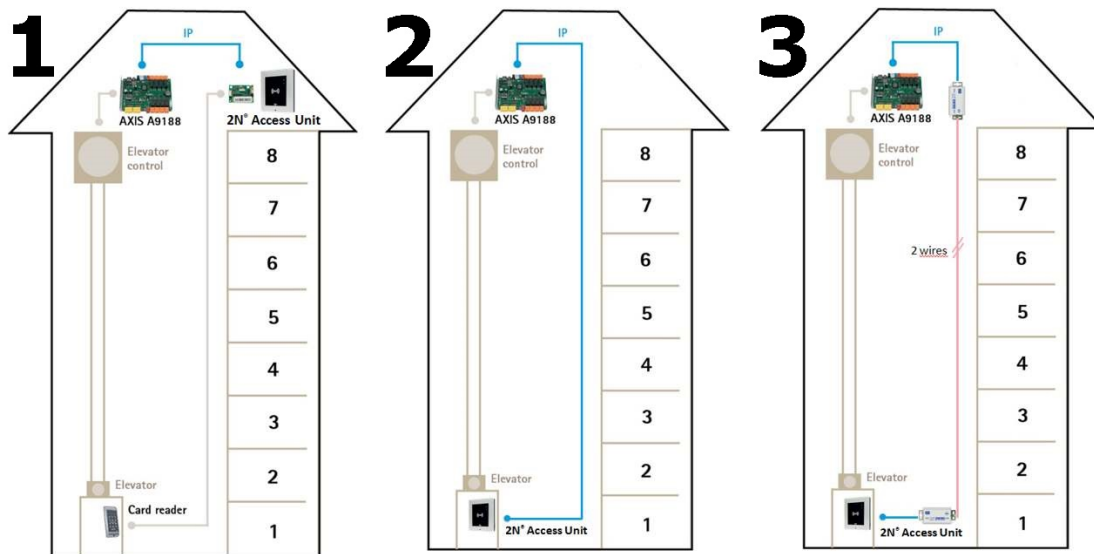


Lift control - configure 2N® Access Commander to control lift access to floors

In Access Commander, you can setup 2N RFID/Keypad/Bluetooth/Fingerprint equipped IP units to control which floors authorized user can access.

The whole scenario allows interconnection of 2N IP units with AXIS A9188 I/O Relay Modules, which tells the lift which floor can be accessed after a person authorizes using the 2N IP unit as shown on the following image:



Types of most typical scenarios are (please also see image above):

1. A 3rd party RFID card reader in the Lift cabin is connected over Wiegand to a 2N® Access Unit or located in the top of the shaft or in the Machine room. The 2N® Access unit communicates over IP with the Axis A9188, which is connected to the Lift Controller. The Lift Controller uses CANbus (or similar) to control the buttons in the Lift Car.
2. A 2N® Access Unit or supported intercom is installed in the Lift cabin requiring Ethernet cable connection from the machine room. This is the most convenient scenario. The 2N® device communicates again over IP with the AXIS A9188 in the same way as above.
3. A 2N® Access Unit or supported intercom is installed in the Lift cabin, which does not have any Ethernet connection. 2N® 2Wire converters are used to bring IP connectivity and PoE through the Lift car's travelling cable over available 2 wires. This provides IP connectivity for communication between the 2N® device and the Axis A9188, which is linked with the Lift Controller.

Currently, a maximum of 5 AXIS A9188 can be connected with one 2N unit making maximum of 40 floors supported (1 I/O Relay Module can handle up to 8 floors).



Requirements

Lift control solution requires:

- Access Commander 1.13 and later
- IP intercoms / Access Units with firmware 2.27 and later
- Lift license (order no. 9137916 (Axis order no. SKU 02001-001) for IP intercoms or 9160401 for Access units (Axis order no. SKU 02000-001)) installed in the 2N device.
Lift license is NOT part of the Gold license and needs to be ordered separately.
The license is available for the following models: 2N® IP Verso, 2N® IP Vario, 2N® IP Force, 2N® Access Unit, 2N® Access Unit 2.0.
- AXIS A9188 I/O Relay Module (2N order no. 9160501, AXIS order no. SKU 0820-001) firmware 1.65.0.2 or newer





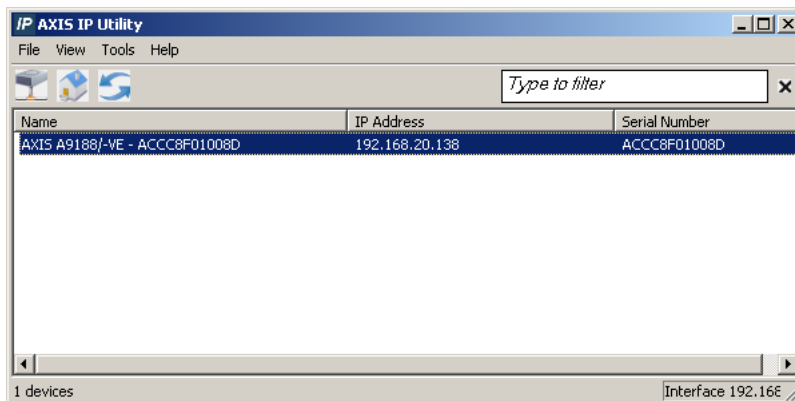
Technical parameters

- AXIS A9188 communicates with lift I/O Relay Module using its relays wired to lift system
- 2N IP Unit communicates with AXIS A9188 via IP protocol HTTPS
- Time for relays open/close time is set by 2N IP unit to 10s which directly corresponds with time person have after his/her authorization on 2N IP unit to push floor button in lift (this time is not configurable)
- One 2N IP device can connect to up to 5 AXIS A9188 I/O Relay Modules
- Multiple 2N IP devices are not recommended to connect to same AXIS A9188 I/O Relay Module

