

**VANDERBILT**

ACTENTERPRISE  
RULES ENGINES  
INSTALLER EXAMPLES

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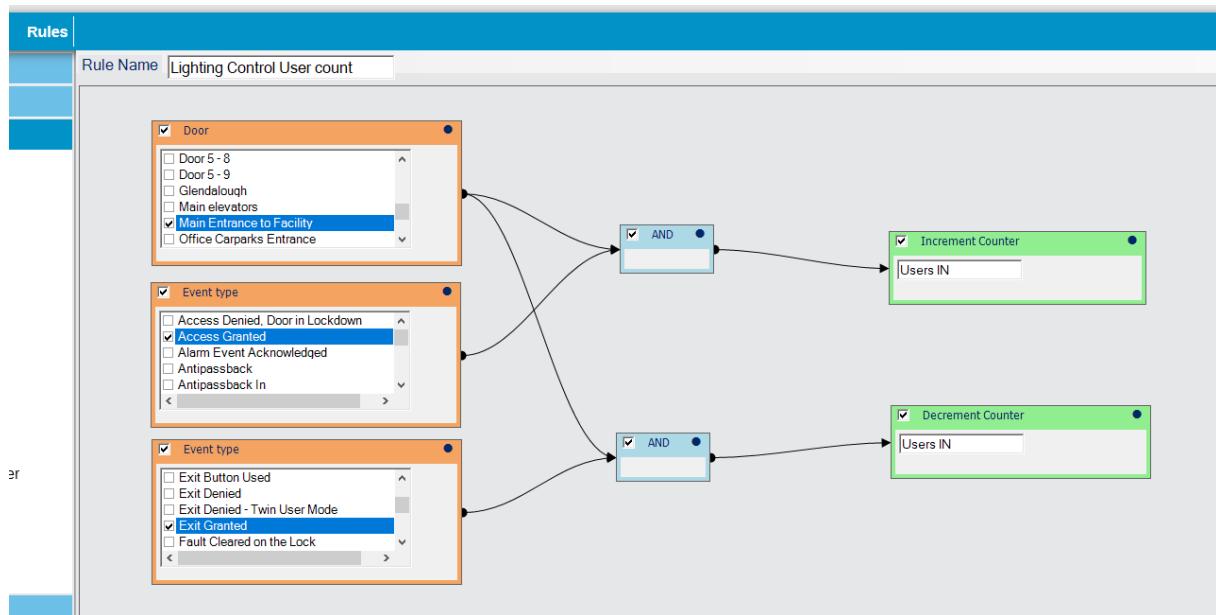
## EXAMPLE 1: HOW TO CONFIGURE RULE TO CONTROL LIGHTING/HEATING USING IO MODULE.

The purpose of the rule below is to automatically control the lighting of a building based on:

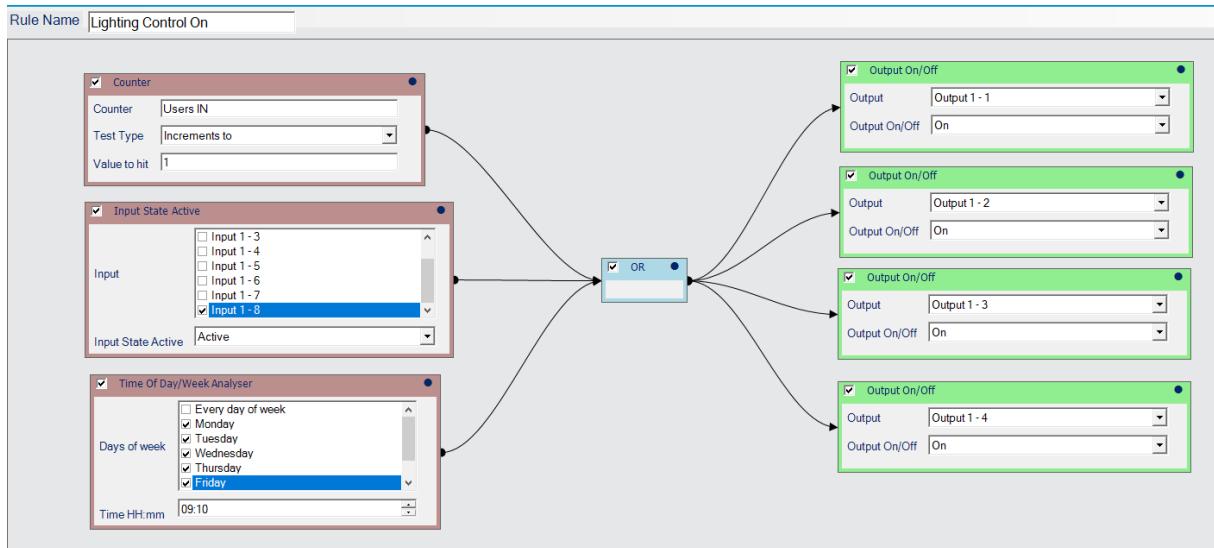
1. Users Present on site.  
OR
2. Time zone.  
OR
3. Input of IO Module Active.

For simplicity the rule is developed across 3 Rules:

1. Lighting Control User count:
  - a. The purpose is to increment or decrement a counter called “Users In” to keep count of the total numbers present in building.



2. Lighting Control On:
  - a. The purpose of this rule is what triggers can cause the output relays to activate the lights of the building.

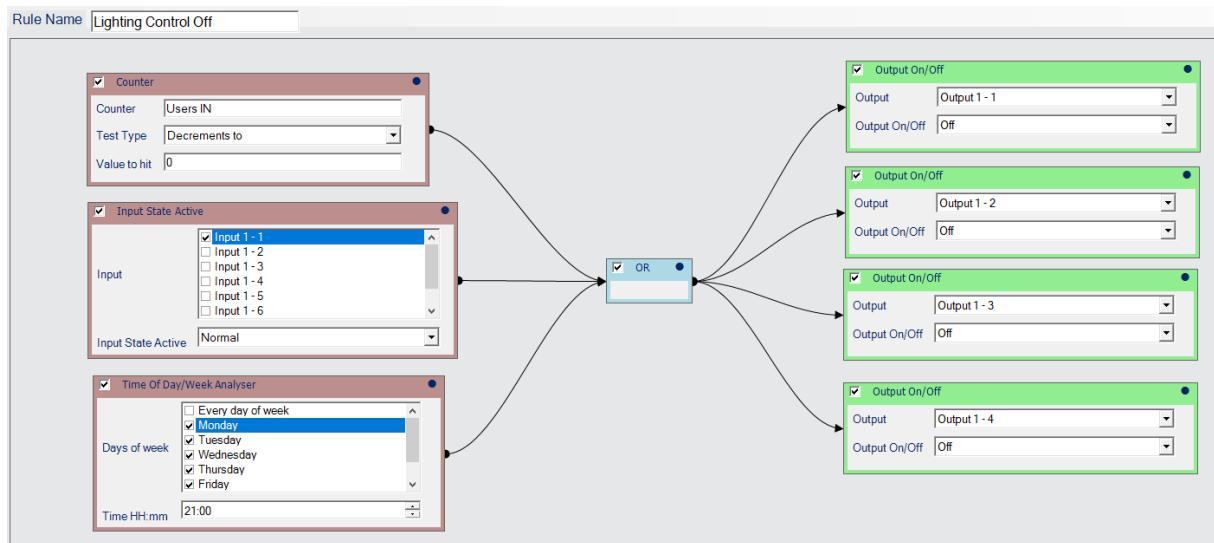


There are 3 triggers that can activate the output relays of the IO board:

- Users In Counter: If users in increment to 1
- Input 8: If Input 8 becomes active – This may be an input from the thermostat of the Central Heating System.
- Timed Action: When it hits 09:10, the outputs will be triggered.

