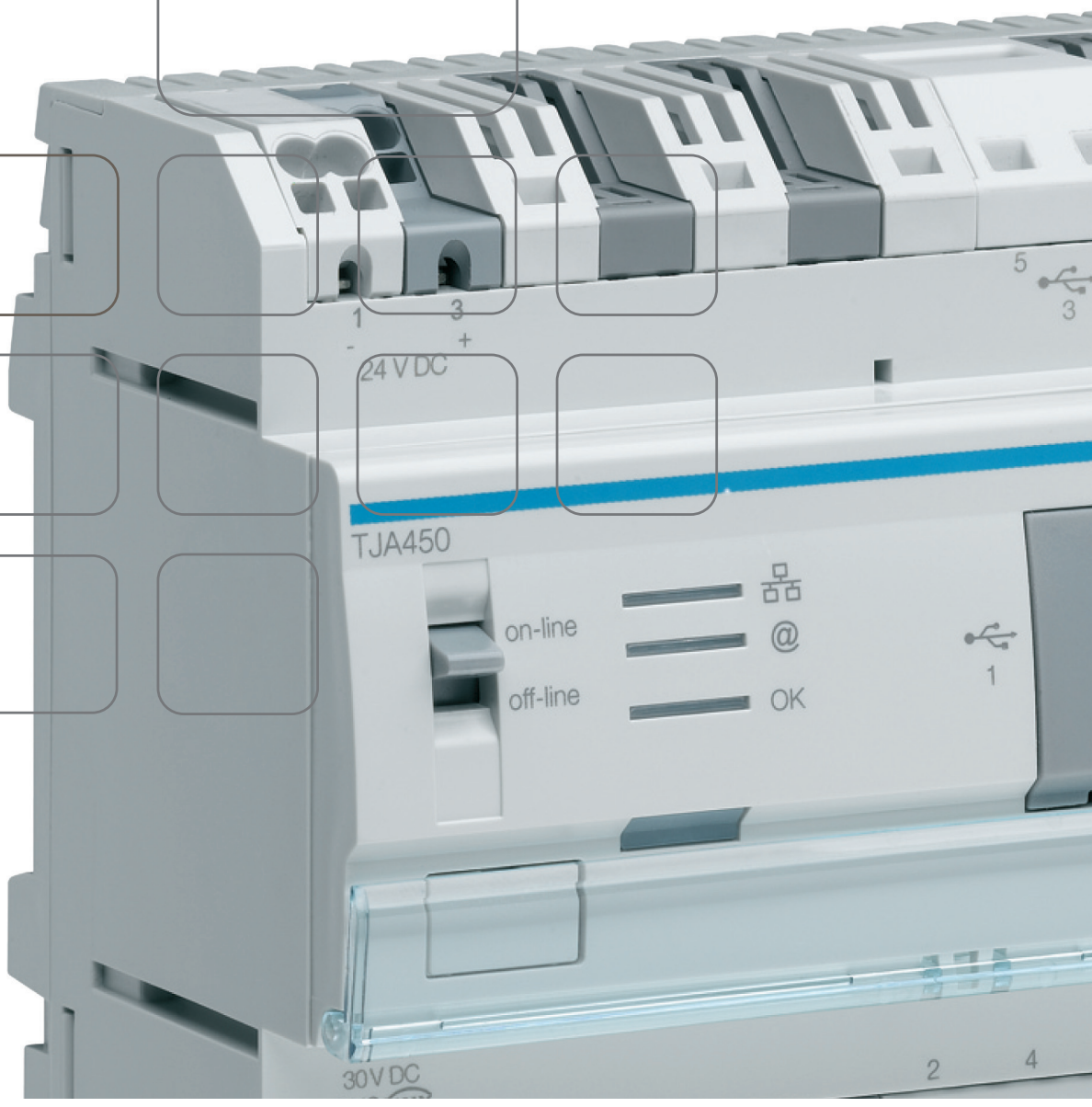
domovea

Sequences



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1. INTRODUCTION

There are two categories of automation type in Domovea:

- Programs

Programs are used to automate actions according to time criteria. Programs can be configured via the end customer configuration tool.

