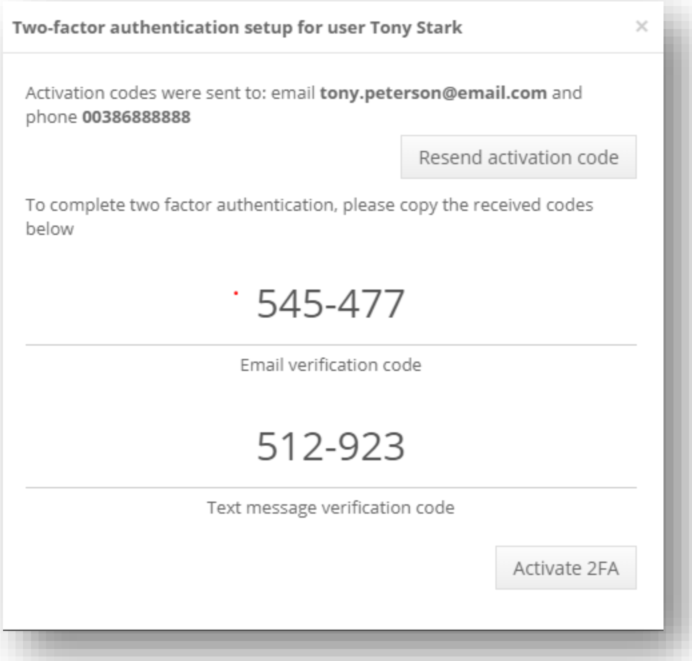
Picture 17.3: The option to ensure encrypted connections only!

IMPORTANT! Centrals with hardware version less than 3.0 do not support secure connections, so this option cannot be set until they are removed from the system.

17.4 Two-factor authentication

To enable two-factor authentication:

1. Navigate to the user (top right) and from the drop-down select the **Account**.
2. Enter the **required email and phone number**.
3. Select the button to Setup 2FA.
4. Separate unique codes will be sent to your email and SMS, copy them over to Nova’s window.
   Note: The codes are only valid for a couple of minutes and upon expiration, you can re-send a new pair of codes.
5. Once two-factor authentication is enabled, it can be tested by logging out and back in.



Two-factor authentication setup for user Tony Stark

Activation codes were sent to: email **tony.peterson@email.com** and phone **00386888888**

To complete two factor authentication, please copy the received codes below

Email verification code: 545-477

Text message verification code: 512-923

Picture 17.4: Two-factor authentication window

To disable Two-factor authentication:

1. Navigate to the user (top right) and from the drop-down select the **Account**.
2. Press the button **Disable 2FA**.
3. The codes will be sent off to email and SMS, copy them over to disable it.

18 Module: Fire alarm module

The fire alarm module supports the connection of one or more external alarm unit(s) to one or multiple centrals in the system. To activate this part of the software, please follow the instruction in chapter **6.1 Add-ons and Modules**.

IMPORTANT! Alarm functions only work on the online and offline readers connected via antenna!

IMPORTANT! All centrals in the system must have software version 2.1 or higher for this module to work correctly.

IMPORTANT! The alarm contact needs to be connected to general Input 2 and one of the settings below needs to be selected on the corresponding central in GUI.

To access the Alarm settings, please navigate to **Home > Hardware > Centrals > Edit central > Auxiliary I/O tab > Input 2**. For the alarm to be triggered, the Active voltage level should be set on NC (default) or NO.

IMPORTANT! Fire alarm overrides any openings, so if a door was opened before by schedule and are now set to lock after the alarm is over, the lock will take priority.

18.1 Setting up an alarm to affect only one central

This option is free and allows the alarm to manage doors connected to that central. If the alarm is triggered, the alarm will unlock all doors on this central. Once the alarm is over, all doors will be locked.

18.2 Setting up a global alarm

Setting this will unlock all doors in the system when the alarm is triggered and then lock them when the alarm is turned off.

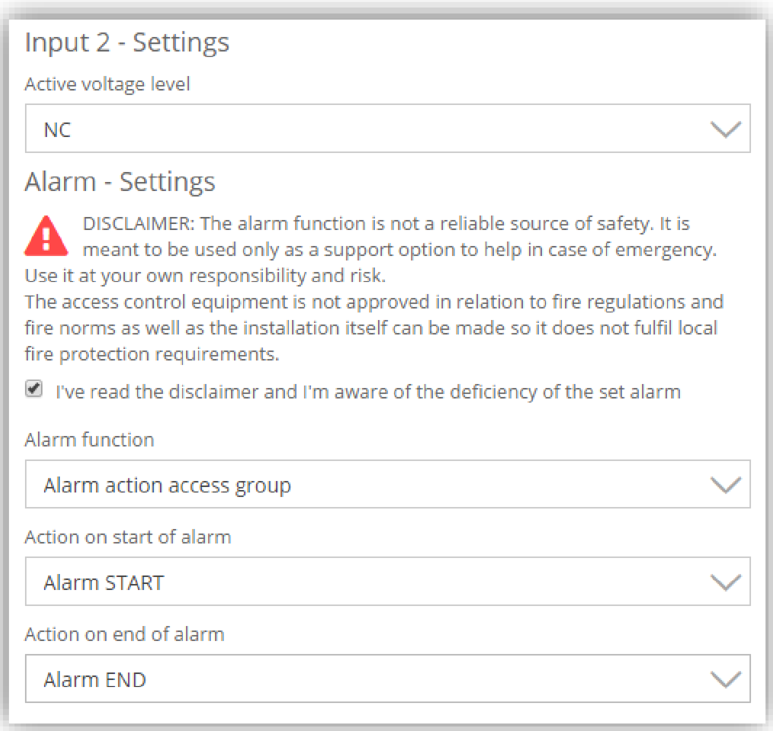
NOTE: Doors that were previously unlocked – manually or by schedule will **LOCK** once the alarm is over.

18.3 Setting up a custom alarm

Advanced setting that allows creating a new, special Alarm action access group with custom settings for the beginning and the end of the alarm time frame.

To create a custom alarm group, please navigate to **Home > Users & Access rights > Access groups**, and create a new group with the **Alarm action** as an access group type. The access group is assigned similarly as a standard access group with some limitations (the time is always 0-24 and actions can be set to Lock/Unlock/Block/Unblock/None). Along with the Action, custom events can also be triggered if the scripting module is applied in the system. More about the scripting module can be read in chapter 7 Module: Scripting.

Once the access groups are created and configured, they can be selected in the alarm's dropdown menu as shown in Picture 18.1.



Input 2 - Settings

Active voltage level

NC

Alarm - Settings

DISCLAIMER: The alarm function is not a reliable source of safety. It is meant to be used only as a support option to help in case of emergency. Use it at your own responsibility and risk.
The access control equipment is not approved in relation to fire regulations and fire norms as well as the installation itself can be made so it does not fulfil local fire protection requirements.

☑ I've read the disclaimer and I'm aware of the deficiency of the set alarm

Alarm function

Alarm action access group

Action on start of alarm

Alarm START

Action on end of alarm

Alarm END

Picture 18.1: Custom alarm with a start/end groups assigned

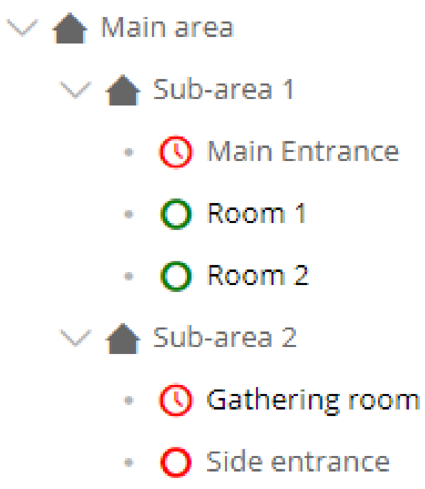
18.3.1 Setting up a custom alarm in case of terror threats

In some situations, there are special zones that we need to block. Here is an example:

Our area will be divided into two smaller areas, each covered with a different alarm signal. Each alarm covers its area and when the alarm is active, it will block all access to that sub-area.

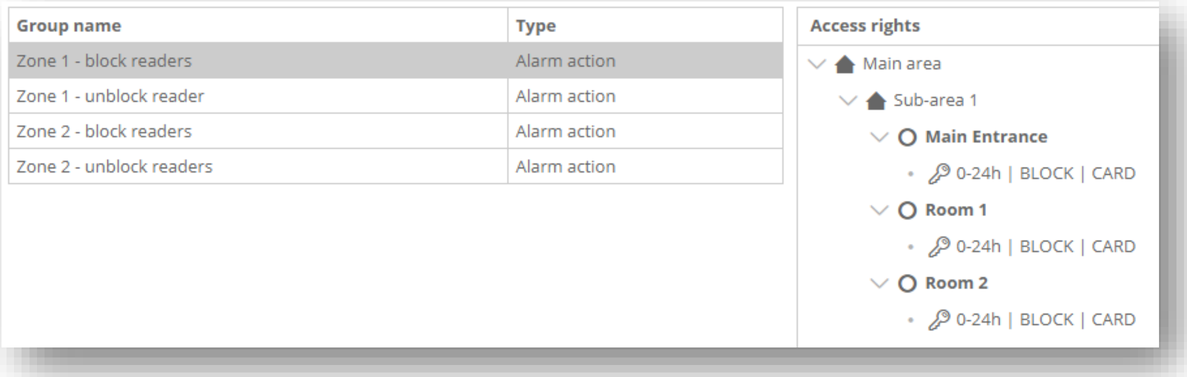
After the thread is cleared, we want to unblock all readers, so everyone authorized to have access again.

Here is a structure of the set-up:



- Main area
  - Sub-area 1
    - Main Entrance
    - Room 1
    - Room 2
  - Sub-area 2
    - Gathering room
    - Side entrance

Here are the access groups:



Group name	Type
Zone 1 - block readers	Alarm action
Zone 1 - unblock reader	Alarm action
Zone 2 - block readers	Alarm action
Zone 2 - unblock readers	Alarm action

Access rights
- Main area
  - Sub-area 1
    - **Main Entrance**
      - 0-24h | BLOCK | CARD
    - **Room 1**
      - 0-24h | BLOCK | CARD
    - **Room 2**
      - 0-24h | BLOCK | CARD

Picture 18.2: Access groups for Alarm action groups

Now that the access groups are created, they can be assigned to the correct central as described in chapter 18.3 for both centrals that have alarms connected.

When the alarm is active, the readers are blocked which means that no one can pass except the users who have Privileged access ~ found in chapter 4.2.3 Managing users, their access rights and apartments.