### 3. Lighting Control Off:

- The purpose of this rule is what triggers can cause the output relays to deactivate the lights of the building.



There are 3 triggers that can deactivate the output relays of the IO board:

- Users In: If 'Users In' decrements to 0.
- Input 1: If input 1 normalizes, this could be an input from the central heating system
- Timed Action: Every day of the week at 21:00hrs.

NB\* The above example is based on ACTpro1520e controller and IO Module.  
The same principal can also be applied to heating control.

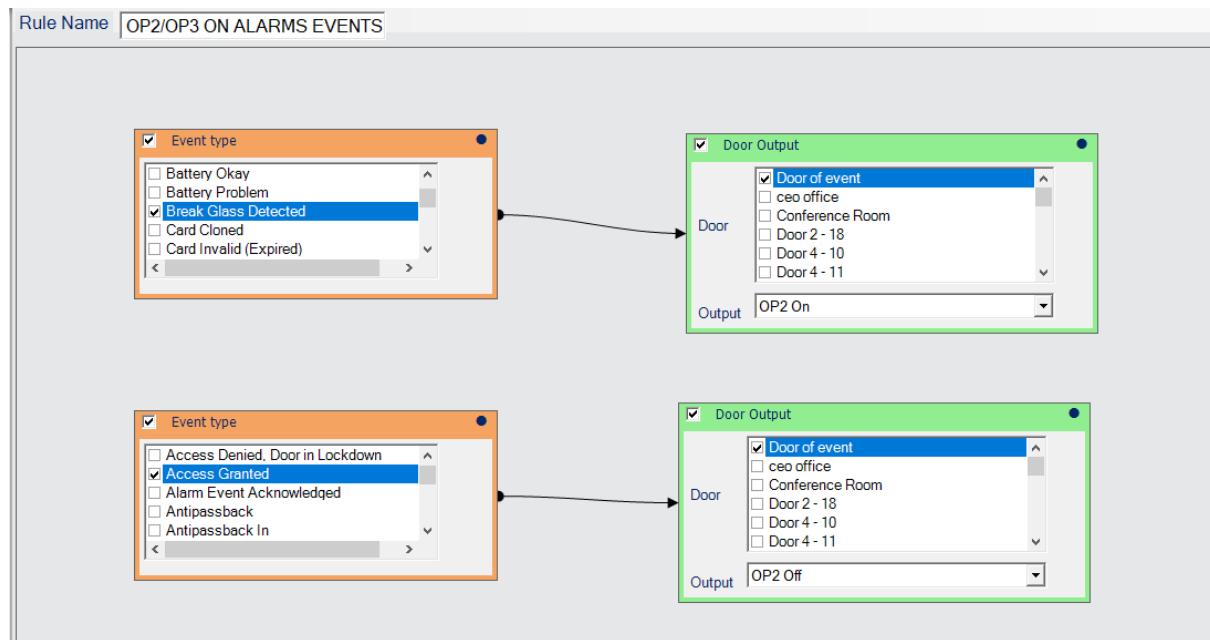
## EXAMPLE 2: HOW TO CONFIGURE RULE TO TRIGGER OP2/OP3 ON ALARMS EVENTS

The auxiliary relay of a door station can be configured to trigger in the event of a door alarm. The following events are interpreted as alarm events:

1. Door Forced.
2. Door Ajar.
3. Access Denied.
4. Duress Code Used.
5. Break Glass.

However, the aux relay may be configured to follow the main relay, to trigger an automatic door opener once the lock has been disengaged. Using the rules engine, it is now possible to programme OP2/OP3 to activate for alarm events using the rules engine. See example below:

OP2/OP3 are transistorised Outputs. They are capable of sinking 100mA and can be used in conjunction with third party relays.



If a door ajar is activated on Door 1 – OP2 of the “event door” will fire.

To deactivate the alarm a valid card has to be presented.

**NEED TO RETHINK THIS RULE AS IT WON'T WORK AS PRESENTED**

### EXAMPLE 3: HOW TO CONFIGURE RULE TO SET A DELAY ON THE AUX RELAY

Access control doors may also use an automatic door opener. When an access is granted the strike lock activates disengaging the lock via the main relay of the door station. The ‘aux relay’ is configured to follow the main relay and cause the door to open via a trigger from the aux. However, if both the main and aux relay fires simultaneously it can cause the door to become jammed. To avoid this an installer ideally wants to set a delay between the main relay and aux firing at the same time. The following rule achieves this:

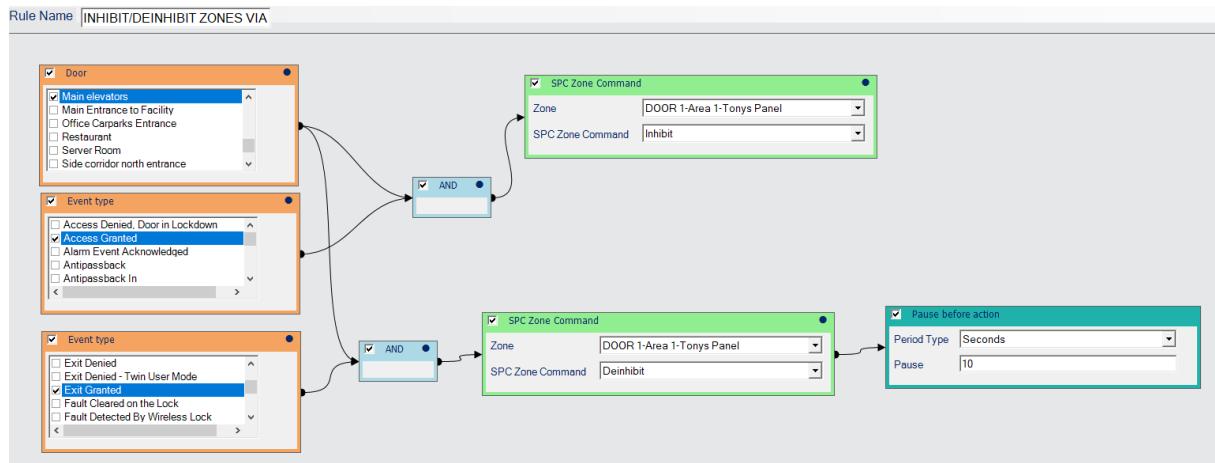


In the above example, if an access/exit granted occurs on door “Office Carparks Entrance” the aux relay fires 2 seconds after the main relay using the “Pause Before Action” function. Using the “Action duration” function the installer can define how long the activation lasts.

## EXAMPLE 4: HOW TO CONFIGURE RULE TO INHIBIT/DEINHIBIT ZONES VIA ACCESS READER

Using SPC integration and the rules engine it is now possible for a user to inhibit/deinhibit zones via an access reader into always set areas.

