# Integrating Net2 with Lift control systems

Lift control options

- Lobby doors
The best access control is to secure the doors that lead to and from the lift floor lobby. A lift is very much a public space and it is normal for one lift to carry several people to a variety of floors during a single trip up and down the building. An intruder need never press a call or floor button to be carried to almost any floor by other people's actions.
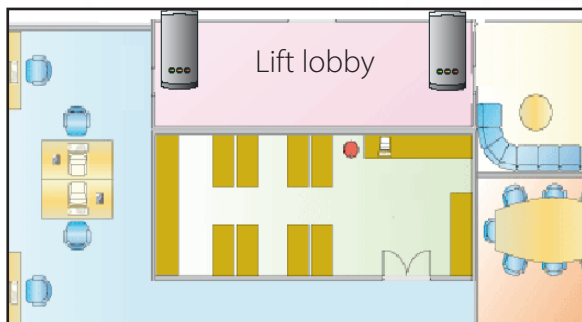
Unfortunately, open plan office design often has the lift opening directly into the office area with no lobby.

- Lift call button control
This treats the lift door as if it was a normal office door. In its simplest form, this restricts those people allowed to call the lift and therefore use it to visit other floors.

Lift lobby

The call button on each floor can be replaced by a proximity reader. This is connected to a local ACU that will check the card for validity and then either close its relay to simulate the original call button or provide input for a Net2 I/O relay board located next to the lift control box to provide the call button signal.

LIFT CONTROL BOX

Lobby call button inputs
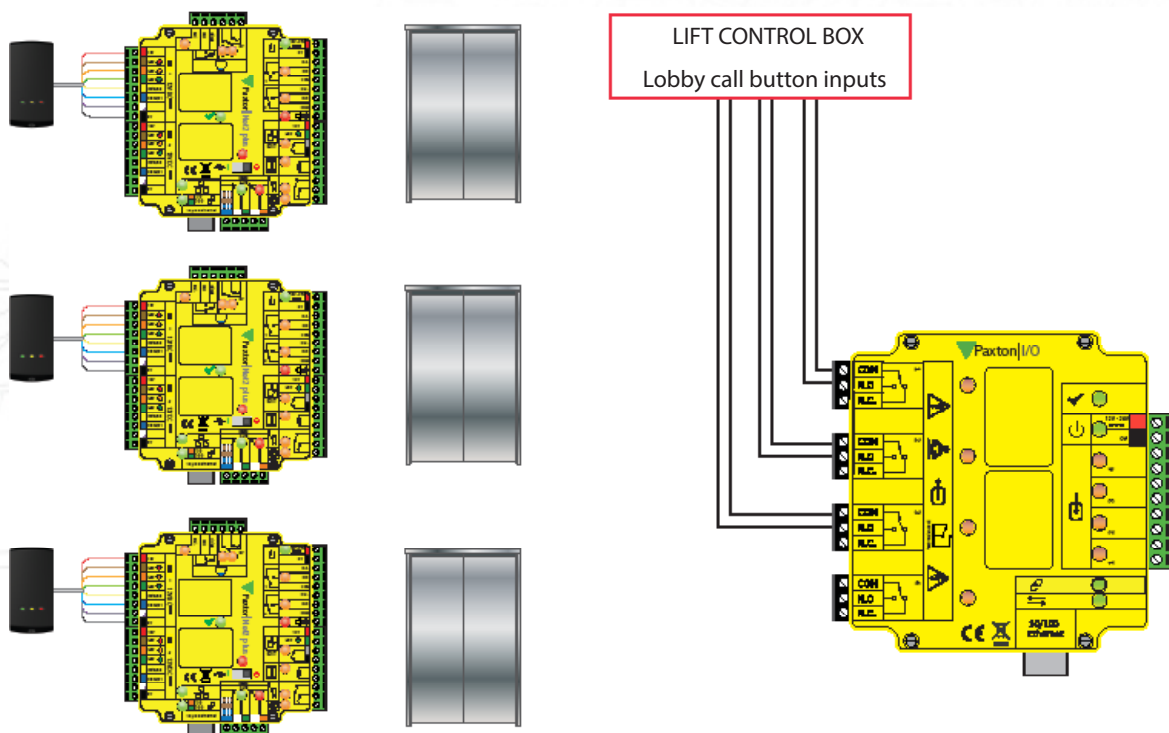
- Lift floor button control
This method gives the most control and will cover most situations.