19 Module: Checkpoint

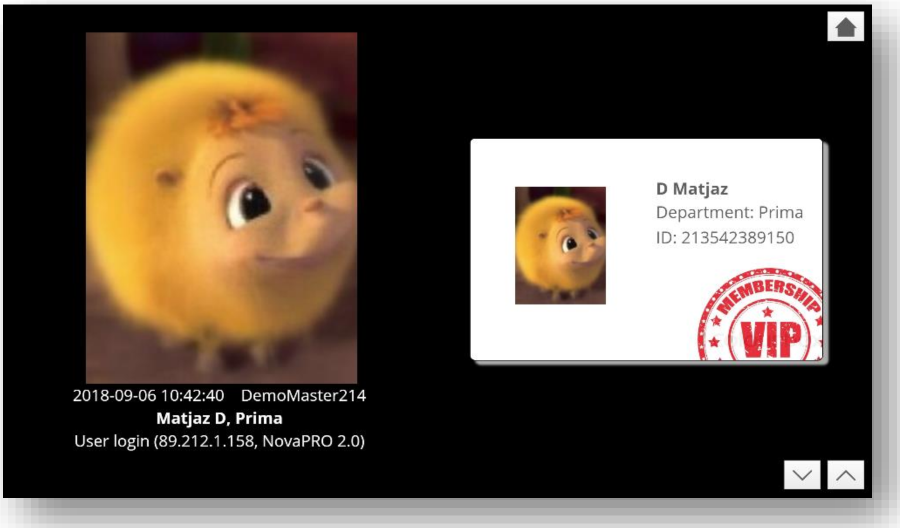
Checkpoint module supports card checks for secure facilities such as airports. There are two (2) ways to check the cards – a **stationary checkpoints**, where a guard can check cards of users that pass by via predefined reader(s) or **mobile checkpoints** that allow guards with a designated mobile device to scan cards on the field.
To activate this part of the software, please follow the instruction in chapter **6.1 Add-ons and Modules**.
IMPORTANT! Master central has to be upgraded with the package version 2.3 or higher for these functionalities.

Firstly, we need to set-up a **Checkpoint user(s)**. To read more about user account types and how to assign them, please read 1.1.1 Account types.

19.1 Setting up a stationary checkpoint

Once the users are created, navigate to **Settings > Checkpoint settings**.
On the top select the checkpoint user and fill out which events show as "OK" and which ones as "Error". You can also assign sounds to any event you've selected by pressing on the "Play button".

When the guard logs in, he can see the checkpoint widget.
When opened, the screen is black until one of the set events occur.
At that time, the layout selected at the Default card print layout (can be changed at the user's general settings) will be displayed.



2018-09-06 10:42:40 DemoMaster214
Matjaz D, Prima
User login (89.212.1.158, NovaPRO 2.0)

D Matjaz
Department: Prima
ID: 213542389150

Picture 19.1: User's card layout displayed on the screen

Picture 19.1 shows a checkpoint preview.
There are 3 buttons:

- The home button, that navigates back to Nova
- The up/down buttons that allow us to go through card history.

NOTE: Card history is limited to 50 cards max and the cards are stored only for 10 minutes!

In the case of the "Error" event type occurs, the text from Other settings on the bottom will be displayed instead of the card. Additionally, you can select a different layout and text if the card is unknown.

19.2 Setting up a mobile checkpoint

After the checkpoint users are created, the special android app has to be installed on the devices capable of reading RFID cards.
After opening the app, the guard will have to login by showing their card + PIN.
The mobile app can only detect if the card is lost, deleted, expired, or the unknown card type (unauthorized or any of the offline cards).

NOTE: In the app, the person responsible has to set-up the IP of the top master central. These settings are locked behind a set PIN, so the normal user doesn't have access to them.

20 Module: Visitor manager

IMPORTANT! For this module, you need special hardware – **USB desktop reader.** There is more information about USB desktop reader described in chapter **24.5 USB desktop reader.**

This module is locked by default and can be activated with an activation code. To do so, please follow the instruction in chapter **6.1 Add-ons and Modules**.
IMPORTANT! Master central has to be upgraded with the package version 2.3 or higher for these functionalities.

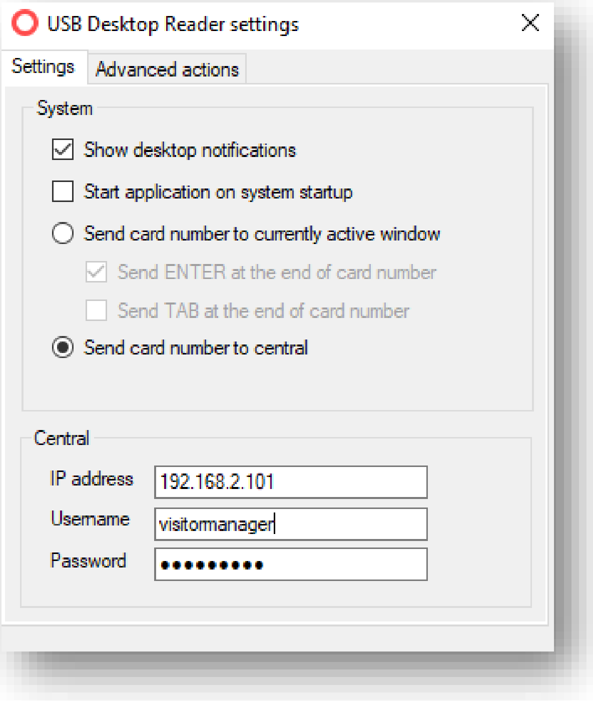
To create the visitor manager:

1. Navigate to **new user creation**.
2. After the user is created, navigate inside his settings and select tab **Account**
3. Change its **Account type** to **Visitor manager**
4. Provide login credentials.

Create different access groups that he can assign:

1. Create a **new access group**, make sure to select **Visitor** as **Access group type**.
2. Assign access rights accordingly (for the visitors).

Run USB reader software and navigate to its settings (right mouse click on the red circle near the clock). Make sure that **Send card number to central** is selected. The central's IP and Visitor manager's credentials need to be filled.


USB Desktop Reader settings

Settings | Advanced actions

System

☑ Show desktop notifications

☐ Start application on system startup

○ Send card number to currently active window

☑ Send ENTER at the end of card number

☐ Send TAB at the end of card number

● Send card number to central

Central

IP address: 192.168.2.101

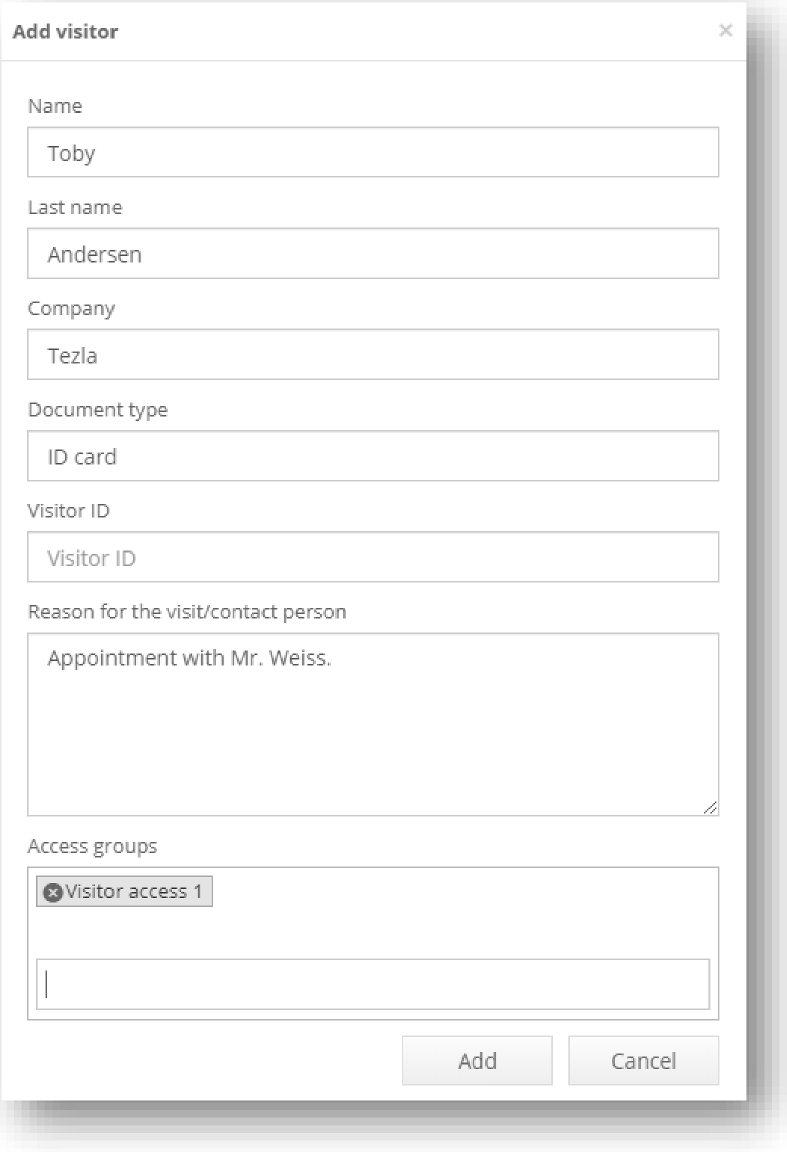
Username: visitormanager

Password: ●●●●●●●●●●

Picture 20.1: USB desktop reader's setting for visitor manager

Open Nova and use its credentials to log in.

Workflow:
Once the Unknown card is presented to USB reader, a new pop-up window will appear asking for data (similar to new user creation).



Add visitor

Name: Toby

Last name: Andersen

Company: Tezla

Document type: ID card

Visitor ID: Visitor ID

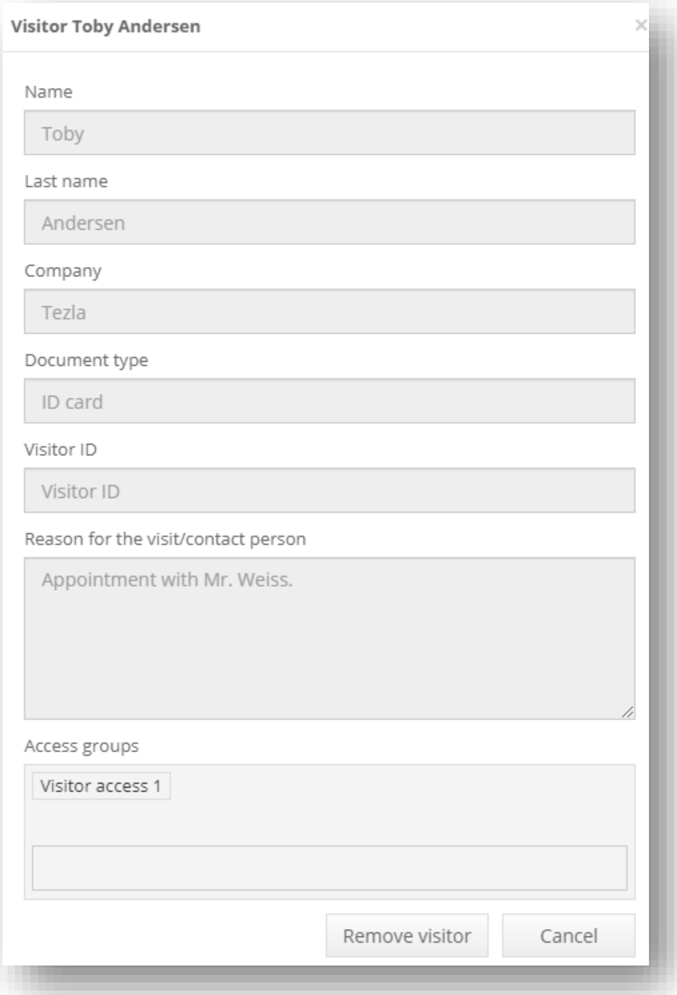
Reason for the visit/contact person: Appointment with Mr. Weiss.