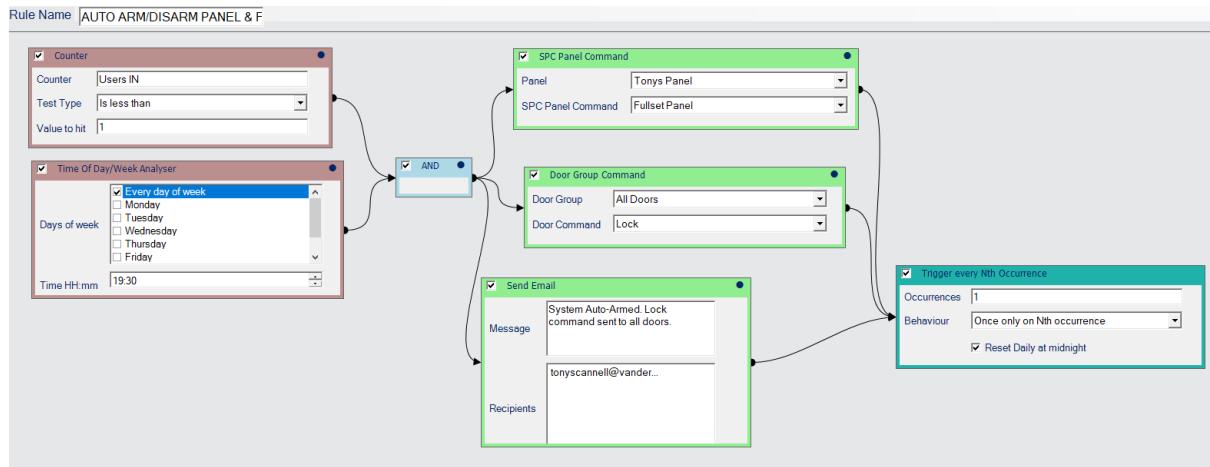
For example, a comms room, cash office, mains room, if the zones are activated in this area it triggers the alarm system to activate\sound. Using the example below it is now possible to inhibit these zones and access the room without having to go to the alarm keypad.



By generating an 'access granted' on the 'Main Elevators' door, Door 1 zone is inhibited. The cardholder can access the room and carry out the work required. When the user swipes on the exit reader it deinhibits the zone and they become active again. A delay is added to the deinhibit to give the user adequate time to vacate the area and close the door.

## EXAMPLE 5: HOW TO CONFIGURE RULE TO AUTO ARM/DISARM PANEL & FAIL TO SET NOTIFICATION

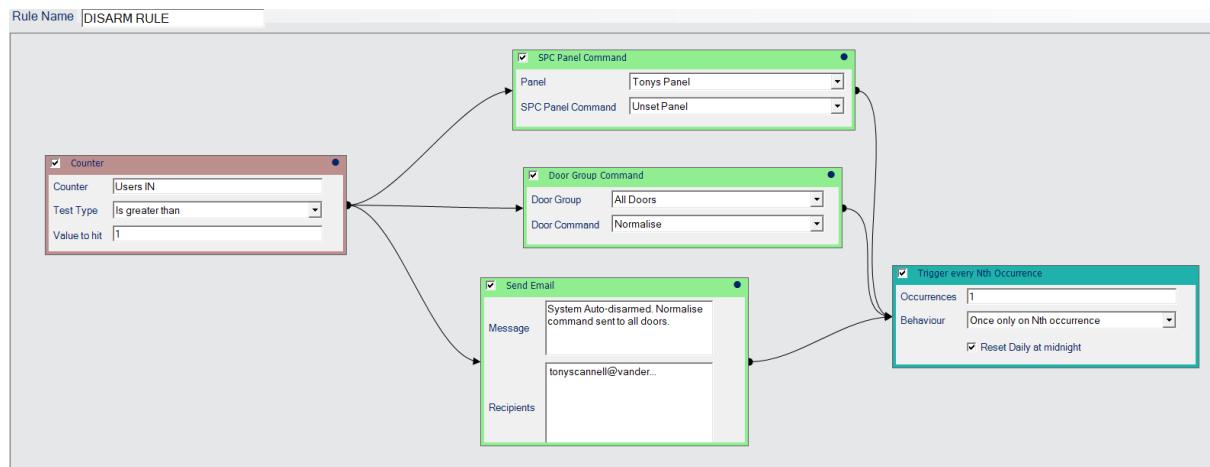
Using SPC integration and the rules engine it is now possible to auto arm/disarm the access system depending on if users are present on site, or at a particular time.



In the above example if 'users in' decrements to 0 and it is 19:30 the following will happen:

- A. The panel will Fullset.
- B. All doors will lock on the access system.
- C. An automatic email will be generated confirming the system has been auto set.

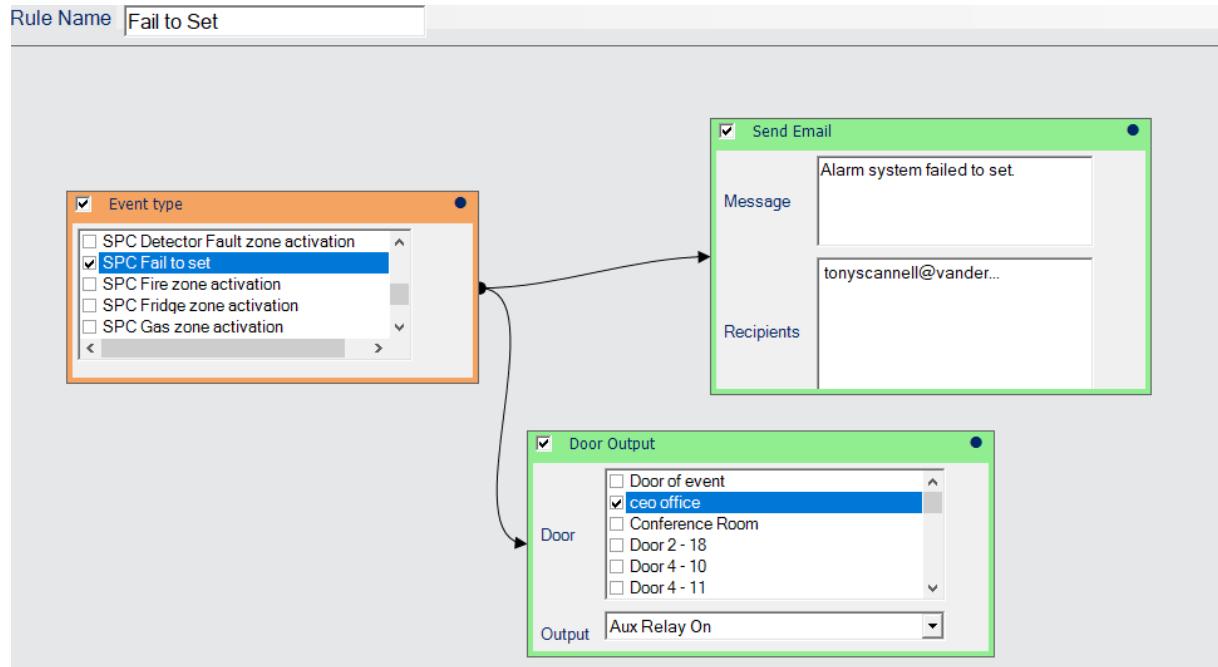
The following rule achieves disarming the system:



If the 'Users In' increments to 1, the following will happen:

- A. The panel will unset.
- B. All doors will normalise
- C. An automatic email will be generated confirming the system has been auto disarmed.

It is also important to notify the user if the system fails to set. The following rule notifies the user of this.