The user has free access to the lift but has to present a user card to the reader inside the lift before any of the restricted floor buttons are available.

The reader requires a protected reader cable running up to the lift control room (max 100 metres). A single ACU then determines whose token has been presented and initiates any matching T&A rules.

An I/O relay is required for each floor button that you are controlling. (4 relays per I/O board) As one rule can activate more than one relay at the same time, a user will be given a choice of floor buttons available depending on the rule programming.

If the lift access is in a public area, then a combination of the above methods may be desirable.

LIFT CONTROL BOX
Individual floor button(s) enabled

Paxton|I/O
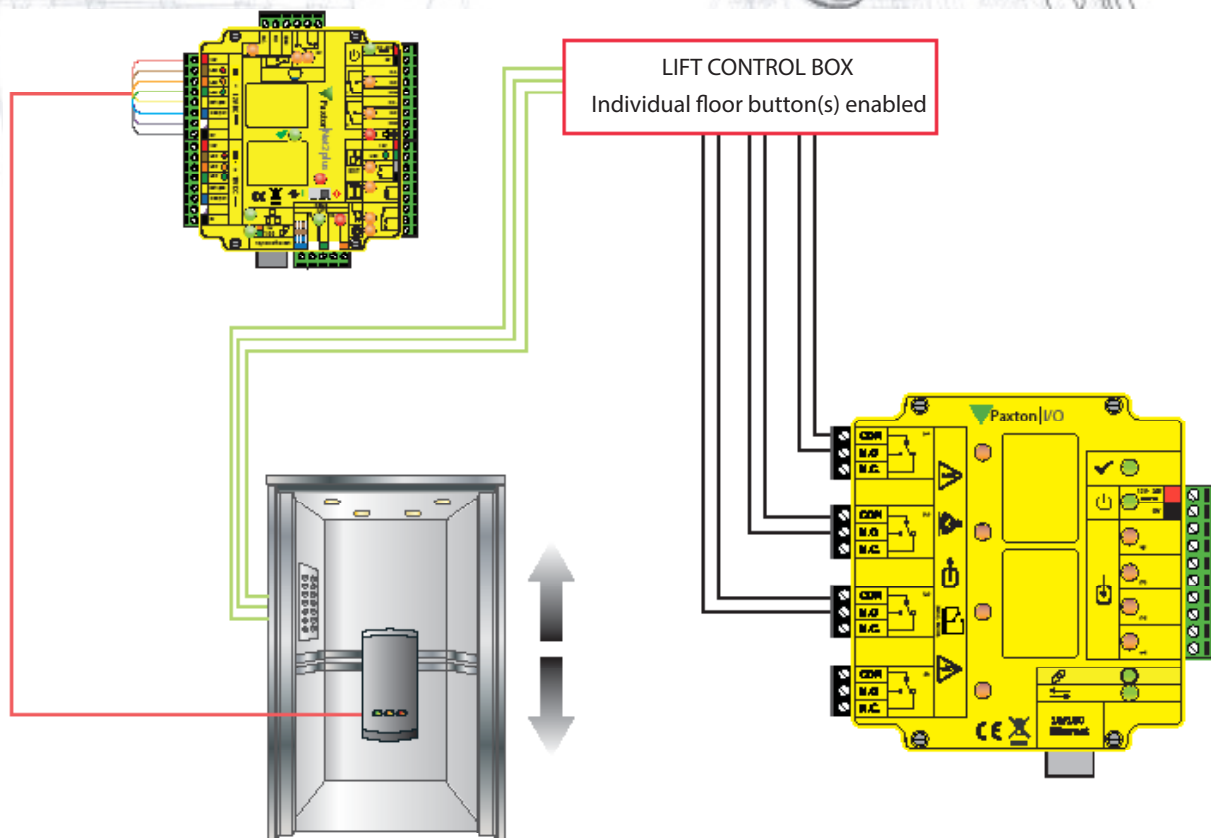
The I/O boards must be set up and configured before appropriate Triggers and Action rules can be set up. A rule must be set up for each floor grouping that you require. (All floors, 1st floor only, etc)