Access groups: Visitor access 1

Picture 20.2: New visitor window

The visitor will then be added to the list.

Later on, when this visitor comes back and returns the card to the Manager has to show to the USB again which will bring up the filled window, prompting for visitor removal.



Visitor Toby Andersen

Name: Toby

Last name: Andersen

Company: Tezla

Document type: ID card

Visitor ID: Visitor ID

Reason for the visit/contact person: Appointment with Mr. Weiss.

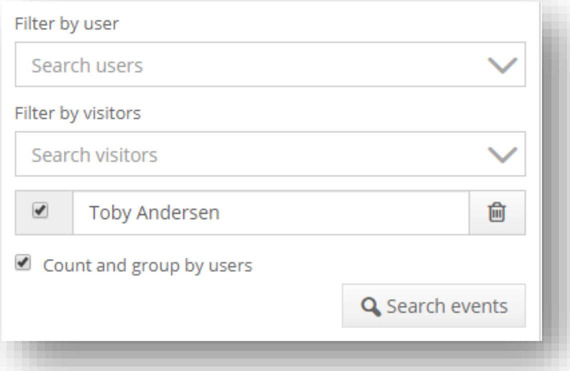
Access groups: Visitor access 1

Picture 20.3: Visitor has returned the card and can be deleted

Next time this card is presented to the USB reader, it will be presented as a new card, ready to be assigned to the next visitor.

20.1 Visitor history

Event history will be extended and users who have access to event history will be able to filter specific visitor passes.
If the visitor comes in sequential days and the name was entered correctly every time, event history will list all of his passes from different days.



Filter by user

Search users

Filter by visitors

Search visitors

☑ Toby Andersen

☑ Count and group by users

Picture 20.4: Event history allows displaying events from visitors too

21 Module: Messaging/Communications

This module is locked by default and can be activated with an activation code. To do so, please follow the instruction in chapter **6.1 Add-ons and Modules**.
IMPORTANT! Master central has to be upgraded with the package version 2.3 or higher for these functionalities.

NOTE: The **messaging modul**e is used for **sending** the message(s), while the **communications module** brings the **option to reply** to the sent message (usually via some poll/confirmation buttons).

21.1 Email messages

IMPORTANT! The **email and SMTP server settings** in the **Other settings** must be filled! For more information read chapter 6.4.4 Email and SMTP server settings.

Navigate to **Messages > Menu > New email message.**

When pressing the drop-down or the user search button, it will only show in black the ones who updated their email address.

Emails can be also sent to a list of users – Clicking on the list button will bring up the existing user list. To read more about how to create user lists, read chapter **14.1.1 User list(s)**.

21.2 Apartment messages

IMPORTANT! Special display hardware (AT – Apartment terminal) is required for the messages to be displayed.

Users created by the AT are counted differently, and if there is even one present in the system, **Apartment terminals** option will show-up in Nova. From there, apartments can be added to the apartment list.

To send a message, navigate to **Messages > Menu > New apartment message.**

From there, only AT users will be displayed. A message to multiple apartments can be sent by clicking on the list button and selecting the wanted list(s).

21.3 Info board messages

IMPORTANT! Special hardware – info board is required for the messages to be displayed.

To send a message, navigate to **Messages > Menu > New info board message.**

The messages sent to the info board will be displayed within the **Message** field. This makes everything more convenient since the layout doesn’t have to be every time a new message is sent onto it.

Additionally, timed messages can be created. A timed message has a higher priority than a regular message, so whenever a timed message is in effect, it will be displayed instead of the regular message. After the timer runs out, the regular message will be displayed again. In case multiple timed messages overlap, the more recent one will have a higher priority.

22 Module: DoorApp

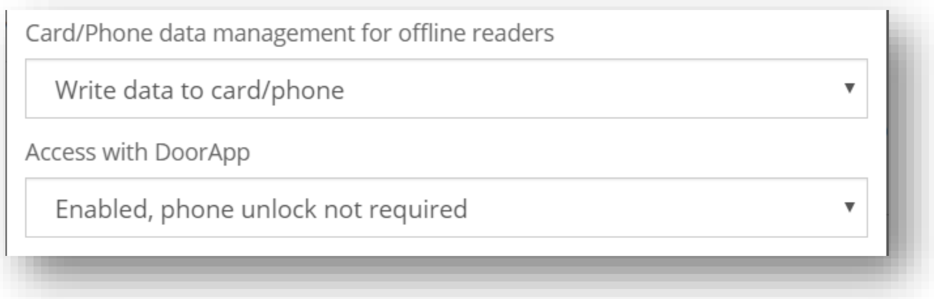
This module adds support for door opening by placing the phone on the Nexus online reader. Depending on the number of phones used to get access, the DoorApp module must match or exceed that number (for example DoorApp 25 can have up to 25 phones registered). Each user can have up to 5 phones assigned (if so, it will still count as 5 used phones).

Prerequisites:

- **Android NFC enabled phone only!**
- The system must be upgraded to Nova 3.0
- Reader's software must be upgraded to firmware 29 or above
- User must have at least 1 card assigned
- The application can be downloaded from Google Play store: https://play.google.com/store/apps/details?id=si.primasystems.doorapp&hl=en

How to pair the card with the phone?

1. Make sure that the writing on the reader is not turned off.
2. Make sure that the Access with DoorApp is not disabled.
3. Open the app on the phone and follow the steps. If any of the steps fail during pairing, just repeat the process until you get a positive result.



Card/Phone data management for offline readers

Write data to card/phone ▾

Access with DoorApp

Enabled, phone unlock not required ▾

Picture 22.1: Make sure that settings in the reader's advanced options are enabled

IMPORTANT! NFC antenna is located on the backside of the phone, so make sure that your phone's backside is facing our Nexus reader.

Once paired, the phone should open doors on all readers that have DoorApp access enabled and users are also required to have access to that door.

23 Module: Notification module

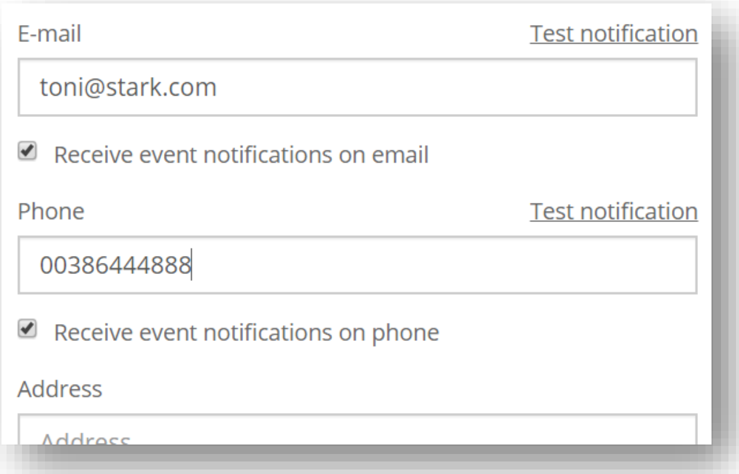
This module supports sending emails and SMS as info when the specific events occur. The messages are automatically generated and are sent immediately when the event is registered.

IMPORTANT! To send out the emails, the master central's gateway server and DNS server must work and have access to the internet.

23.1 Notification recipients

How to assign user(s) to receive notifications:

1. Navigate to specific user (**Users & access rights > Users > user of choice**).
2. Enable the checkmark next to the email address,
   enable the checkmark next to the phone number for SMS notifications.
   The notification can easily be tested by pressing the Test link.
3. Save changes.



E-mail

toni@stark.com

☑ Receive event notifications on email

Phone

00386444888

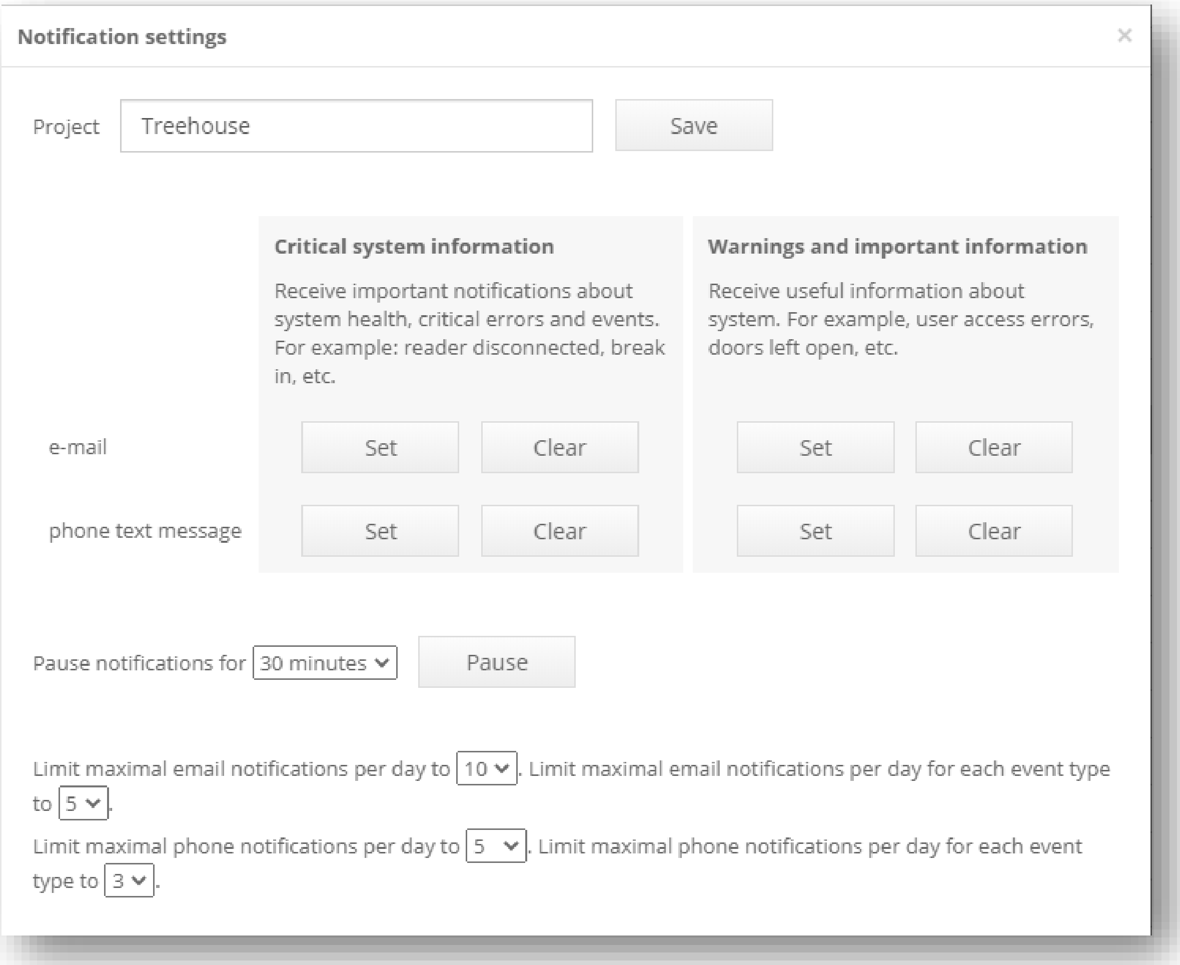
☑ Receive event notifications on phone

Address

Address

23.2 Notification events and limits

If we navigate to **Monitoring > Events >Notifications > Menu - Notification settings**, a dialog shows up:



Notification settings

Project: Treehouse

Critical system information

Receive important notifications about system health, critical errors and events. For example: reader disconnected, break in, etc.