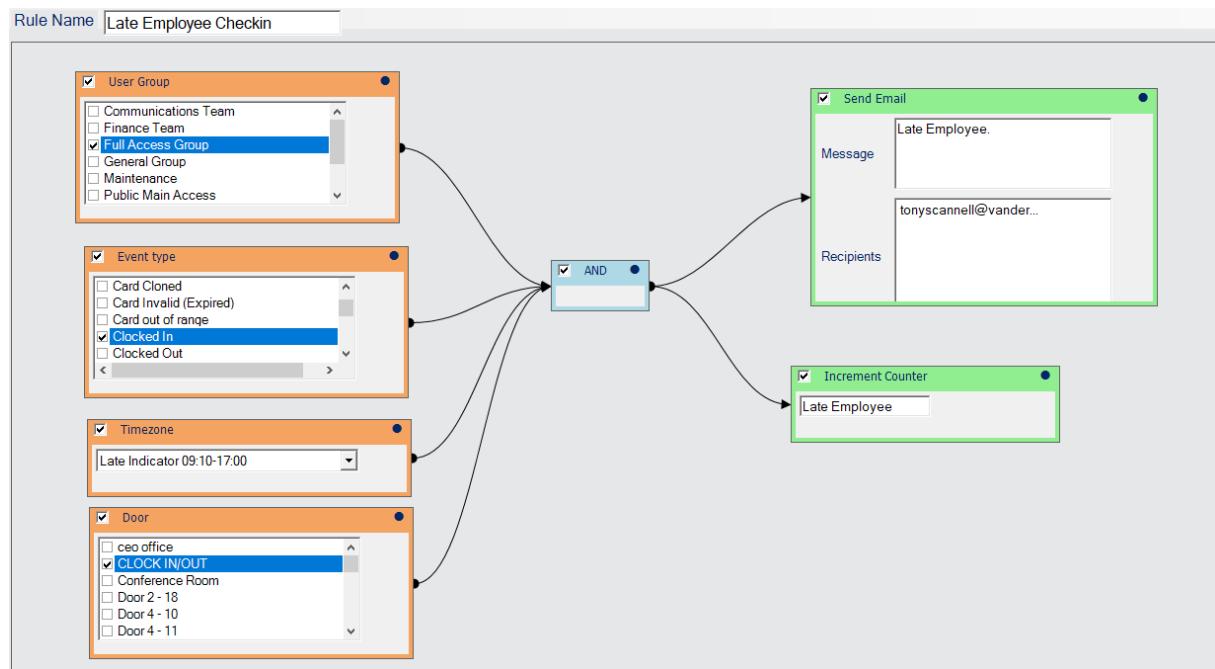


In the event of a 'fail to set' an email notification will be sent, and the Aux Relay of Ceo Office will trigger. The aux relay could be wired into a visual/audio indicator.

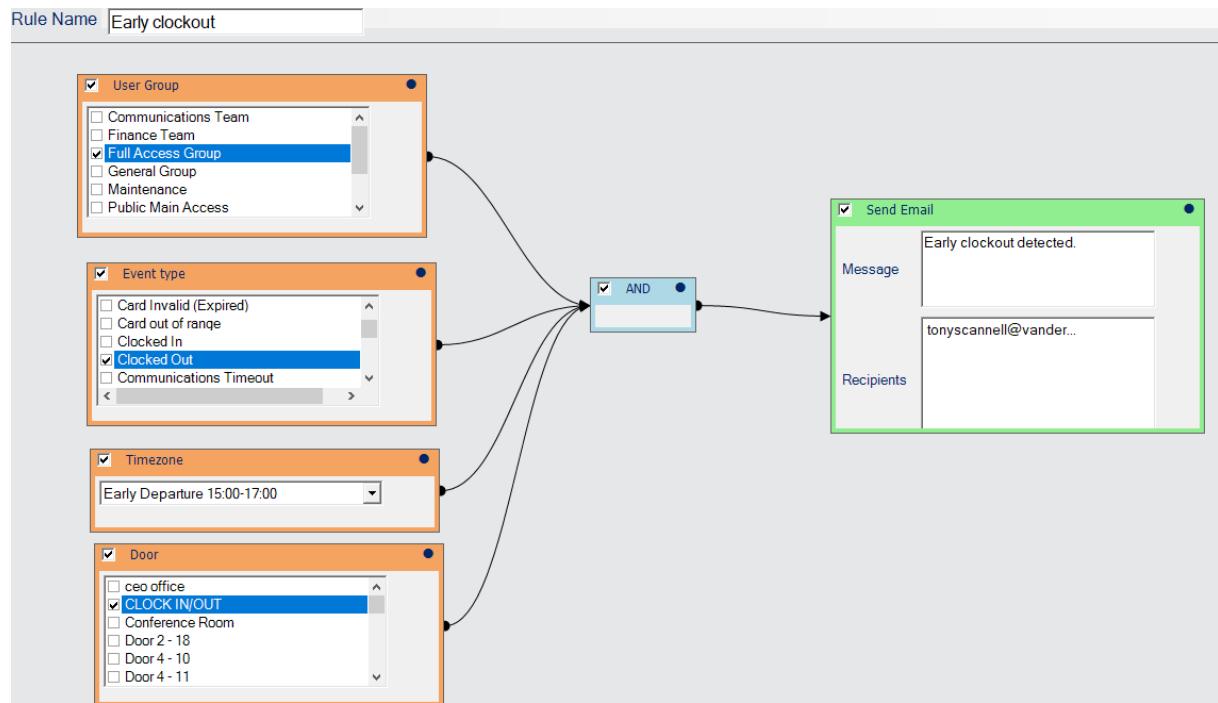
## EXAMPLE 6: HOW TO CONFIGURE RULE TO GENERATE EMAIL NOTIFICATION FOR LATE CLOCK IN EARLY CLOCK OUT

Sites that avail of the basic TnA reporting offered in ACTenterprise usually install a designated Clock In/Out reader station in reception. Using the rules engine it is now possible to generate email notifications of staff starting late or leaving early.

The following rule will notify the email recipient if a user from the full access group clocks in late i.e. after 09:05hrs. It will also increment the 'Employee Late Counter'.



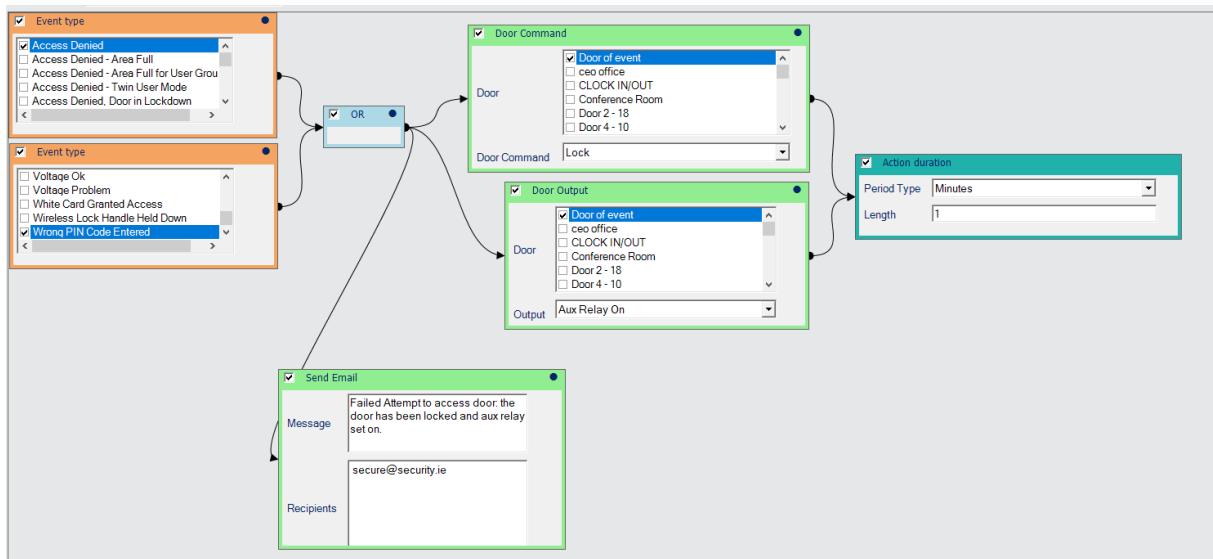
The following rule will notify the email recipient if a user from the full access group clocks out early i.e. before 17:00hrs.