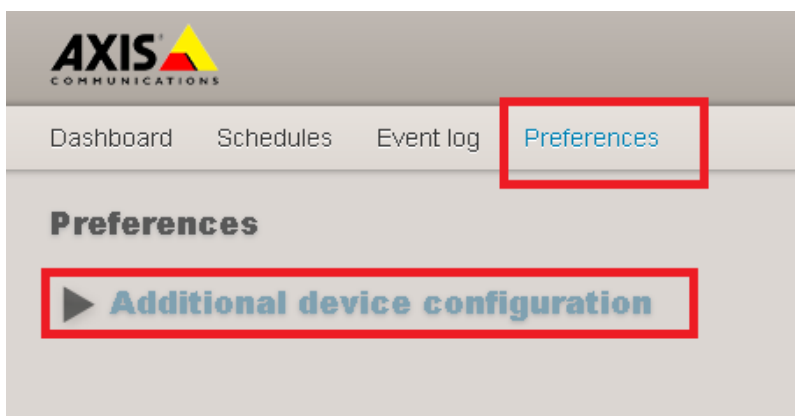
The following guide will explain, how to set the whole scenario to allow persons access to certain floors in the lift using their credentials (RFID, Code, Bluetooth or Fingerprint).

STEP 1: Configure AXIS A9188 to allow communication with 2N unit.

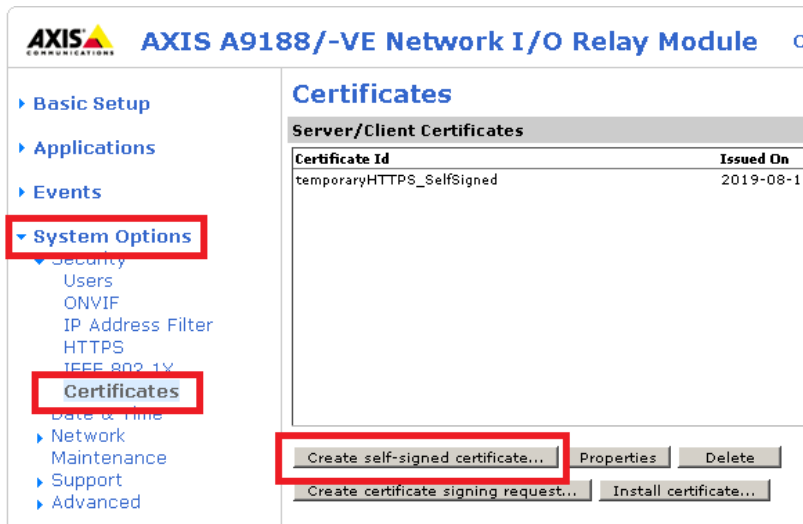
- Physically wire AXIS A9188 using its relays to lift control electronics which allows certain floor buttons to be pressed (for example wire relay io_1_1 on AXIS A9188 to lift control for 1st floor). Documentation for AXIS A9188 I/O Relay Module is available on following link: <https://www.axis.com/en-us/products/axis-a9188/support-and-documentation>
- Connect AXIS A9188 I/O Relay Module to IP network, since it needs to be configured.
- AXIS A9188 I/O Relay Module supports PoE and DHCP, once connected it can be located on the network using AXIS IP Utility which can be downloaded here: [AXIS IP Utility](#)



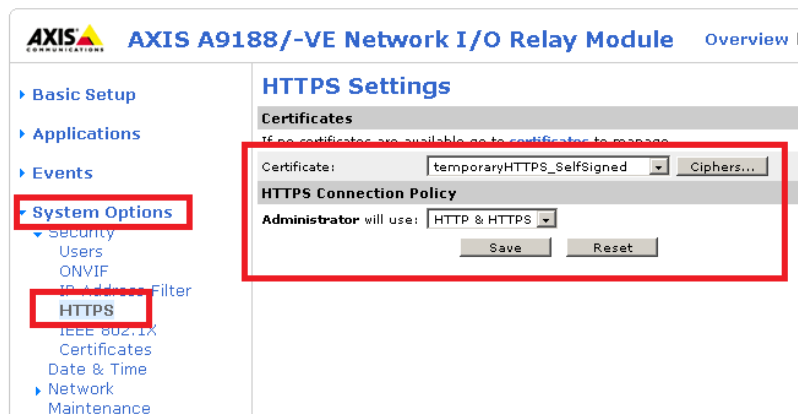
- I/O Relay Module can be accessed on its IP address using a web browser.
- Default login information:
Username: root
Password: root
- Navigate to section Preferences -> Additional configuration, which will allow you to access full configuration of I/O Relay Module.