Warnings and important information

Receive useful information about system. For example, user access errors, doors left open, etc.

Pause notifications for 30 minutes

Limit maximal email notifications per day to 10. Limit maximal email notifications per day for each event type to 5.

Limit maximal phone notifications per day to 5. Limit maximal phone notifications per day for each event type to 3.

Picture 23.1: Notification settings and restrictions

Picture 23.1 represents the **notification settings**:

- **Project**: This is helpful to determine from which project the notifications are coming from.
- **Critical system information**: Pressing the Set button will place the checkmark next to the predefined events for the email/phone. This setting focuses on hardware errors/failures.
- **Warnings and important information**: Similar to the previous point, but focuses more on user interactions.
- **Pause notifications:** For any planned system maintenance, the notifications will be blocked for a set period. This also triggers during the system upgrade.
- **Maximal email limit:** To prevent spam, this limit can be set. Additionally, one can set a limit for each event type.
- **Maximal SMS limit:** Same as email limit, but for phones.

How to add/remove events from the notification list:

1. Navigate to **Monitoring > Notifications**.

2. Double click on the wanted event or select it and press Menu > Edit
3. Select/deselect the notification checkboxes and save.

24 Special hardware

24.1 Elevator controller

The elevator controller is based on the regular Alpha central and has support for controlling access for up to ten floors by activating only those floor buttons in the elevator to which the user has access.

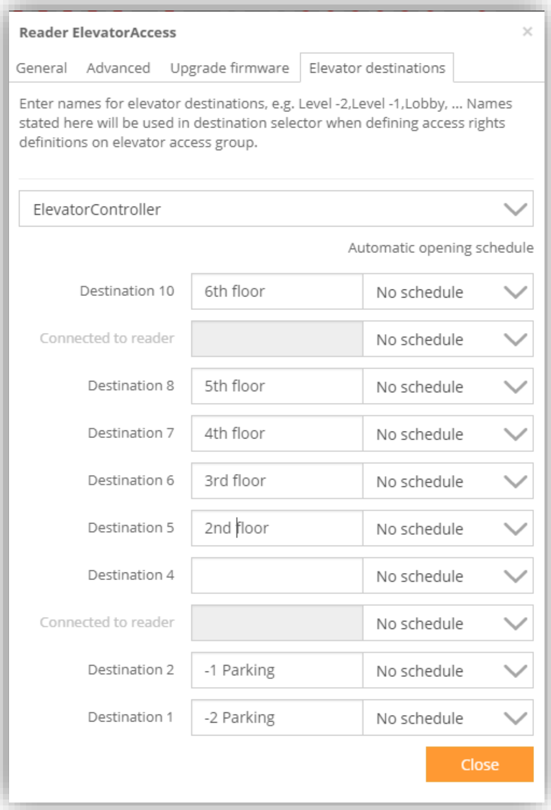
24.1.1 Elevator reader setup

- The reader has to be installed on **Door 1** on the Elevator controller.
- Reader and Door 1 settings are applied in the same way as for a normal reader.
- Please see the section on setting up an RFID reader for more information.

NOTE: The only difference is that the **Electric lock open time** setting for Door 1 is controlling how long the elevator buttons are enabled.
IMPORTANT! In cases where the central is controlling less than 10 floors, unused outputs can be used for normal access control with additional readers connected to Door 2, Door 3, or Door 4.

24.1.2 Setting up elevator destinations

To set-up elevator destination, navigate to reader settings (described in chapter **5.1.15 Reader settings**) and enter the desired destinations (an example is displayed on Picture 24.1).
We can make so floors publicly available by assigning a schedule next to the destination name.



Reader ElevatorAccess

Enter names for elevator destinations, e.g. Level -2,Level -1,Lobby, ... Names stated here will be used in destination selector when defining access rights definitions on elevator access group.

ElevatorController

		Automatic opening schedule
Destination 10	6th floor	No schedule
Connected to reader		No schedule
Destination 8	5th floor	No schedule
Destination 7	4th floor	No schedule
Destination 6	3rd floor	No schedule
Destination 5	2nd floor	No schedule
Destination 4		No schedule
Connected to reader		No schedule
Destination 2	-1 Parking	No schedule
Destination 1	-2 Parking	No schedule

Picture 24.1: Elevator destinations

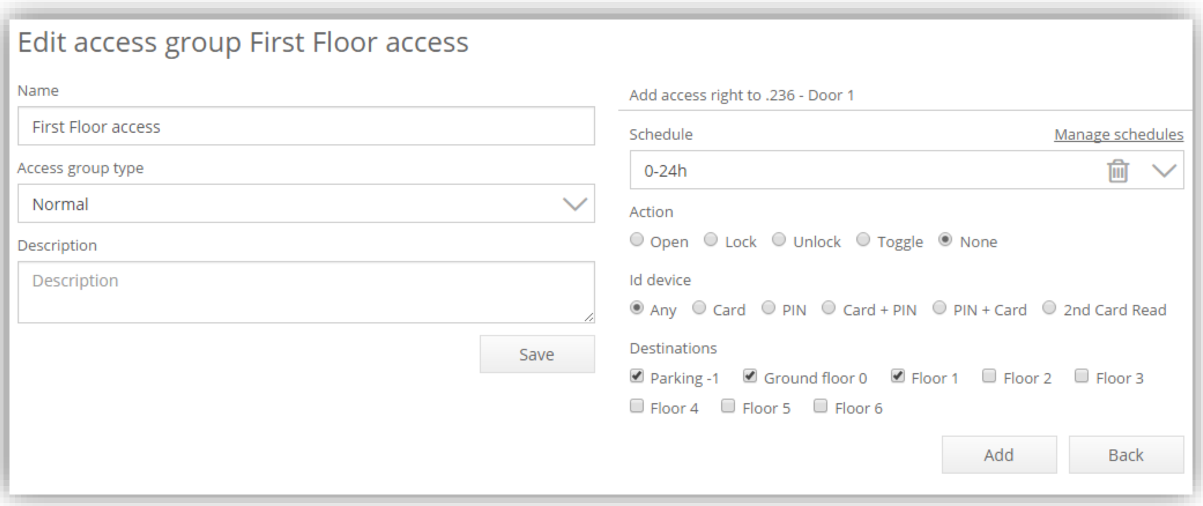
24.1.3 Setting up access groups and access rights

- Users need to be assigned with **special access groups** defining which floor should be activated when the elevator is used.

- A **special access group** is created in the same way as a normal access group. Here you create a new access definition of the elevator reader and select the desired **schedule, Id device,** and **floors**.

- Action has to be set to **None** (Picture 24.2).

NOTE: New access groups must be created for each different combination of floors.



Edit access group First Floor access

Name: First Floor access

Access group type: Normal

Description: Description

Add access right to .236 - Door 1

Schedule: 0-24h

Action: ○ Open ○ Lock ○ Unlock ○ Toggle ● None

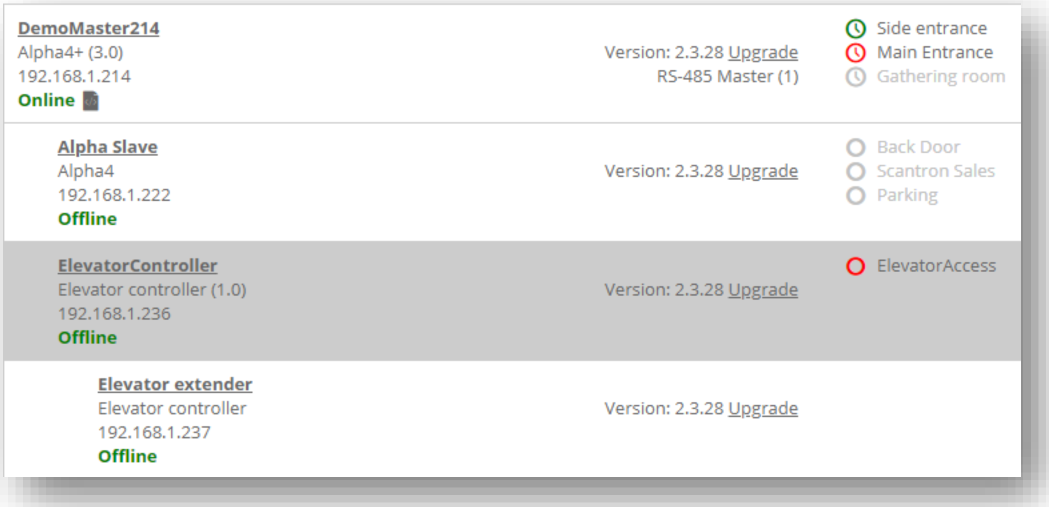
Id device: ● Any ○ Card ○ PIN ○ Card + PIN ○ PIN + Card ○ 2nd Card Read

Destinations: ☑ Parking -1 ☑ Ground floor 0 ☑ Floor 1 □ Floor 2 □ Floor 3 □ Floor 4 □ Floor 5 □ Floor 6

Picture 24.2: Access definition for floors -1, 0, and 1.

24.1.4 How to create more than 10 destinations

A single elevator controller can handle up to 10 floors on its own, however, we can have multiple elevator controllers to extend the maximum floor value by 10 per controller. The extension has to be done in Nova by assigning the "extended" elevator controller as a direct slave to the main elevator controller as shown in Picture 24.3.