## EXAMPLE 7: HOW TO CONFIGURE RULE TO LOCKOUT DOOR

For high secure doors the installer may like to implement a lockout function if an access denied or wrong pin entered on the door.

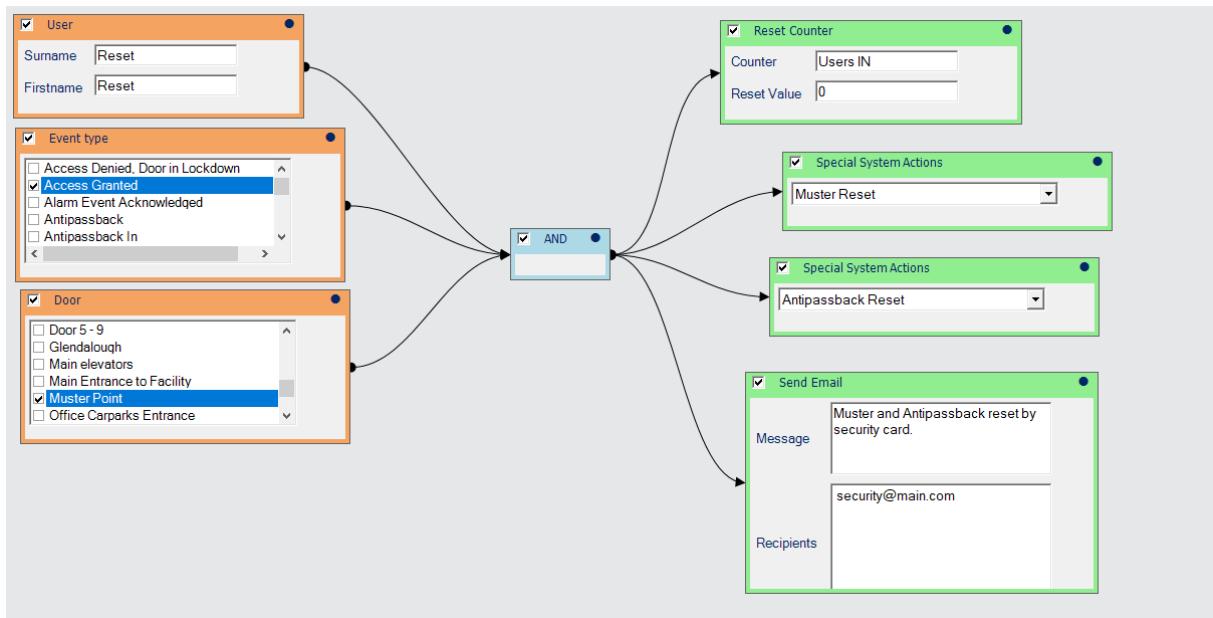
The following rules achieves this:



If a 'wrong pin code' is entered OR an access denied the door which the event occurred will lock for 1 minute also the doors aux relay will fire. The aux relay could be wired into a strobe/sounder. Also, an email notification is sent to notify the email recipient that an unsuccessful access attempt occurred on the specified access door.

## EXAMPLE 8: HOW TO CONFIGURE RULE TO RESET ANTIPASSBACK/MUSTER VIA ACCESS READER

With a site configured with Antipassback, in the event of fire everyone vacates the building and gathers at the fire assembly point. Once everyone has been accounted for and the building deemed safe, users will be denied access because they left through fire doors and never swiped out – the system will record ‘access denied – Antipassback in’. A card could be added to the system called “Reset”, that if an ‘Access Granted’ is generated on a door that it will reset the Muster and Antipassback and permit access back into the building. This solution may be easier for security as oppose accessing the software and selecting the reset muster and Antipassback.

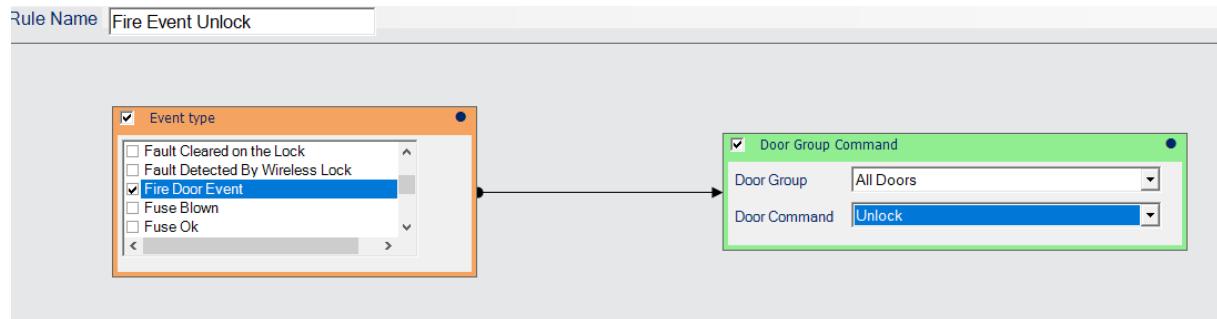


## EXAMPLE 9: HOW TO CONFIGURE RULE TO TRIGGER FIRE OVERRIDE ON CONTROLLERS WITHOUT FIRE INPUT

Previously if you required a door to unlock in the event of fire, the controller the door was cabled back to required a fire input. Due to the location of where a controller is installed this may have been impossible to achieve. However, using the new rules engine, it is now possible using a rule that if a controller receives a fire activation that all doors or a particular group of doors can be activated without an input.

The following rules achieves this:

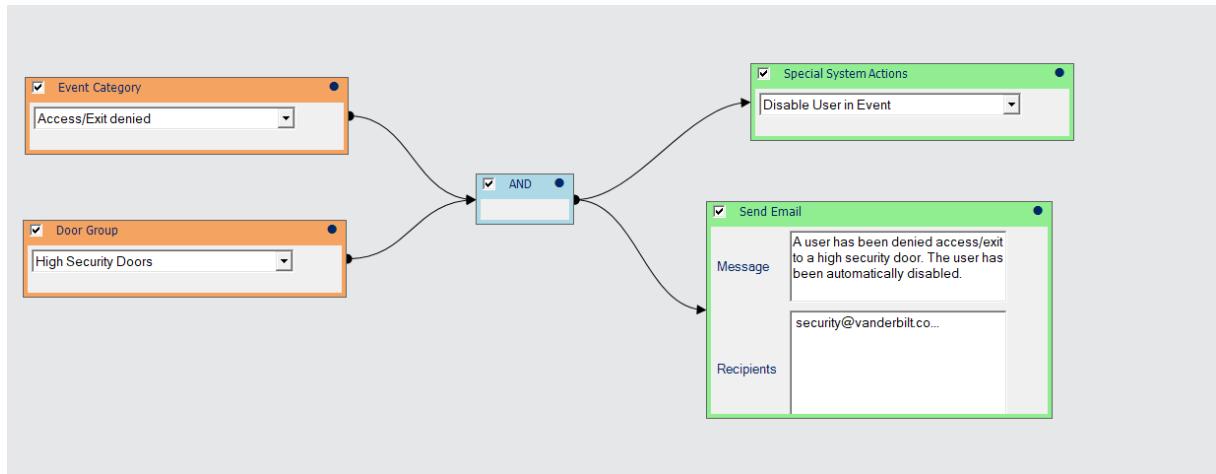
- **However, it is recommended to have a fire IO installed for every door. Also for the rule to trigger the server running ACTEnterprise must be running 24/7**
- **To normalise the doors, this can be achieved via ACTmanage issuing a normalise command to all doors or another rule could be created.**



## EXAMPLE 10: HOW TO CONFIGURE RULE TO DISABLE USER THAT RECEIVES ACCESS DENIED ON HIGH SECURITY DOORS

If a door group is created consisting of high security doors and a valid cardholder receives access denied it would be good to disable the user.