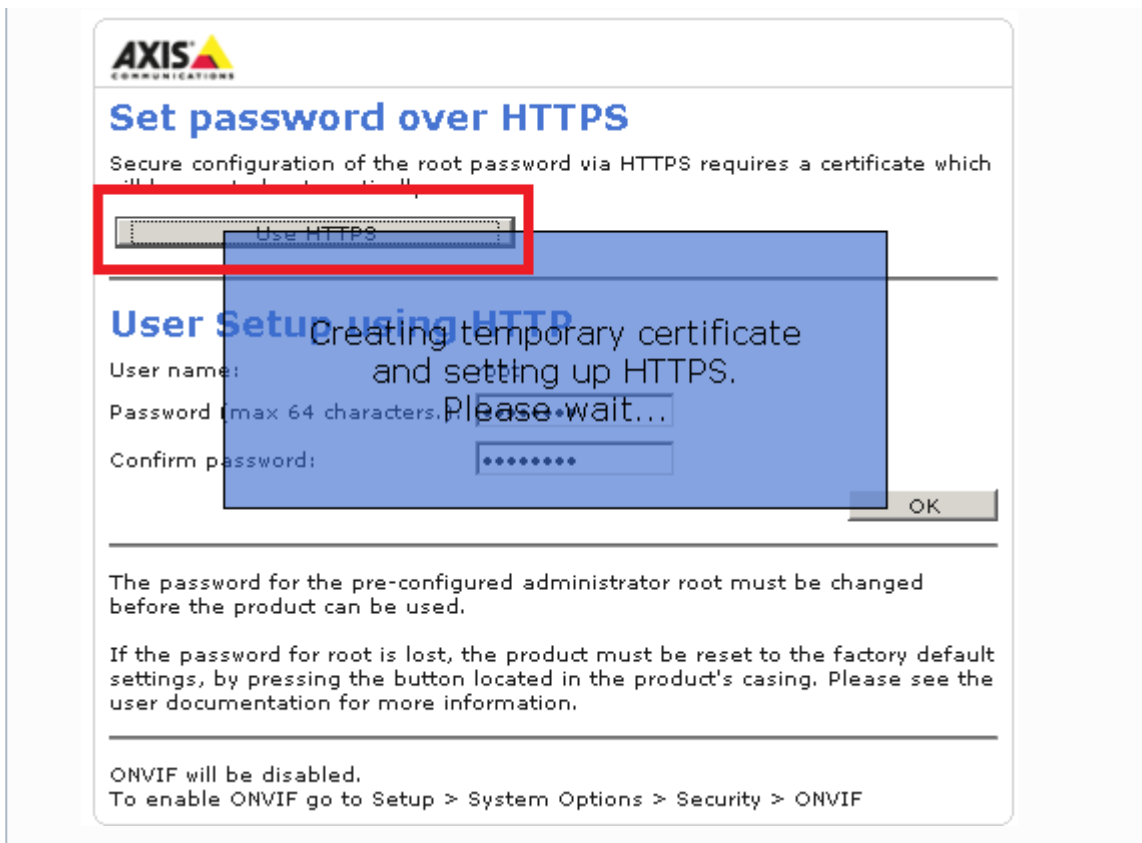
- Navigate to section System Options -> Security -> Certificates and choose Create self-signed certificate in order to allow I/O Relay Module using secured communication which is required for connection with 2N unit (optionally you can use your own CA signed certificates).



- Navigate to section System Options -> Security -> HTTPS choose certificate from previous step and allow Administrator to use HTTPS.

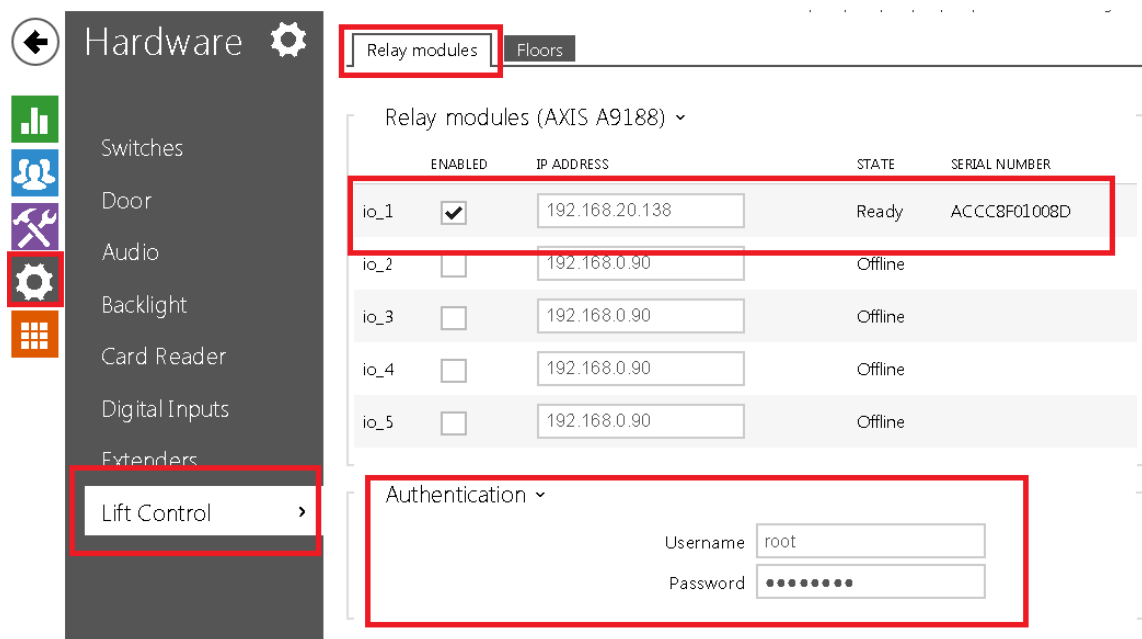


 Self-signed certificate and HTTPS protocol settings can be also set the first time you access AXIS A9188 device before creating root password by clicking on button Use HTTPS



STEP 2: Configure 2N unit to communicate with AXIS 9188 I/O Relay Module

- Make sure the 2N device has Lift license installed (order no. 9137916 for IP intercoms or 9160401 for Access units) and firmware 2.27 or newer is used.
- Connect the 2N unit to the AXIS A9188 I/O Relay Module in section Hardware - Lift Control by specifying the IP address of AXIS A9188 and administrator user (root for example).