DemoMaster214
Alpha4+ (3.0)
192.168.1.214
Online
Version: 2.3.28 Upgrade
RS-485 Master (1)
Side entrance
Main Entrance
Gathering room

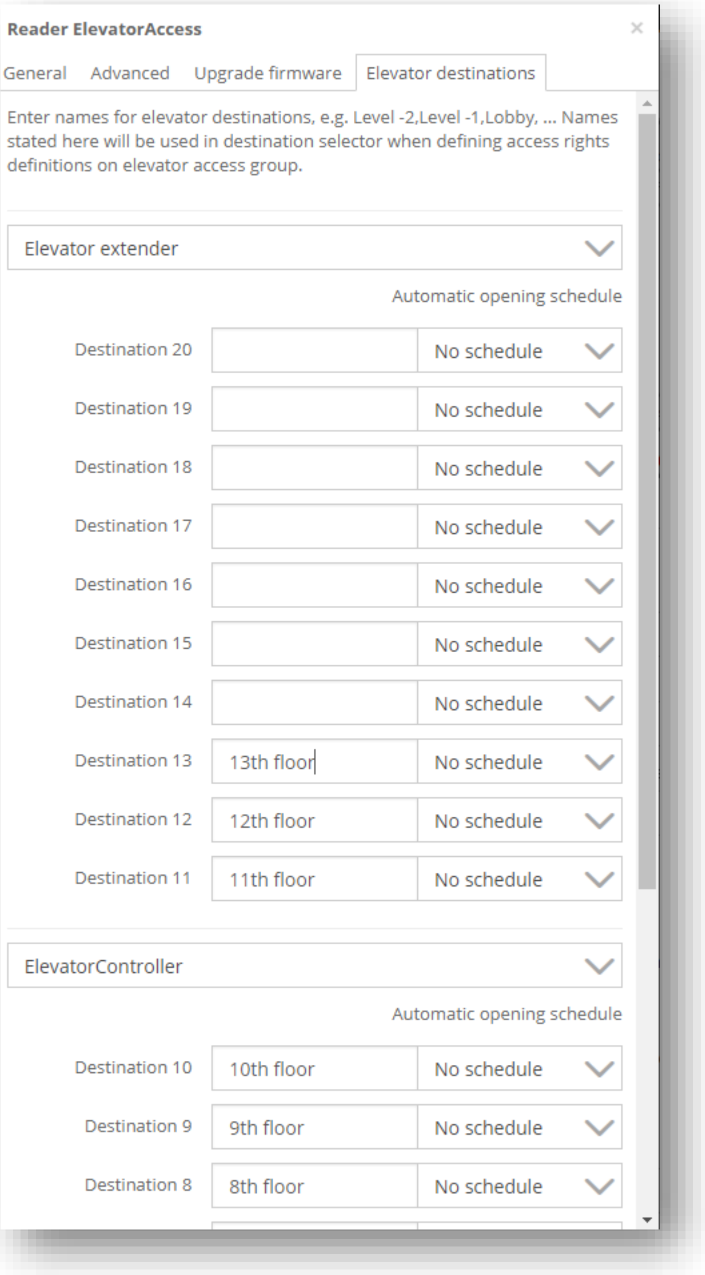
Alpha Slave
Alpha4
192.168.1.222
Offline
Version: 2.3.28 Upgrade
Back Door
Scantron Sales
Parking

ElevatorController
Elevator controller (1.0)
192.168.1.236
Offline
Version: 2.3.28 Upgrade
ElevatorAccess

Elevator extender
Elevator controller
192.168.1.237
Offline
Version: 2.3.28 Upgrade

Picture 24.3: Example of an elevator controller with 20 destinations

The destination screen will now have 20 destinations to fill in.



Reader ElevatorAccess

General | Advanced | Upgrade firmware | Elevator destinations

Enter names for elevator destinations, e.g. Level -2,Level -1,Lobby, ... Names stated here will be used in destination selector when defining access rights definitions on elevator access group.

Elevator extender

		Automatic opening schedule
Destination 20		No schedule
Destination 19		No schedule
Destination 18		No schedule
Destination 17		No schedule
Destination 16		No schedule
Destination 15		No schedule
Destination 14		No schedule
Destination 13	13th floor	No schedule
Destination 12	12th floor	No schedule
Destination 11	11th floor	No schedule

ElevatorController

		Automatic opening schedule
Destination 10	10th floor	No schedule
Destination 9	9th floor	No schedule
Destination 8	8th floor	No schedule

24.2 FireAlpha

FireAlpha is a stand-alone central that serves to ping devices on the RS485 bus. It contains its graphical user interface to manage the connected devices from a pre-determined list.

The detailed FireAlpha manual is in a separate file. Please contact the support that can be found on the vendor's webpage.

24.3 Parking controller

The Parking controller is a stand-alone central that manages parking garages entry/exits.

A detailed manual is written in a separate file. Please contact the support that can be found on the vendor's webpage.

24.4 Nexus MO

Nexus MO is stand-alone hardware that supports the connection of up to **two readers**. It needs to be programmed the same way as offline readers are programmed. You can read more on programming offline readers in chapter 5.2 Offline readers.

There are no special readers for this hardware – meaning the readers from Alpha central can be connected to Nexus MO and the other way around.

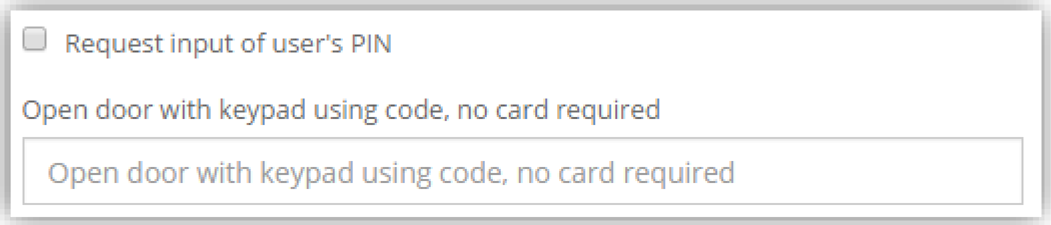
24.4.1 Upgrading Nexus MO readers

1. Disconnect reader(s) from the Nexus MO.
2. Connect them to port on a central.
3. Run a search and add them to the system.
4. Double click on it and navigate to tab **Upgrade firmware.**
5. Press the button **Upgrade firmware** and find the upgrade software on your PC.
6. After the upgrade is done, the readers can be removed from the software and connected back to Nexus MO.
7. Reboot the Nexus MO to detect the readers.

NOTE: Nexus MO only detects readers at its boot. Connected readers after boot will not be recognized. Please press the reboot button to start the initial search again.

24.4.2 Nexus MO PIN

When changing the configuration of different offline types, when we select **Offline Nexus reader**, we are presented with the option to request the user's PIN or we have an option to enter with a shared PIN.



□ Request input of user's PIN

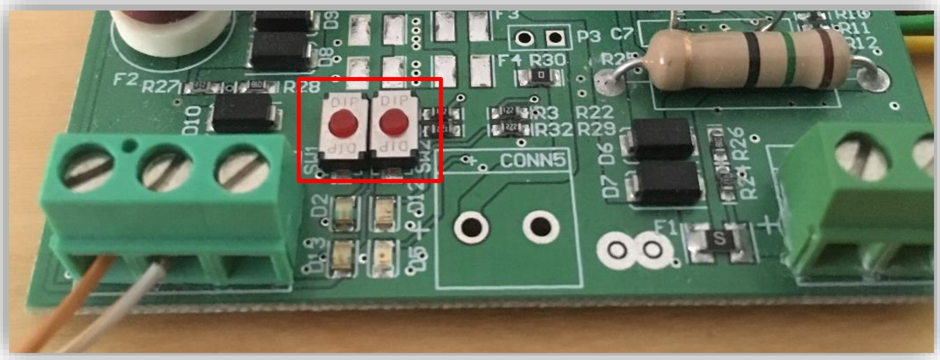
Open door with keypad using code, no card required

Open door with keypad using code, no card required

Picture 24.4: Nexus MO additional PIN settings

24.4.3 On-board buttons

Next to the power connectors, there are two buttons like there are on the central. Pressing the left one will reset the board. By pressing and holding the right one until the LED starts blinking faster will reset all settings (the board needs to be re-programmed).



Picture 24.5: Nexus MO on-board buttons

24.4.4 Upgrading older systems with the new firmware

Older version of Nexus MO can be upgraded to the latest version, but during the procedure, all data will be lost, so after the upgrade is done, it needs to be re-programmed.

To update **old reader** software, an RS485 connection must be made from PC to reader. At reader boot, it expects a new firmware for a couple of seconds. It needs to be provided with the flashing tool. If the time window is missed, the reader needs to be rebooted and the process repeated.

Updating the **old board** with the new software is similar to upgrading readers. The connection must be established with the PC via RS485 cable and the flashing tool needs to be used in the first couple of seconds to upload new software.

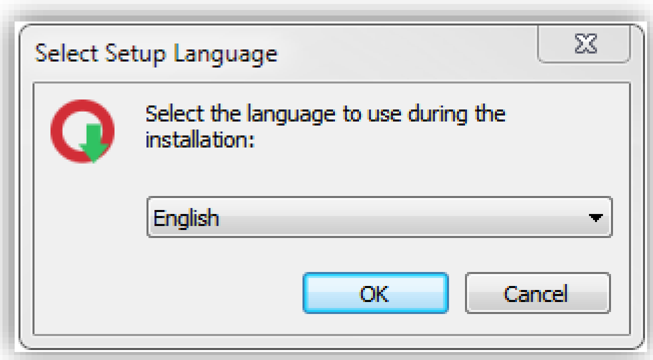
24.5 USB desktop reader

- **Overview**: USB Desktop Reader consists of a reader and companion software application. The reader is connected to the PC with a USB connector.
- **LED Status:** In normal operation, a red LED is lit on the reader and red LED and green LED are blinking on the USB connector signalizing ongoing communication between application and reader. When a new card is read, the red LED on the reader blinks and short beep is produced. When a card is accessed for reading/write operations, a short beeping sound is produced.
- **System Requirements:**
  Windows XP/7/8/8.1/10 with .NET 4.0 installed
  USB 2.0 Port,
  Internet connection
- **Safety:** To ensure the safe operation of the device and its users, please read and act following the safety instructions.
  USB Desktop Reader is designed for indoor use only; do not place it outdoors.
  Do not place the USB Desktop Reader in or near hot/humid places, such as a kitchen or bathroom.
  Please keep the USB Desktop Reader out of reach of children.
  There are no user-serviceable parts inside the USB Desktop Reader. If you experience problems, please contact your dealer to purchase and ask for help.
  The USB Desktop Reader is an electrical device and as such, if it becomes wet for any reason, stop using it immediately.

24.5.1 Installation

1. Turn on your computer and **plug-in USB Desktop Reader** into an available USB port on your computer. Never use force to insert a USB connector.
2. **Wait for Windows to detect inserted device** and that required drivers are installed. **This procedure can take some time**, as Windows may contact update servers to download required files.
3. Download the installation file **USB Desktop Reader Setup <version>.exe**.
4. Double click USB Desktop Reader Setup <version>.exe **setup application** and follow the next installation steps:

- Select the desired **language** you wish to use during the installation of the USB Desktop Reader.



Select Setup Language

Select the language to use during the installation:

English

Picture 24.6: USB Desktop Reader language selection

- The next screen welcomes you in the **setup wizard**. You can proceed with the setup process or you can cancel it by clicking on the *Cancel* button. Click the *Next* button to proceed with the installation.
- Select the desired installation location. It is recommended to use the default location.
- Select the Start Menu folder name. Under this folder, you will later access the installed application.
- Select if you wish to create a desktop icon.
- The next screen displays setup summary information, please read it carefully and click *Install* when you are ready to continue. If you have an older version of the software installed on your computer, it will be closed before installation.