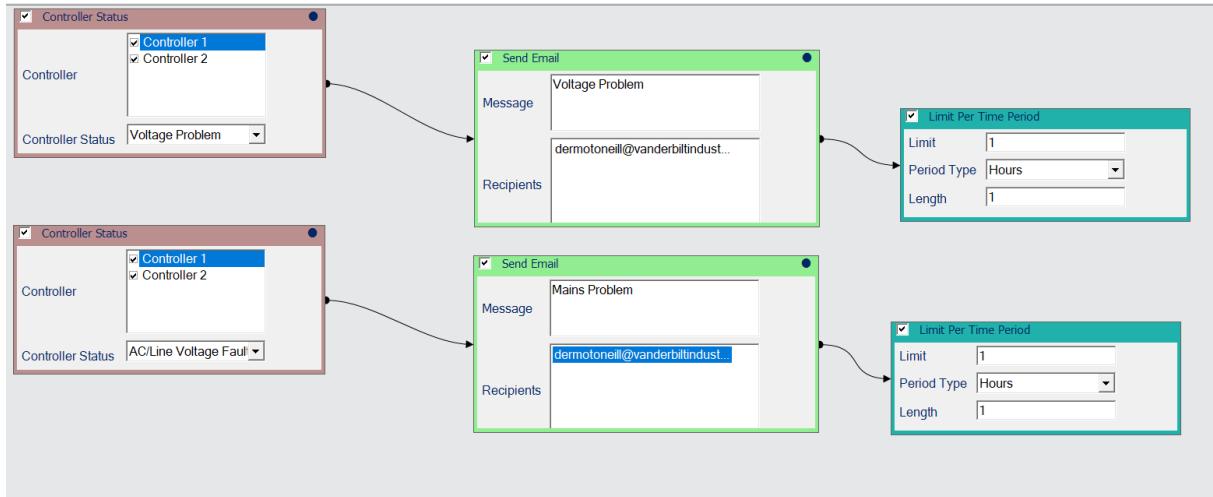
The special system action requires a tick box for event user, that whomever is recorded in the event is disabled.



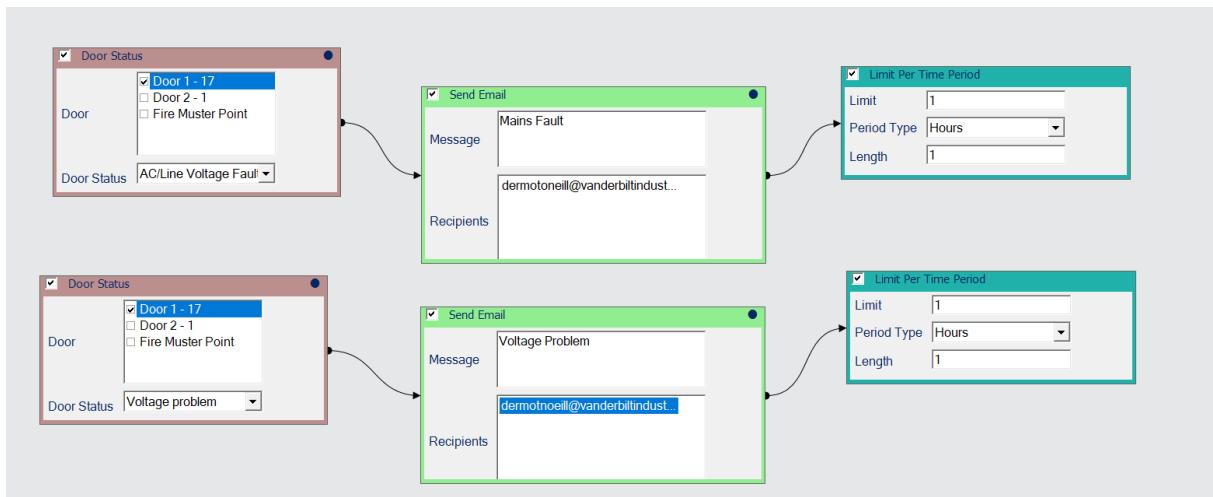
## EXAMPLE 11: HOW TO CONFIGURE RULE FOR MAINS FAILURE/VOLTAGE PROBLEM REPORTING ON CONTROLLERS

When a PSU goes faulty one of the PSU characteristic is low voltage, no voltage or fluctuating supply voltage.

The following rule generates email notification for voltage\PSU problem. To eliminate being inundated with Voltage\Mains Problem emails if the voltage is fluctuating a 'limit per time period' can be added to the rule that permits execution of only 1 email alert per hour, even if the system is recorded much more failures.



The same rule may be applied to door stations also.