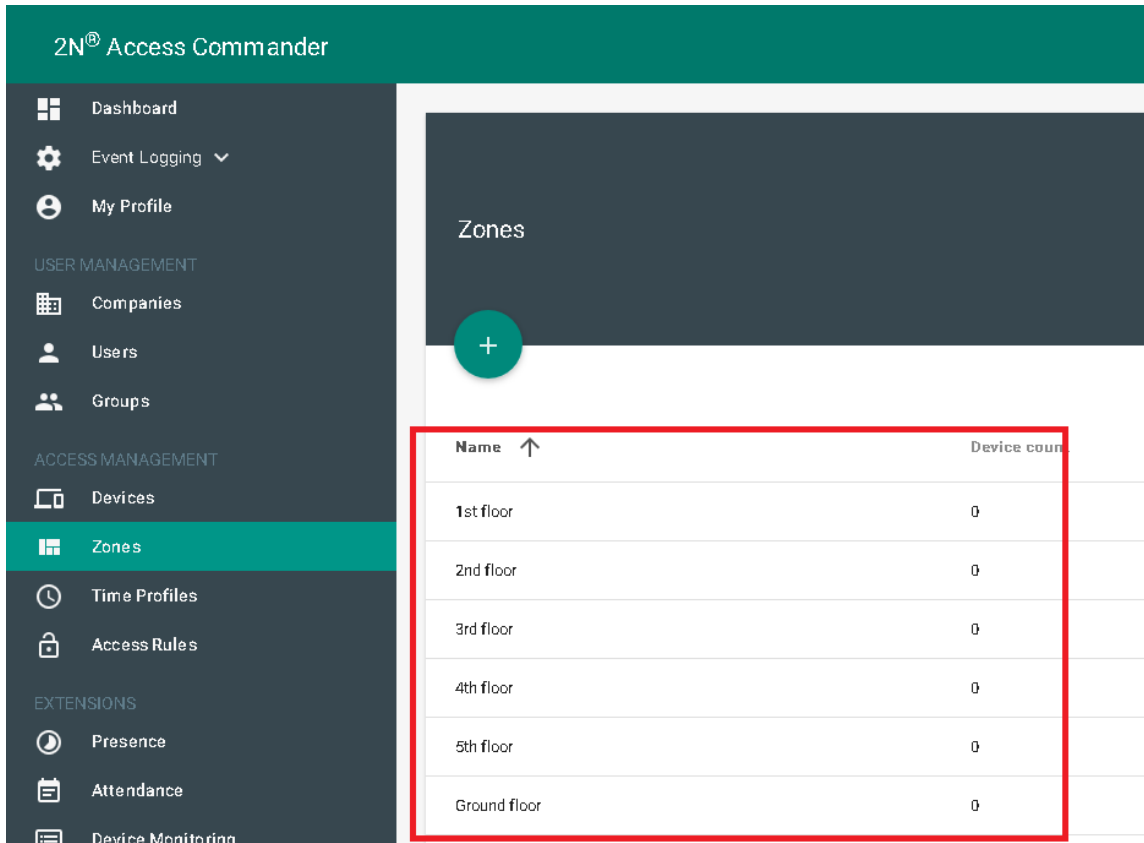


All AXIS A9188 I/O Relay Modules connected to the same 2N unit needs to have same

administrator user with same password (root for example) - maximum of 5 AXIS A9188 I/O Relay Modules can be connected to one 2N unit allowing for maximum of 40 floors

STEP 3: Setup floor access to users using 2N® Access Commander

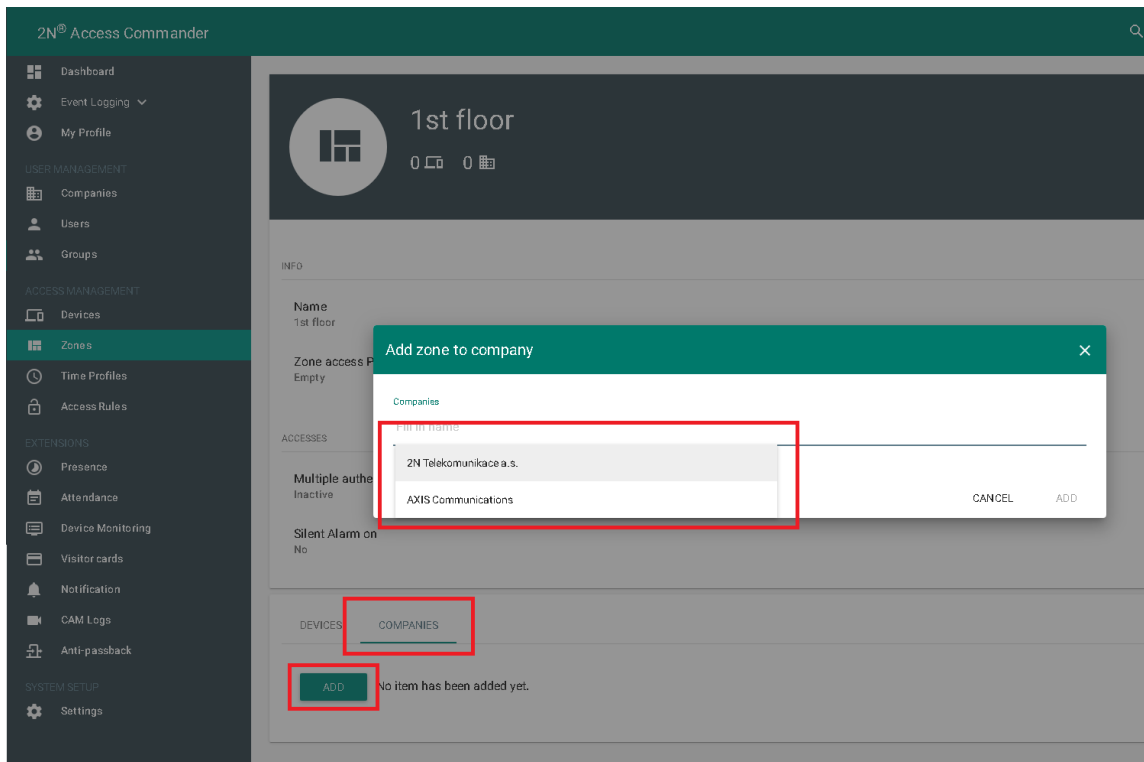
- Create a Zone for each Floor in the section Zones. It is correct that these Zones will not have any device assigned, since lift enabled devices cannot be added to any Zone.