- When the installation process is finished, you will be able to run USB Desktop Reader on your PC. Click *Finish* to close the setup wizard.

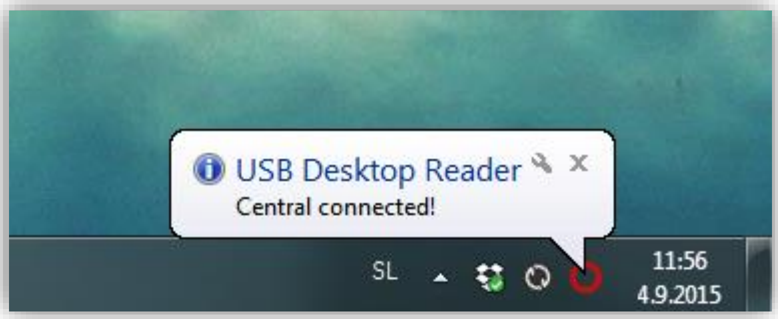
24.5.2 Using USB Desktop Reader

Starting application

IMPORTANT! To use USB Desktop Reader, host central needs to be running SysFCGI version 1.7.172 or greater. You can check the installed version on central's user interface under Settings in Advanced tab, next to the Upgrade software button. You may need to upgrade central to the latest firmware if the SysFCGI version is not correct.

Start USB Desktop Reader application by double-clicking on the desktop shortcut or click on Windows start menu and selecting USB Desktop Reader shortcut under USB Desktop Reader folder *(shortcuts may not be available if you have decided not to create them during the installation process)*.

USB Desktop Reader will start in the system tray where it can be accessed by clicking on its icon. If the icon is not visible, you can click the *up arrow* on the left side of the system tray and rearrange the USB Desktop reader icon by dragging it to the desired location on the system tray.



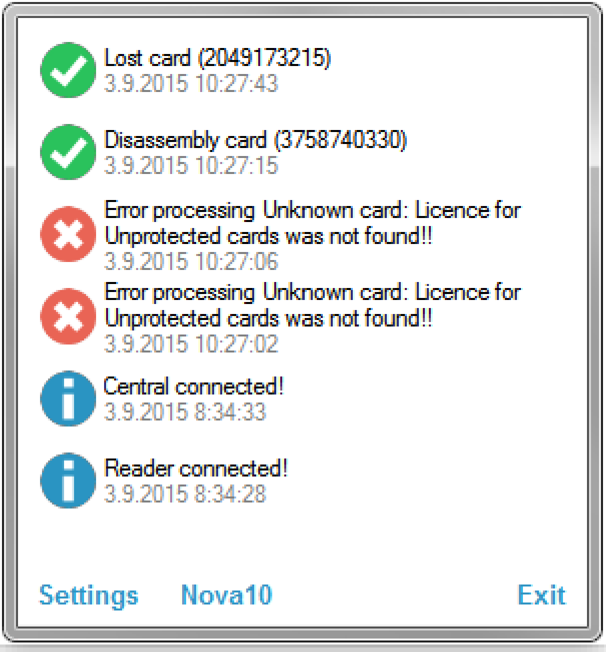
USB Desktop Reader

Central connected!

Picture 24.7: USB Desktop Reader software running in the system tray

USB Desktop Reader settings

Mouse click on USB Desktop Reader icon will open the main application window with six latest events and access to application settings and connected central.



Lost card (2049173215)
3.9.2015 10:27:43

Disassembly card (3758740330)
3.9.2015 10:27:15

Error processing Unknown card: Licence for Unprotected cards was not found!!
3.9.2015 10:27:06

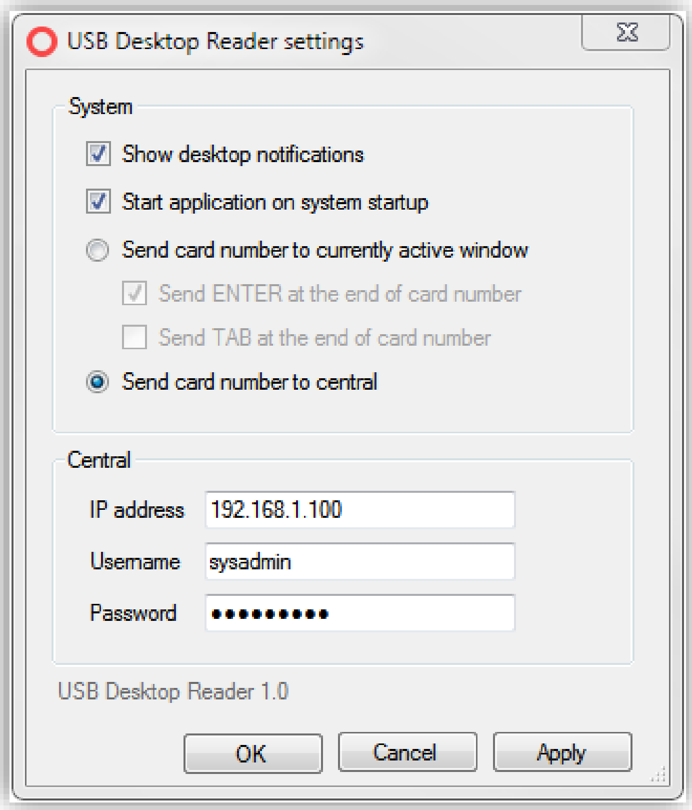
Error processing Unknown card: Licence for Unprotected cards was not found!!
3.9.2015 10:27:02

Central connected!
3.9.2015 8:34:33

Reader connected!
3.9.2015 8:34:28

Picture 24.8: USB Desktop Reader log

Click on *Settings* will open application settings where you can change the system and central related settings.
Under the *System* section, desktop notification balloons can be enabled or turned off. When desktop notifications are enabled, balloon messages will show the status of all card-related operations and system state changes (disconnected reader, ...).
When the option *Start application on system startup* is selected, USB Desktop Reader will automatically start whenever the PC is turned on.



USB Desktop Reader settings

System

☑ Show desktop notifications

☑ Start application on system startup

○ Send card number to currently active window

☑ Send ENTER at the end of card number

□ Send TAB at the end of card number

● Send card number to central

Central

IP address: 192.168.1.100

Username: sysadmin

Password: ●●●●●●●●●

USB Desktop Reader 1.0

Picture 24.9: USB Desktop Reader settings

USB Desktop Reader can be run in two different modes:

- When option *Send card number to the currently active window* is selected, the application will send read card numbers to the opened application that has focus (*this mode is useful if you need to create a list of user cards in Excel spreadsheet*). In this mode, you can also select if the card number is combined with ENTER or TAB keypress.

- If option *Send card number to central* is selected, then read card number is sent to the central, and card is treated in the same way as it would be on an online reader.

  For the second option valid central IP address, username and password need to be entered under applicable fields in the *Central* section of the settings window.
  When you have edited application settings you can close the settings window by clicking on the *OK* button or you can apply new settings with the click on the *Apply* button. If you wish to discard changes, you can click on the *Close* button to close the settings window.
  Exiting application

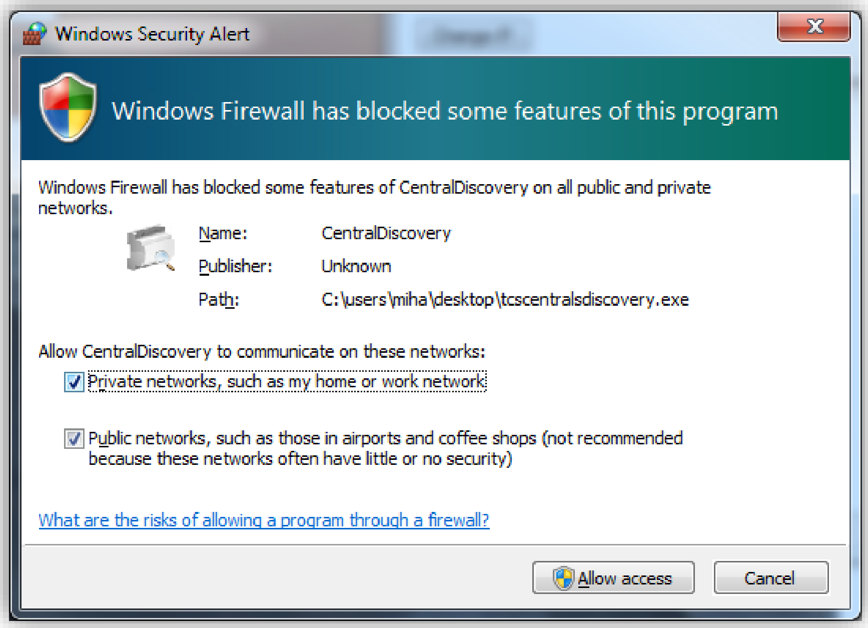
You can close the USB Desktop Reader application by clicking on the *Exit* label in the main application window or by right-clicking on the application icon in the system tray and selecting menu option Exit.

25 Central discovery tool

This tool allows installers to manage all centrals connected to the local network. This software can be found and downloaded from the vendor's webpage.

After downloading the software:

1. Open it
2. Both checkmarks must be checked and the tool must be allowed access to the network in the Firewall enable window (Picture 25.1)



Windows Security Alert

Windows Firewall has blocked some features of this program

Windows Firewall has blocked some features of CentralDiscovery on all public and private networks.

Name: CentralDiscovery

Publisher: Unknown

Path: C:\users\miha\desktop\tcscentralsdiscovery.exe

Allow CentralDiscovery to communicate on these networks:

☑ Private networks, such as my home or work network

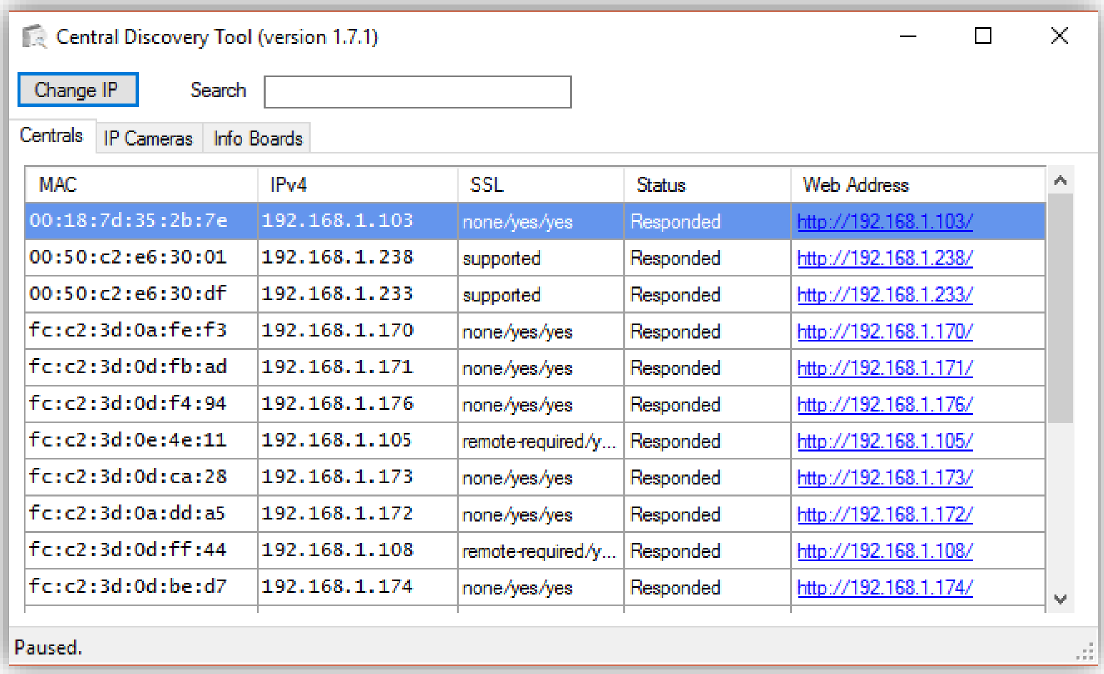
☑ Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)

What are the risks of allowing a program through a firewall?