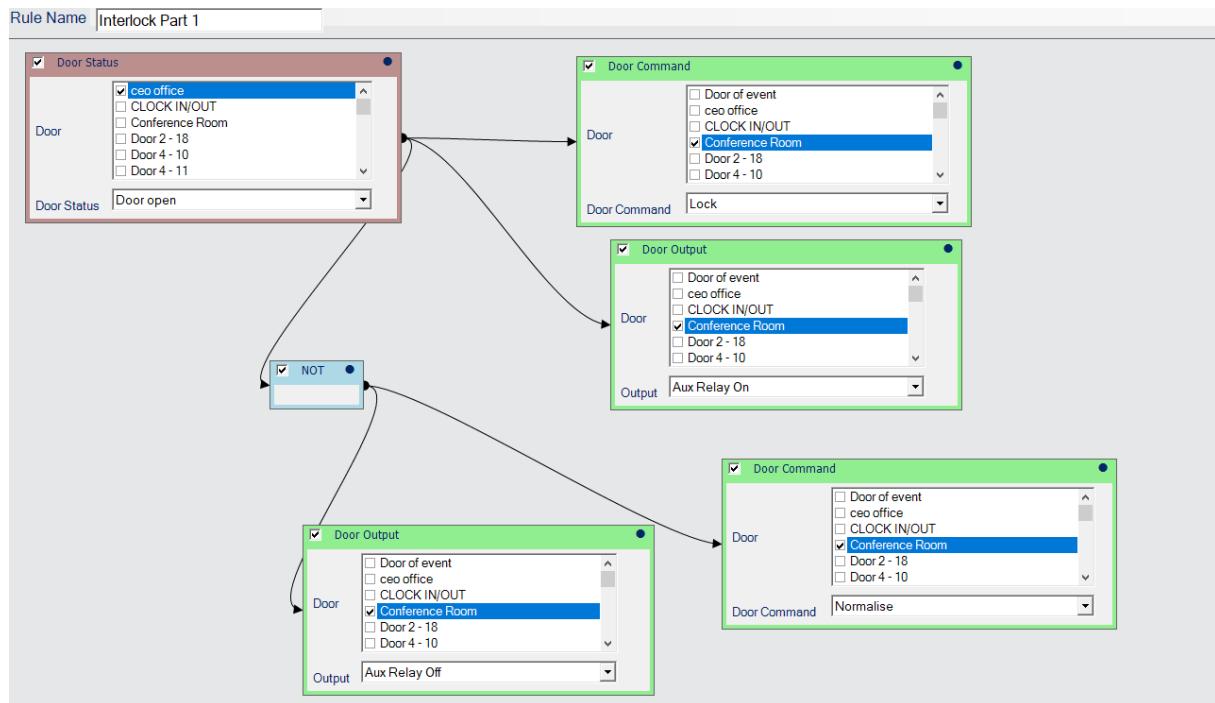


## EXAMPLE 12: HOW TO CONFIGURE RULE FOR INTERLOCK

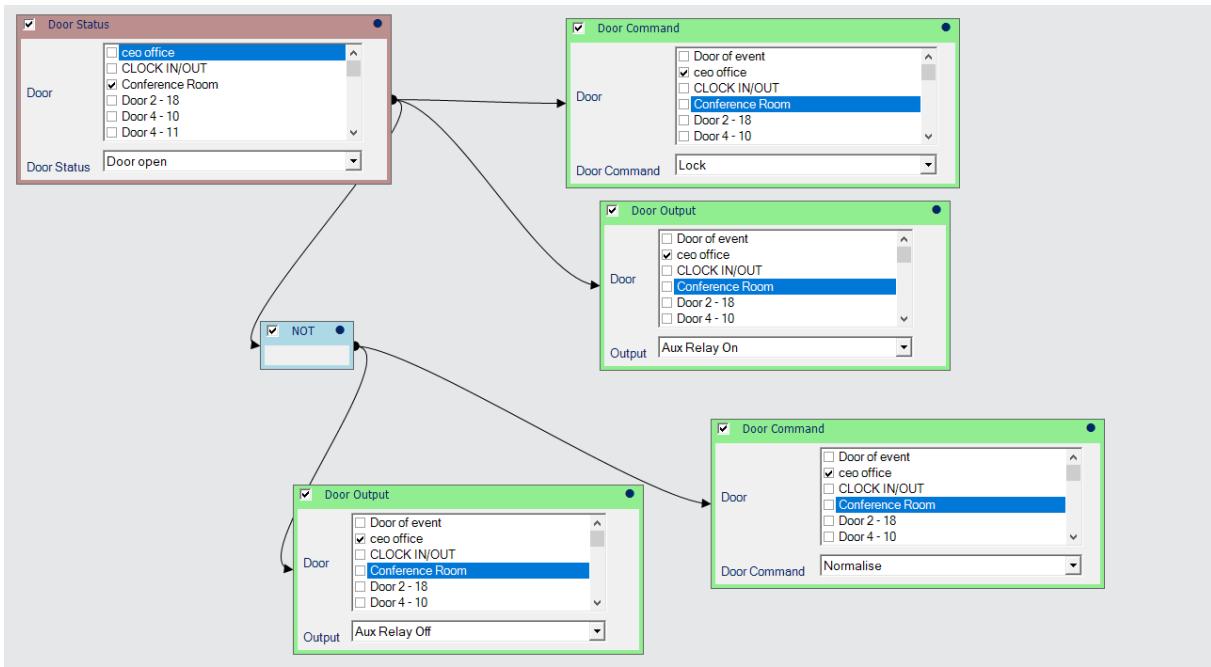
Previously to interlock doors it was necessary to wire a physical cable between the two doors in question. However, using the Rules engine, it is now possible to configure interlock without the connection.

The interlock Rule can be broken into two rules.

- **Rule 1** defines the affect Door 1 has on Door 2 i.e. if Door 1 is open, Lock Door 2 and fire its auxiliary output. The door will then normalise once Door 1 contact is closed and deactivate Door 2 aux relay.
- The auxiliary output can be wired to a visual indicator to inform the person the door is locked because the other interlock door is open.

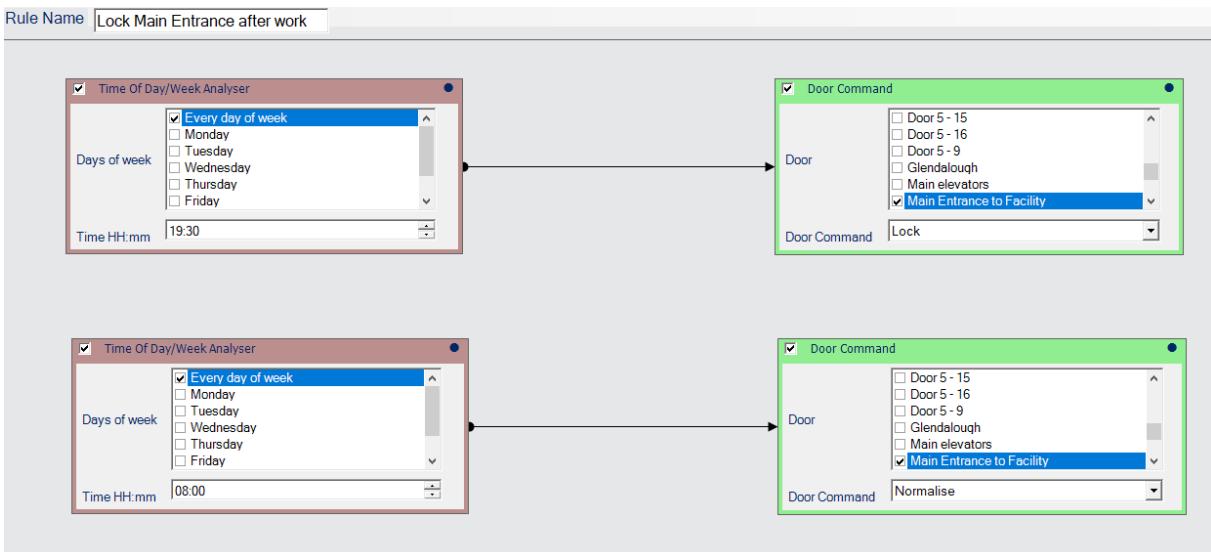


- **Rule 2** defines the affect Door 2 has on Door 1 i.e. if Door 2 is open, Lock Door 1 and fire its auxiliary output. The door will then normalise once Door 2 contact is closed and deactivate door 1 aux relay.



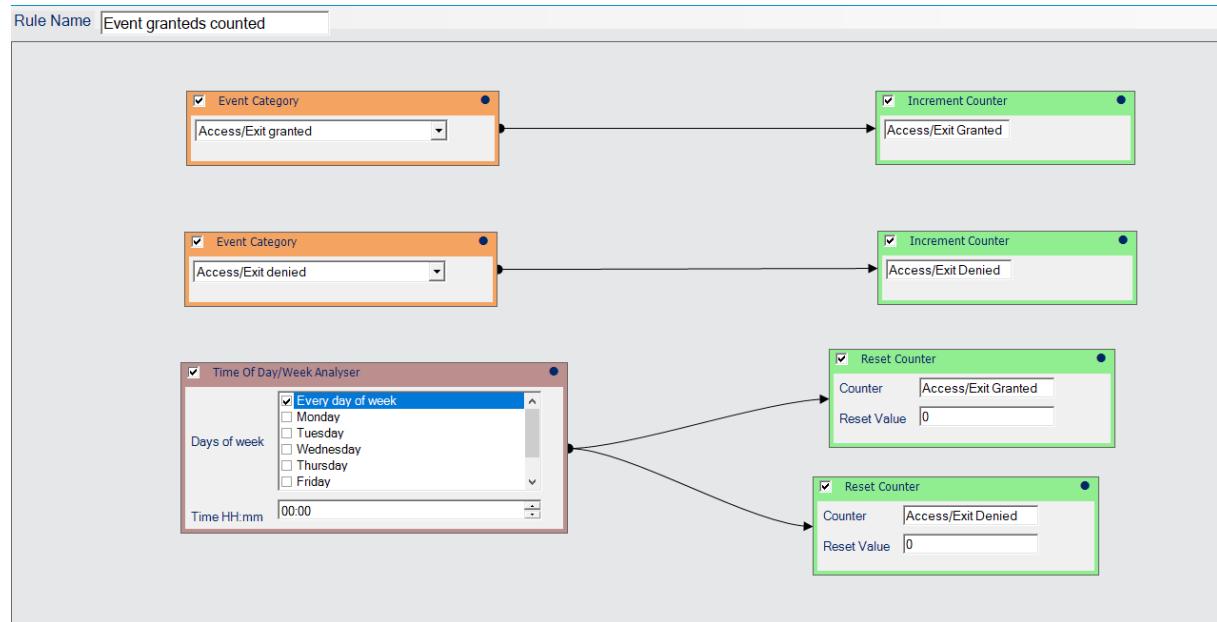
### EXAMPLE 13: ENSURE THAT MAIN ENTRANCE IS LOCKED AFTER OFFICE HOURS EVERY NIGHT