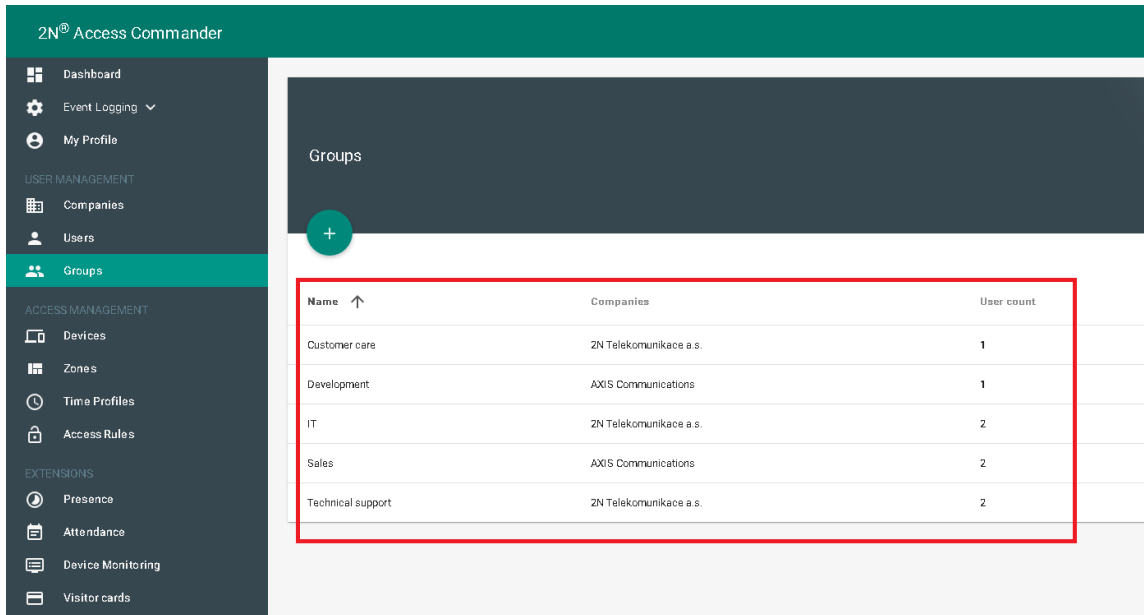
The screenshot shows the 2N Access Commander web interface. The left sidebar contains navigation options: Dashboard, Event Logging, My Profile, USER MANAGEMENT (Companies, Users, Groups), ACCESS MANAGEMENT (Devices, Zones, Time Profiles, Access Rules), and EXTENSIONS (Presence, Attendance, Device Monitoring). The 'Zones' menu item is highlighted in green. The main content area displays a 'Zones' section with a '+ Add Zone' button and a table of existing zones.

Name ↑	Device count
1st floor	0
2nd floor	0
3rd floor	0
4th floor	0
5th floor	0
Ground floor	0

- Assign each zone to the Company which contains users who are allowed access to that particular floor (multiple Companies can be selected if needed).

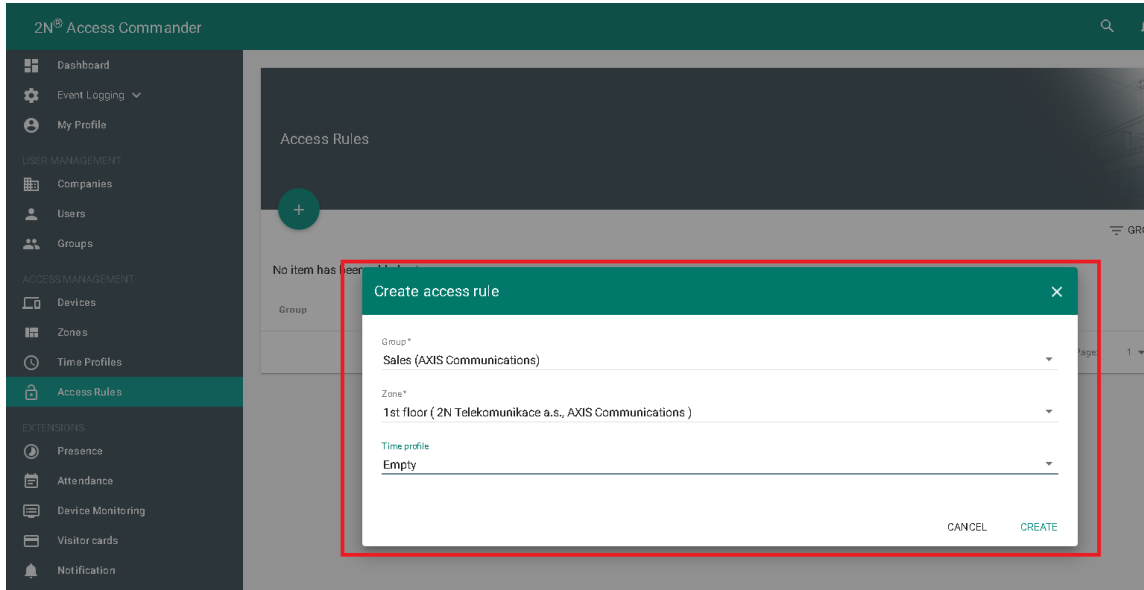


- Users should be placed in groups which will later be granted access to particular floors.