Set up a rule for 'When a user is granted access through a door'. This rule will run when a valid token has been presented to the 'lift' reader.

Triggers and Actions

When a user is granted access through a door...

Choose to which users and departments this rule applies

(none)	>	Accounts
IT	<	
Management	>>	
Sales	<<	
Support		
Visitors		

Cancel < Back Next > Finish

Select the users who need to run this rule.

Triggers and Actions

When a user is granted access through a door...

Choose to which doors and areas this rule applies

Car Park - Car Barrier 1 (In)	>	Lift Control (In)
Car Park - Car Barrier 1 (Out)	<	
Lift Control (Out)	>>	
Main Entrance (In)	<<	
Main Entrance (Out)		
Meeting Room (In)		
Meeting Room (Out)		
Reception (In)		
Reception (Out)		

Cancel < Back Next > Finish

Select the reader they will use (e.g. Lift Control (In)).

Triggers and Actions

When a user is granted access through a door...

Choose when this rule is active

⦿ This rule is active during the following timezone
◯ This rule is active at all times outside the following timezone

All day, every day ⌄

Cancel < Back Next > Finish

Select the timezone when this will apply.

Triggers and Actions

When a user is granted access through a door...
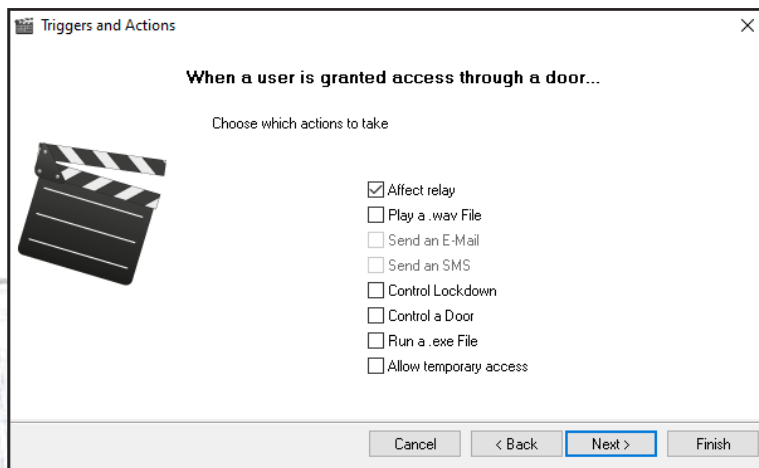
Set a time delay between the trigger and the actions