Picture 25.1: Allowing access to the tool beyond the firewall

From the main window (Picture 25.2) the MAC and IP address are visible for the corresponding centrals.

- Here it is possible to navigate to the central web page by clicking on the active link in the **Web Address** column.
- Changing the IP of the central is only available from the default IP (192.168.1.100) address.
  - This prevents any unwanted changes outside the system. If the central is reset, its IP changes to the default address. See the explanation of central reset in chapter 27.



MAC	IPv4	SSL	Status	Web Address
00:18:7d:35:2b:7e	192.168.1.103	none/yes/yes	Responded	http://192.168.1.103/
00:50:c2:e6:30:01	192.168.1.238	supported	Responded	http://192.168.1.238/
00:50:c2:e6:30:df	192.168.1.233	supported	Responded	http://192.168.1.233/
fc:c2:3d:0a:fe:f3	192.168.1.170	none/yes/yes	Responded	http://192.168.1.170/
fc:c2:3d:0d:fb:ad	192.168.1.171	none/yes/yes	Responded	http://192.168.1.171/
fc:c2:3d:0d:f4:94	192.168.1.176	none/yes/yes	Responded	http://192.168.1.176/
fc:c2:3d:0e:4e:11	192.168.1.105	remote-required/y...	Responded	http://192.168.1.105/
fc:c2:3d:0d:ca:28	192.168.1.173	none/yes/yes	Responded	http://192.168.1.173/
fc:c2:3d:0a:dd:a5	192.168.1.172	none/yes/yes	Responded	http://192.168.1.172/
fc:c2:3d:0d:ff:44	192.168.1.108	remote-required/y...	Responded	http://192.168.1.108/
fc:c2:3d:0d:be:d7	192.168.1.174	none/yes/yes	Responded	http://192.168.1.174/

Paused.

Picture 25.2: Central discovery tool main page

- This tool scans the network for any new central every few seconds.
  - In case a central fails to respond due to IP change or network error, its entire row will turn red and its status will show '**No response**".
    - This is extremely helpful to determine if there are any problems with the local network.

Search function

The search box on the top applies a filter to display centrals only in the specific network or just a simple search for central IP or MAC address.

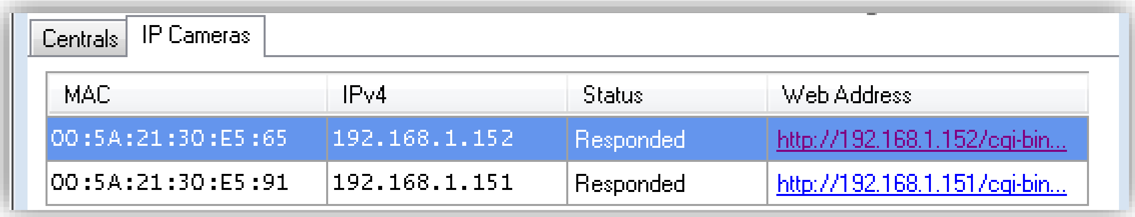
SSL support

This column reports if the central is capable of connecting via a secure SSL connection. Centrals with **old hardware do not support SSL!** The SSL options:

- Not supported
- **Supported** – the old way of reporting SSL capable connection
- Mode / Require peer certificate / Strict certificate check
  - **Mode:** The current SSL mode the central is set on (required, optional, optional+, none)
  - **Require peer certificate:** (yes/no) if the central presents and requires a connection with a certificate.
  - **Strict certificate check:** (yes/no) checks the contents of the certificates and revokes the connection if the certificate is unfamiliar.

IP cameras

For the system with IP cameras on the network, there is an **IP Cameras** tab.



MAC	IPv4	Status	Web Address
00:5A:21:30:E5:65	192.168.1.152	Responded	http://192.168.1.152/cgi-bin...
00:5A:21:30:E5:91	192.168.1.151	Responded	http://192.168.1.151/cgi-bin...

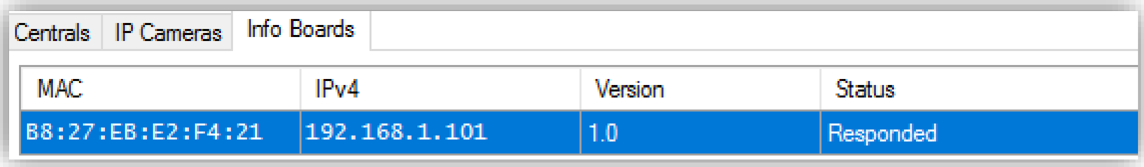
Picture 25.3: Display of IP cameras on the network

Contrary to the centrals, IP addresses of the cameras can be changed anytime to any address by:

- Clicking on the **Web Address** of the IP camera
  - A new web page containing net settings will be displayed, confirming that the camera is up and running.

Before setting up IP Cameras in the system, please make sure that the camera is compatible with the Nova software.

Info boards



MAC	IPv4	Version	Status
B8:27:EB:E2:F4:21	192.168.1.101	1.0	Responded

The tool also finds the Info boards connected on the same network. Moreover, it allows changing the network settings to the found info board.

NOTE: The discovery and search tool works the same as the one for centrals.

ATTENTION! Central discovery uses UDP (User Datagram Protocol) packets, which means that the discovery will display all centrals from local network (for centrals with Nova version 1.4 and lower) and the centrals from other sub-networks (if the router/access point allows it and the software on centrals is **version 1.5 or higher**).

IMPORTANT! This tool does not need to be installed. It was designed to run on any version of Windows OS. Different OS systems can also run the tool via emulation software.

26 FAQ

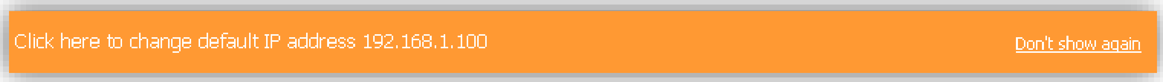
Difference between the physical IP address of a central and the IP address, on which the central is visible

If all centrals are inside the same LAN, every central can be connected to another central by registering the IP address of the other central. This IP address is the physical address of the central and can be changed in the **Central Settings** (see chapter 5.1.5 – Settings section). This address is the address where the central is visible to other centrals. If all centrals are in the same LAN, the physical address is also the visible address. The visible address is the address, which can be set in the **Central Settings** (Picture 5.9).

If any central in the LAN should be connected to a central located in a remote LAN, the address of the remote LAN must be identified. Routers control the communication between two different LANs, and if a message is sent from a central in one LAN to a central in another LAN, it is first sent to the router of the other LAN, which then sends it to the central. In the latter case, the router address becomes the visible address of the central in the other LAN (and is set in the **Central editor**).

A central in a remote LAN still has its physical address, which is needed for message delivery. This physical address can be changed in **Manage Centrals** (**5.1.1 Searching and managing centrals in Local Area Network (LAN)**) popup window.

The warning message in Picture 26.1 shows on the main page. It is displayed, if the physical address of the central is on 192.168.1.100. The best way to properly set the system is to set the central database IP to 192.168.1.[any other number between 1 and 255 excluding 100] – with database update. If the central interface IP needs to be changed, repeat the process setting the new interface IP without database update.



Click here to change default IP address 192.168.1.100

Picture 26.1: Default IP warning message

RS-485 BUS between Alpha centrals - Capacity and rules

On the RS-485 BUS, the bandwidth available for replication is greatly reduced compared to Ethernet. RS-485 communication is also much slower because the communication can only take place from one central to another at the time, whereas Ethernet allows many centrals to communicate all the time. This means that the limit of maximum 10 slave centrals connected to an 'RS-485 master central' on one RS-485 BUS is pre-set. Replication over an RS-485 BUS can handle up to 750 door openings per hour (3.000 events).

This amounts to up to 300 door openings per minute between centrals connected over TCP/IP connection run on Alpha centrals – if more capacity is needed the Nova software should be placed on a Linux server with more processing power which is a NovaServer version, which includes the server.

When the system is running, the slave centrals send their events to the master but receive no events back from the master or any other centrals in the system except if an event concerns a function on the slave central – e.g. an event generated on another central should open a relay on the central. So regarding the slaves, most of the communication is one-way and means that the slaves have no back-up of events in the system, but only contain its local events and the settings for the system (users, access groups, etc.).

The 'RS-485 master central' receives all events from its 'RS-485 slaves', which it replicates to all other Alpha centrals in the access control system that is on Ethernet. It also sends all settings to the 'RS-485 slaves' as well as events that shall activate a function on an 'RS-485 slave'.

A system where centrals are on RS-485 BUS should not contain more than 1.000 users due to the time it takes to upload them and distribute the information to all centrals. It takes approximately 3 minutes per central on an RS485 BUS, which means that it takes 30 minutes for 10 centrals connected on one RS-485 BUS. This can be important under commissioning or for systems where there are many changes to the settings.

Port forwarding for remote central on fixed IP address
Here, two possible cases can occur:

- The first case is when master central needs to communicate with the slave central in another network.
- The other case is when wanting to access publicly available Nova application through the browser.

In the first case, when the master needs to access remote slave central, one port needs to be forwarded on a remote router. Usually, port number 3543 on the remote router (the number is configurable under advanced settings of the remote central) needs to be forwarded to internal port 3543 on the slave central (not configurable). Through this port, the master central (or the local master central) sends the database to slaves.

In the second case, port 80 (which is used as the default port for all HTTP traffic) on the router needs to be routed to port 80 on the central serving Nova application.

If using a domain name (dynamic DNS service or custom domain name) instead of an IP number, that domain name is connected only to the IP address and all port settings remain the same.

What happens in the case of replicator overload?
If the system generates more than approximately 3.000 events per hour on an RS-485 BUS it builds up a backlog. This means that events are lined up in a queue and not reported instantly. In many cases, this does not matter as the local centrals continue to

work normally, so users will not notice any difference. However, in systems where an event (e.g. an input) on one central should release a function on another (e.g. an output), it can cause the event to be delayed when registered in the queue.
A built-up backlog of events will be phased out in the minutes afterward if the number of events gets fewer than 50 per minute (approximately 12 door openings). If the backlog only builds up and up the system will stop working.