- Navigate to Access Rules and begin creating rules to define which zones or floors each group may access. For example, the group 'Company A Sales Team' can be paired with the zone 'first floor' to allow the

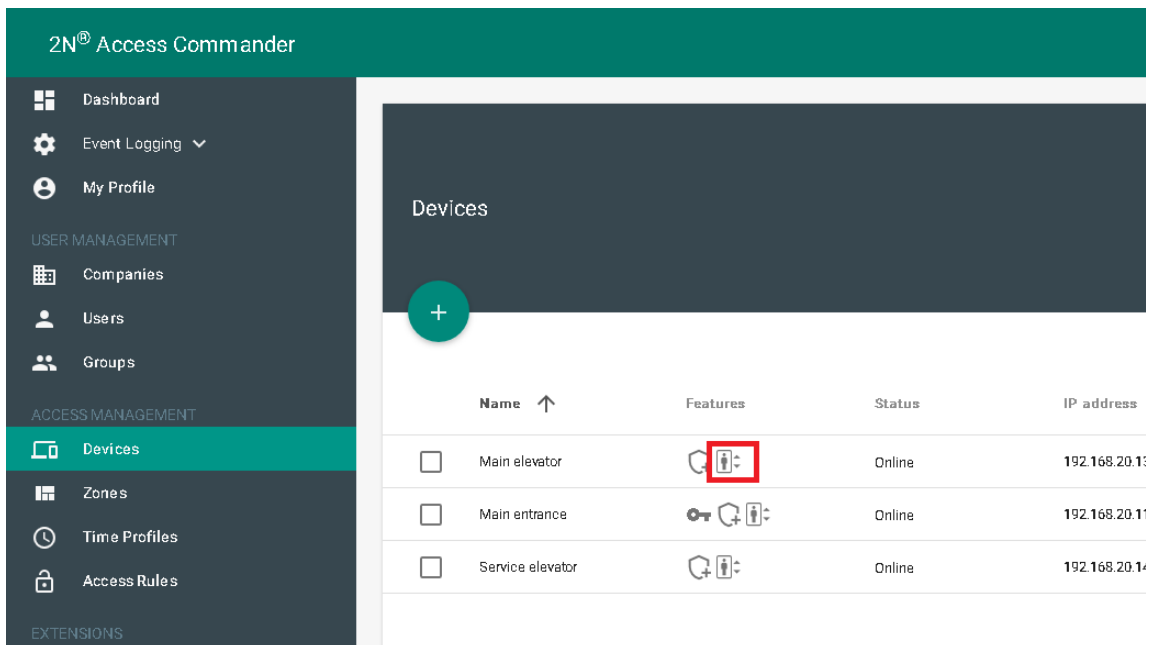
users of that group access to the first floor.



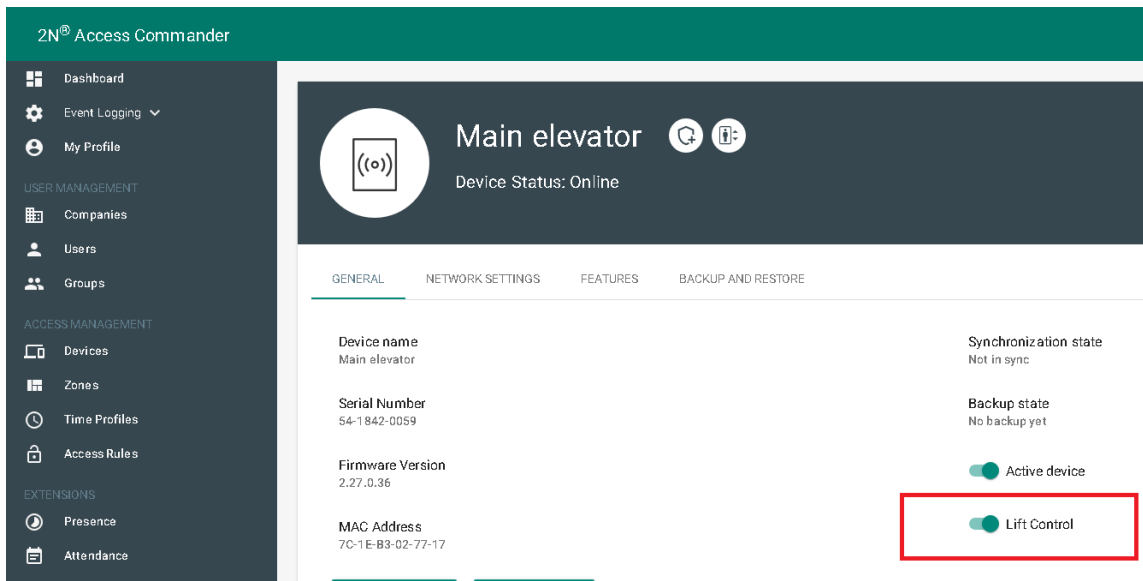
i Optionally, Time profiles can be set within Access rules which will restrict access to that floor within desired time frames.


If none or Empty Time profile is used it means access will be allowed 24/7.

- Add the 2N unit to Access Commander in the section Devices. Units which have Lift license and have Lift control enable will be show a lift icon when added to Access Commander.




- Enable lift control usage in added devices in the device details page in Access Commander.