⦿ No delay
◯ Delay actions

Set time delay (hh:mm:ss) 00:00:00
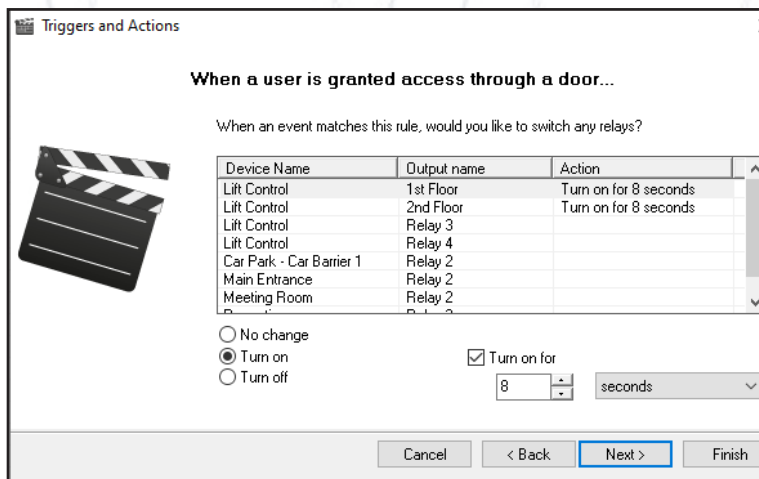
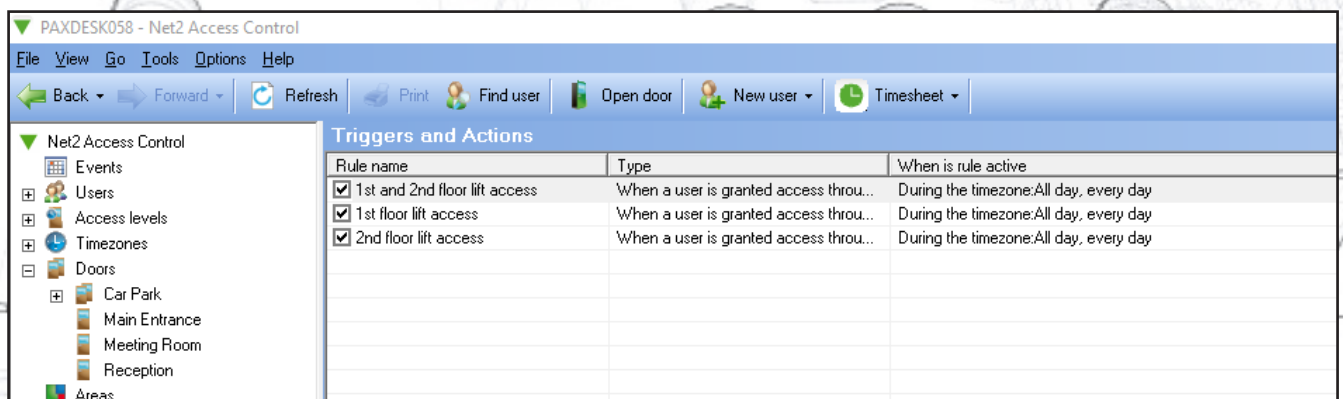Cancel < Back Next > Finish

Select 'No delay'

Select 'Affect relay'

Determine the lift buttons that these users may require and turn on the appropriate relays to enable the buttons for long enough for the user to decide which button to press (set here for 8 secs)

Set up a rule for each of the various floor button combinations as required.

Important information on Lift Integration

Timing

For Triggers and Actions to function correctly, the server must be running and communicating with all control units and I/O boards. As the I/O Board contains no on-board memory, it is reliant on communication from the Net2 server to run the trigger and action rules.

READER>CONTROLLER>SERVER>I/O BOARD

Because of this, you may experience a small delay in the illumination of the floor buttons within the lift car following the presentation of a card. The delay can be up to 10 seconds, but in most cases the floor buttons will light within 7 seconds. External factors, such as noise affecting cable signals in the lift shaft, can also cause delays in the button responses.

Cabling

Installers should refer to a cable specialist for a lift grade equivalent cable of Belden CR9540. Alternatively, ACUs can be mounted on the lift car with a lift grade Cat5 cable used to connect them.

Paxton have discussed the issue of specifying the relevant reader cable for lift shafts with a cable specialist. They advised they would never sign off a generic cable for use with any system as there are too many site-specific elements to take account of, such as:

*   Temperature
*   Voltage
*   Cable flexing - Some cable will break with excessive flexing
*   Location of the cable - in or out of the Lift
*   Do they require a screen?
*   Core colours
*   Sheath type

For example, silicone cable is very heat resistant however the sheath is very thin and can break easily in the wrong environment.