An 'RS-485 slave central' is not affected locally by a replicator backlog. It will continue to operate according to the memory settings: doors will be opened for users, period validation and access rights to offline readers will be written to users' cards, etc.

Capabilities of RS-485 system

A system with RS-485 BUS between the centrals can be set up in three ways:

1. One master central connected directly to a PC and with up to 10 slave centrals connected on the RS-485 BUS.
2. One master is central on TCP/IP connection and with up to 10 slave centrals connected on the RS-485 BUS.
3. Several 'RS-485 master centrals' on TCP/IP – all part of the same big access control system – and each has up to 10 RS-485 centrals connected on the local RS-485 BUS.

The rule of max 10 centrals on an RS-485 BUS and max 1.000 users in an access control system with centrals on RS-485 BUS is as a guideline, which in some cases can be adapted to local circumstances. If a system has few users and a few events, it is possible to have more centrals on the BUS and it will work well.

The same goes for more than 1.000 users in an access control system, where it is only possible to have few slave centrals on a separate RS-485 BUS.

On the opposite side, it is possible to have a system with 500 users, but with many events and changes to the users. In this case, it might be unsuitable to install any centrals on RS-485 BUS.

On the 'RS-485 slaves' read/write readers can be installed to be used as update readers for period validation and access rights for offline readers. Input on the centrals can also be used to generate outputs on other. The RS-485 does not limit these possibilities.

Which memory sectors are used on MIFARE cards by the offline system?
User cards use sectors 5 – 9 (4 sectors) and 10 - 12 (3 sectors) by default. The starting sector for the access rights segment is configurable. It is currently the 5th sector, followed by 4 consecutive sectors. The starting sector for the feedback segment is also configurable. By default, the segment starts at the 10th sector followed by 2 consecutive sectors. All sectors are protected by unique authentication keys.

Usage of cards in other applications

Configuration cards for offline readers should not be shared between different applications and are linked only to our system. User cards are usable for other applications as long as the other applications use ‘free’ sectors on cards.

How is a user informed about a low battery level on the offline readers?
The user is informed by the device (with delay, red LED, etc.) as well as by software reports of battery status when Offline+ activation key is used and user feedback (events on user card) is enabled. If the battery status is low, it can be found between Errors on the Home screen. In the settings for every offline reader, there is a Remarks box to note the date of the last battery change.

How to replace existing or add new central to the existing system
When adding a new central or replacing some centrals in the existing system, follow these instructions:

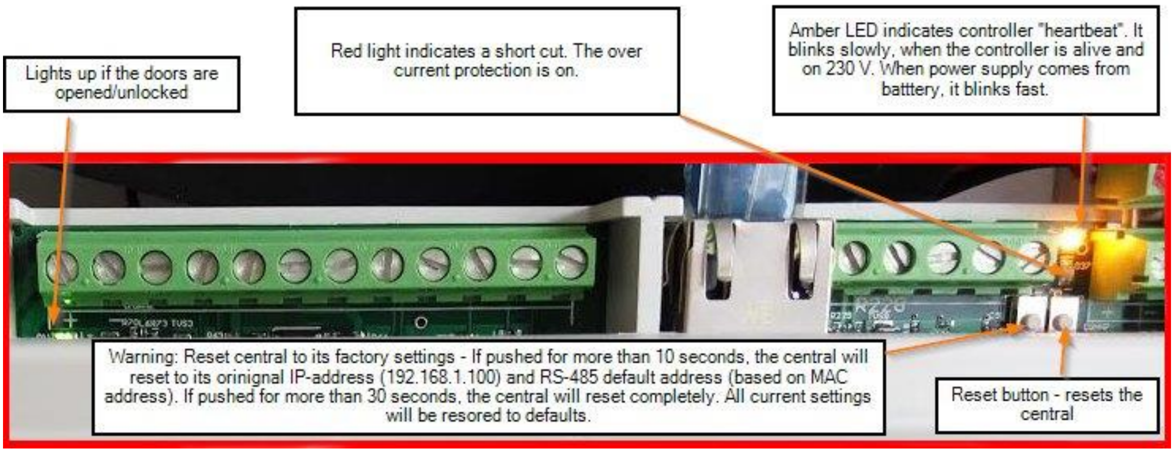
1. Disconnect faulty central from the system if applicable.
2. Login to master central and add new slave central to the system or edit existing slave MAC address with the MAC address of the new slave central. The MAC address of the central is written on the central side label.
3. Reset new slave centrals to default, so there is no old data on it (it might be an old master and will try to connect to some centrals, etc...).
4. Login to Nova application (NovaSimpli when reset to default) using default credentials and change the central IP address to the new value, which is set on master central.
5. Connect the slave central to the network. Master central will connect to it and update the slave central configuration.

The replacement of master central is described in chapter 5.1.7 Replacement of malfunctioning master central.

How many cards are stored on the blacklist card?
The blacklist itself can store up to 1133 cards.

27 Appendix A - Description of LEDs and buttons on central

There are two types of central Hardware and some differences in position/color of the LEDs and buttons. Here are the descriptions of both:



Lights up if the doors are opened/unlocked

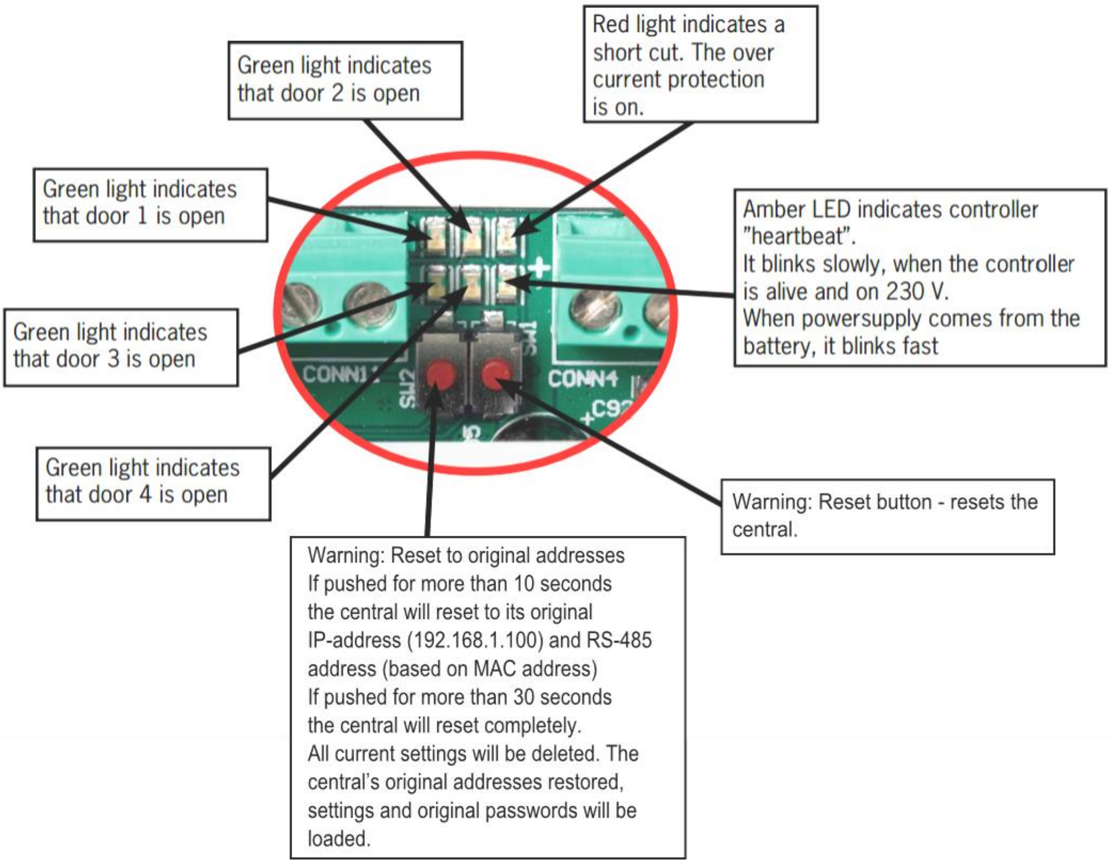
Red light indicates a short cut. The over current protection is on.

Amber LED indicates controller "heartbeat". It blinks slowly, when the controller is alive and on 230 V. When power supply comes from batttery, it blinks fast.

Warning: Reset central to its factory settings - If pushed for more than 10 seconds, the central will reset to its orinignal IP-address (192.168.1.100) and RS-485 default address (based on MAC address). If pushed for more than 30 seconds, the central will reset completely. All current settings will be resored to defaults.

Reset button - resets the central

Picture 27.1: LEDs and buttons on the new Alpha central



Green light indicates that door 2 is open

Red light indicates a short cut. The over current protection is on.

Green light indicates that door 1 is open

Amber LED indicates controller "heartbeat".
It blinks slowly, when the controller is alive and on 230 V.
When powersupply comes from the battery, it blinks fast

Green light indicates that door 3 is open

Green light indicates that door 4 is open

Warning: Reset button - resets the central.

Warning: Reset to original addresses
If pushed for more than 10 seconds the central will reset to its original IP-address (192.168.1.100) and RS-485 address (based on MAC address)
If pushed for more than 30 seconds the central will reset completely.
All current settings will be deleted. The central's original addresses restored, settings and original passwords will be loaded.

Picture 27.2: LEDs and buttons on the old Alpha central

28 Appendix B - Nova software feature possibility list

Package/Module	Description	Administrator client	200 extra users	10 extra doors	Use any card	XML integration	Offline+	Door stations	Python scripting
NovaSimpli	price: free, no schedules - only 24h, no offline doors, only one - standalone central	no	yes	no - only one standalone central	yes	no	no	no	no
NovaSimpli 350	price: free, no schedules - only 24h, no offline doors, no events history, only one - standalone central	no	yes	no - only one standalone central	yes	no	no	no	no
Nova10	10 doors/100 users	yes	yes	yes	yes	yes	yes	yes	yes
Nova100	100 doors/1500 users	yes	yes	yes	yes	yes	yes	yes	yes
NovaPRO	250 doors/3000 users	yes	yes	yes	yes	yes	yes	yes	yes
NovaServer	500 doors/5000 users	yes	yes	yes	yes	yes	yes	yes	yes

Table 28.1: Nova software feature possibility list

We combine our specialist expertise with our solid first-hand experience to develop convenient solutions for our customers. We aim to develop access control systems based on what our clients want and need with high security in mind.

Our systems also include high flexibility and quality, which make it possible to create dynamic, innovative solutions. We present solutions suitable for all industrial, office, home and apartment buildings, where traditional mechanical lock systems are being replaced with intelligent access control systems, saving both money and time. We base our solutions on an open platform, which is easy to integrate with video, time and attendance, booking, house automation and other customized solutions that you might require.

We provide 100% access control systems focused on software, hardware and centrals. We co-operate with experts in the field to develop secure, yet user-friendly products for customers.

Our production and development is located internationally, and our experienced sales force and technicians are always ready to help you.