 If you add to Access Commander device with lift control license, it will become automatically enabled for Lift Control)

- To finally setup which users can access which floor, in device details go to Management and create Floor assignment according to physical connection of relays between AXIS A9188 and the lift itself (for example relay io_1_1 on AXIS A9188 is physically connected to lift that 1st floor will become available for Groups of users which have in Access rules defined rules for Zone 1st floor).

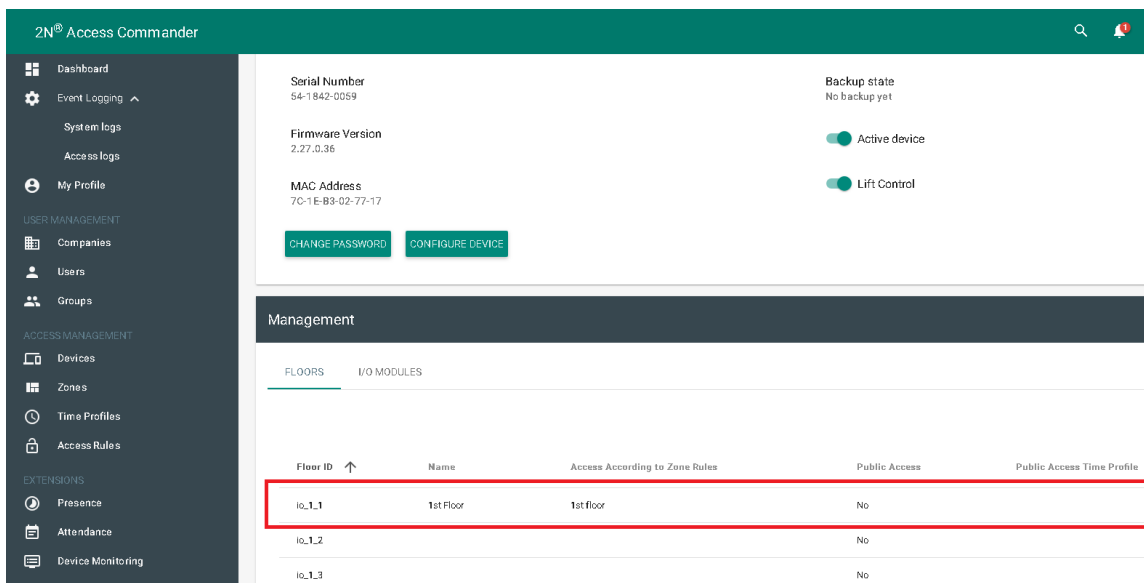
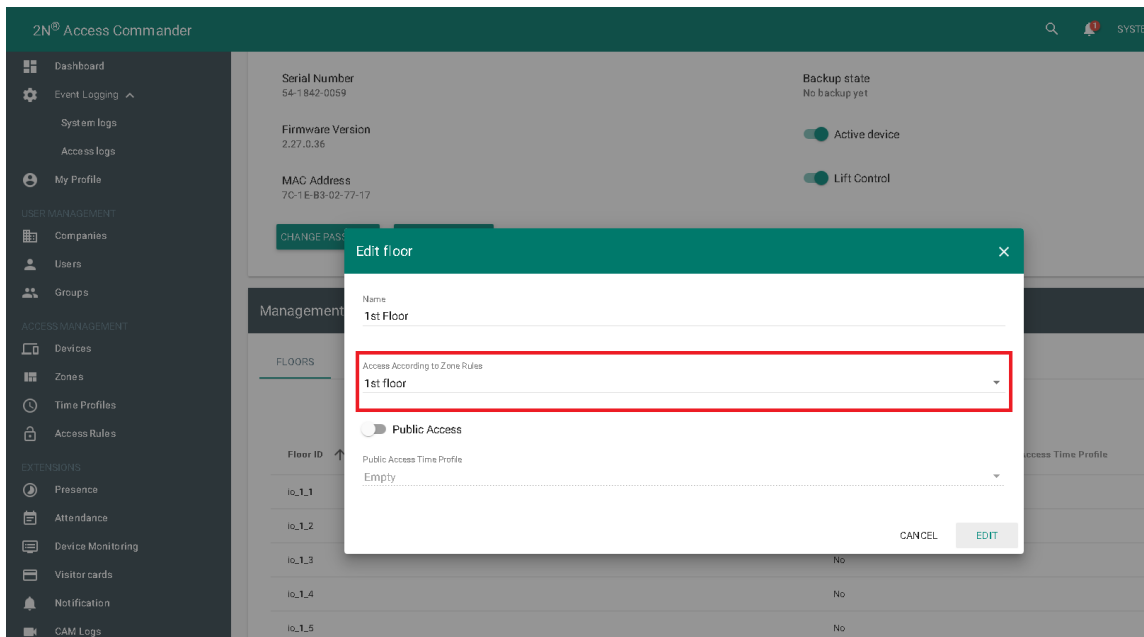
 Since up to 5 AXIS A9188 can be connected, you need to know which relay belongs to which AXIS A9188 I/O Relay Module:

io_1_1 in Floor list stands for first connected AXIS A9188 to 2N unit and its first relay

io_1_2 in Floor list stands for first connected AXIS A9188 to 2N unit and its second relay

io_2_1 in Floor list stands for second connected AXIS A9188 to 2N unit and its first relay