Some facilities might want extra security after hours by automatically making sure that main doors are locked every night after normal working hours and normalised again before work the following day. The following rule achieves this:

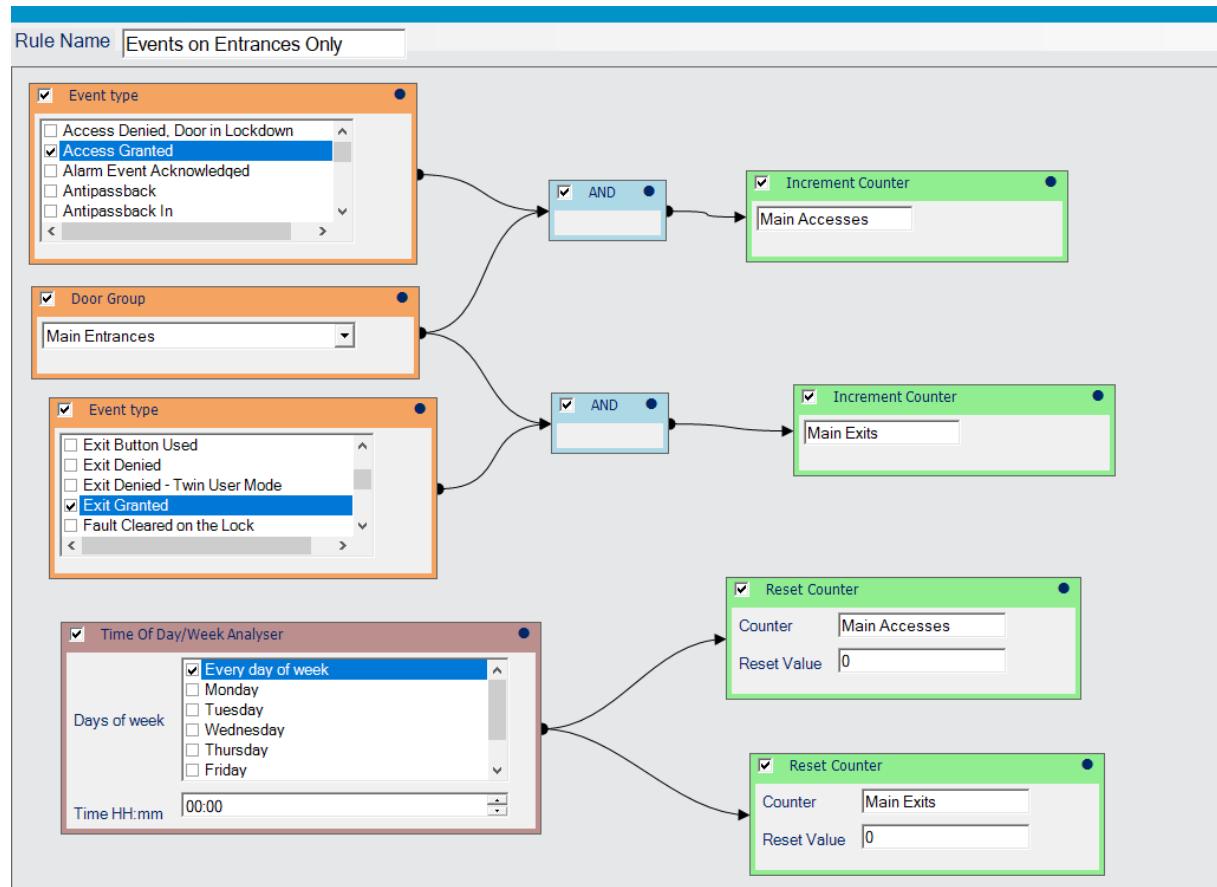


### EXAMPLE 14: USING COUNTERS TO MONITOR DAILY TRAFFIC

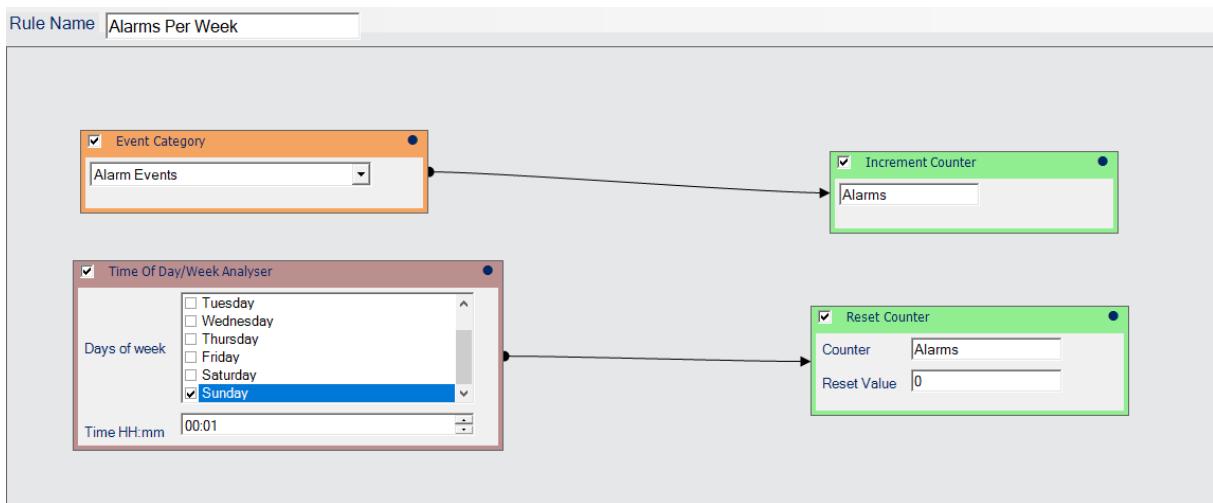
Counters can be set up to monitor certain event types on busy sites. This would enable quick and easy viewing of site activity every day. Such counters can be configured site-wide like this:



Or they could be restricted to entry and exit on main entrances like this:



Another example might be someone wanting to count the number of alarms generated in a week. Note that it is important for the counter to be reset using a rule (it can also be reset manually from the Rule Counters list page).



The Rule Counters page will then display the value of the counter.

	No	Name	Amount	Last Action
m	1	APPLE	0	Reset
m	2	APPLES	0	Reset
Groups	3	INPUT STATES AND OUTPUT	0	Reset
Groups	4	CONTROLLER OFFLINE	0	Reset
Groups	5	CEOS OFFICE UNLOCKED	0	Reset
Groups	7	ACCESS/EXIT GRANTED	0	Reset
Groups	8	DOOR PASSED	0	Reset
Groups	9	TONY	0	Reset
Groups	10	TIMER TRIGGERED	0	Reset
Groups	11	SPC PANEL SET	0	Reset
ones	13	ALARMS	5	Incremented

#### EXAMPLE 15: ORDER A DOWNLOAD TO ALL CONTROLLERS ONCE A WEEK

If there are any concerns about the state of the system or the status of controllers, then a full download to all controllers can clear out possibly out-of-date controllers. You would use the special system action to download to all controllers at a specified time once per week.