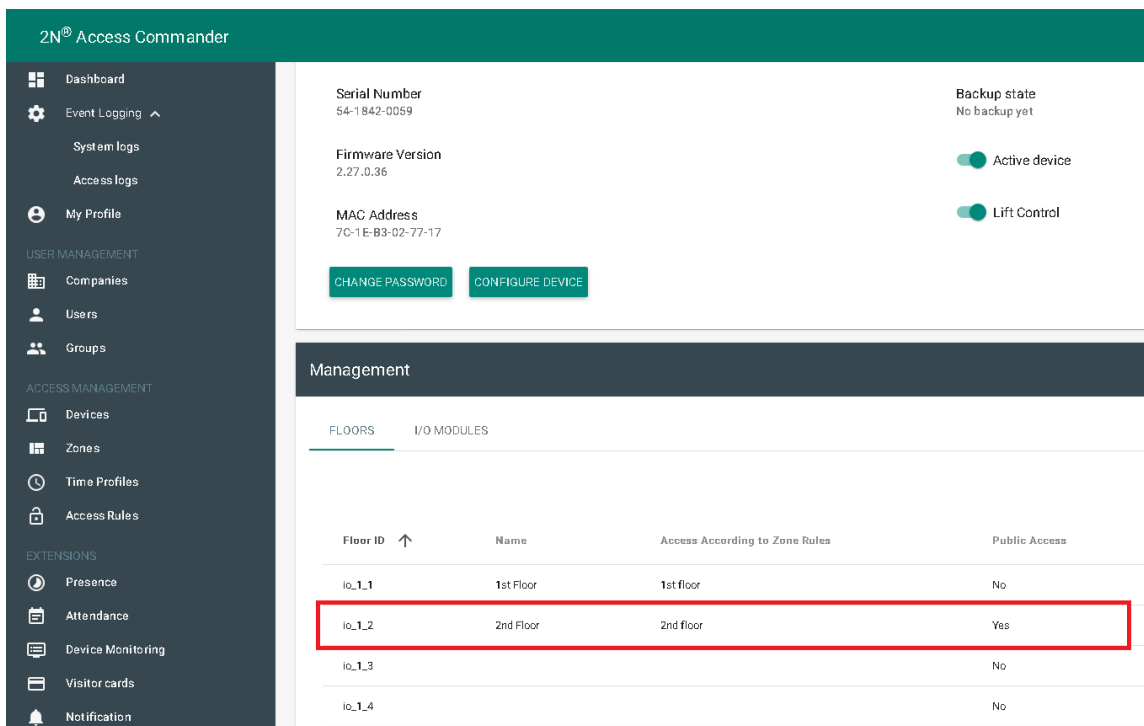
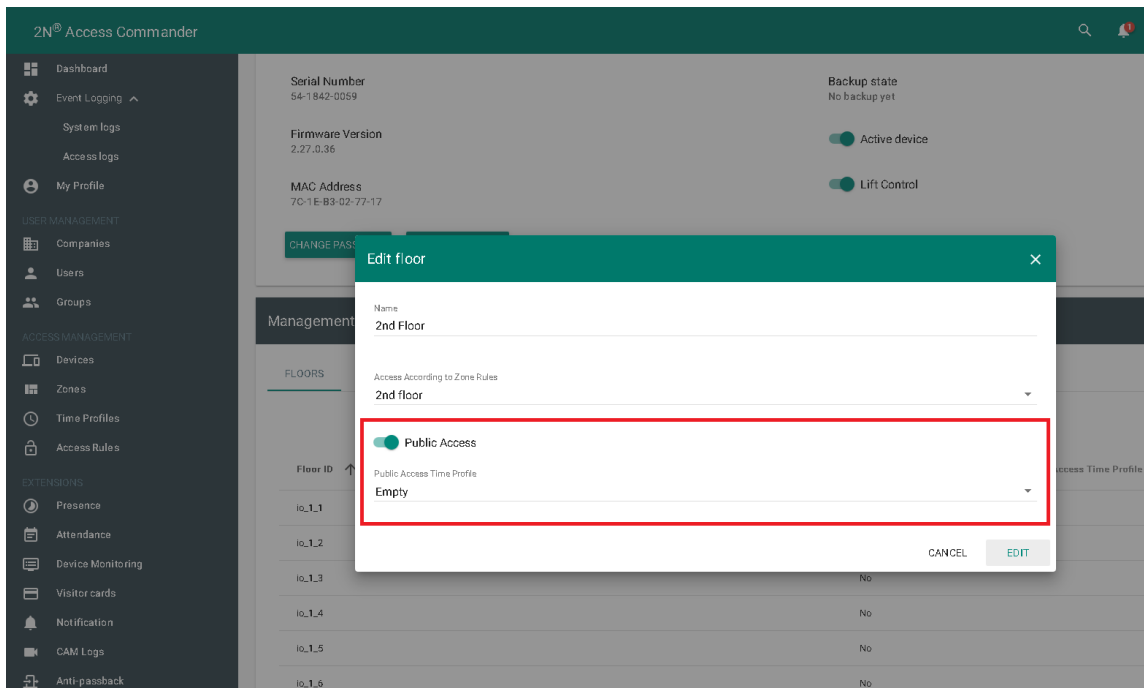
etc...



From now all users, which are part of Groups associated in Access rules with Zone 1st floor and have valid credentials, when they authorize on 2N IP unit in lift cabin will be able to use lift button for 1st floor.

(Optional) STEP 4: Setup floor to allow access to anyone who press lift floor button

- In order to allow access to floor without need to authorize person using RFID card, in device details go to Management and create Floor assignment according to physical connection of relay between AXIS A9188 and lift itself (for example relay io_1_2 on AXIS A9188 is physically connected to lift which 2nd floor will become available for anyone who just press 2nd floor button in lift).



From now, anyone who press button for 2nd floor will be able to access that floor.

i Optionally, Time profile can be set, which will restrict access to that floor for desired time frames. If none or Empty Time profile is used it means 24/7 allowed access.