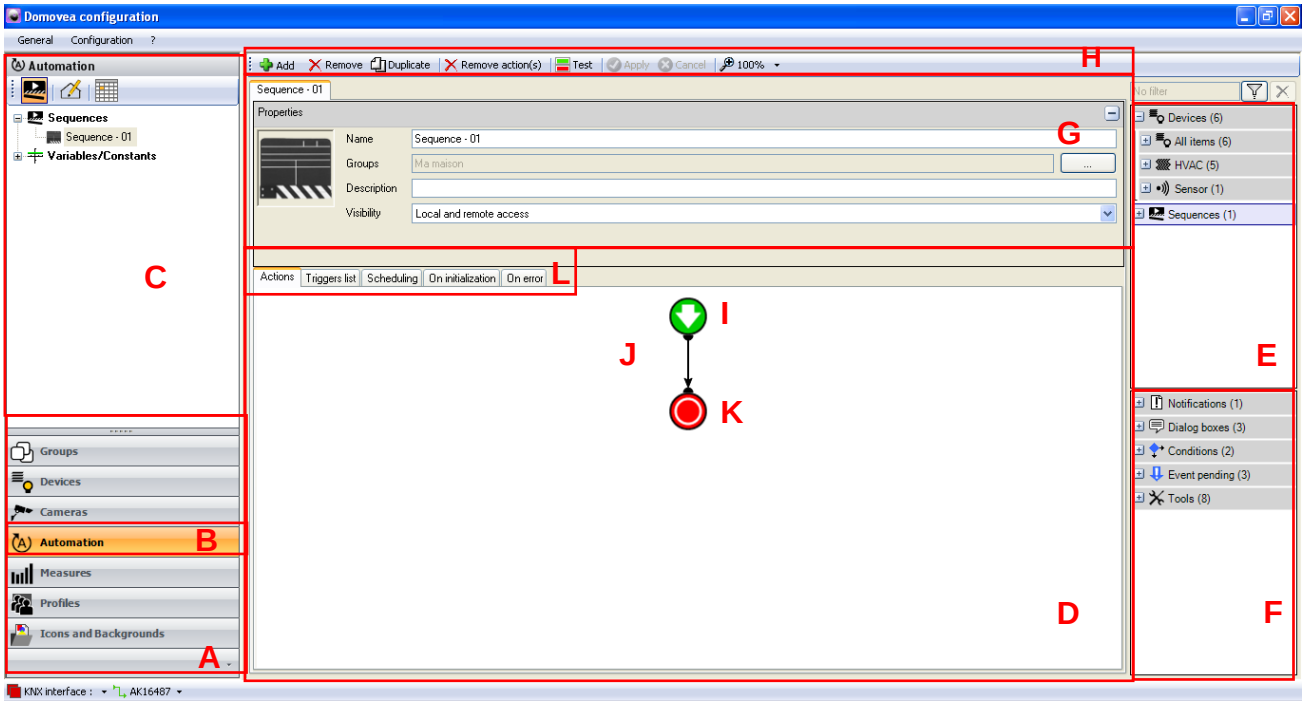
- Sequences

Sequences are used to create complex scenarios and allow functions to be executed either in response to sensor states or independently of them. Sequences can only be configured via the Domovea configuration tool.

The remainder of this document will deal exclusively with sequences as the program functions are covered by a specific document.

2. NAVIGATION INTERFACE

The navigation interface for the Automations section of the configuration tool is as follows:



A: List of links

B: Link to the Automation tab

C: List of sequences

D: Sequences

E: List of devices

F: List of advanced functions

G: Sequence properties

H: Menu bar

I: Start of the sequence

J: Body of the sequence

K: End of the sequence

L: List of tabs

3. CREATE AN AUTOMATION

3.1 EXAMPLE 1: HIGH WIND SPEED

Level: Easy

Uses: Actions, Triggers

Sequence

*A sequence is an ordered list of **actions** between a start and end of sequence.*	

Actions

An action consists of changing the status of a device. This action may be a moving a shutter, switching on lighting, modifying a thermostat's HVAC mode, or sending an e-mail.	

Triggers

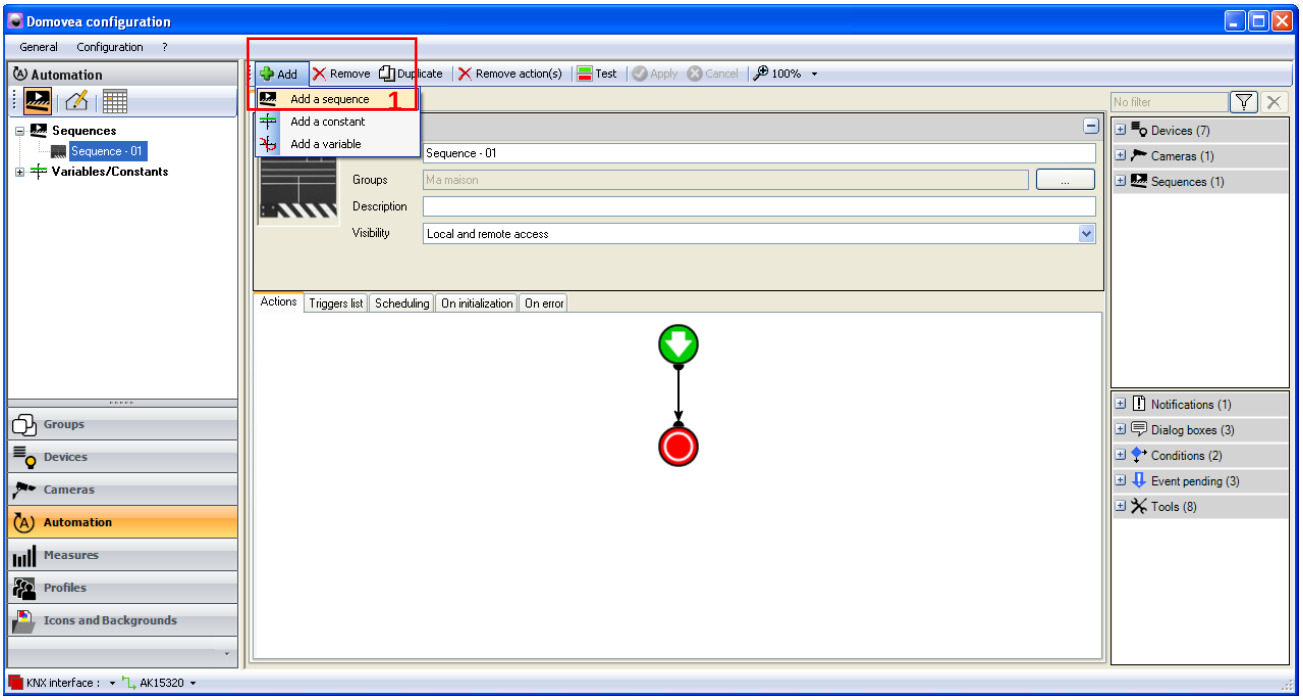
A trigger launches a sequence during a specific event.	

The **High wind speed** scenario allows all the house's shutters to be closed when the wind speed rises above 60 Km/h.

- ***Creation***

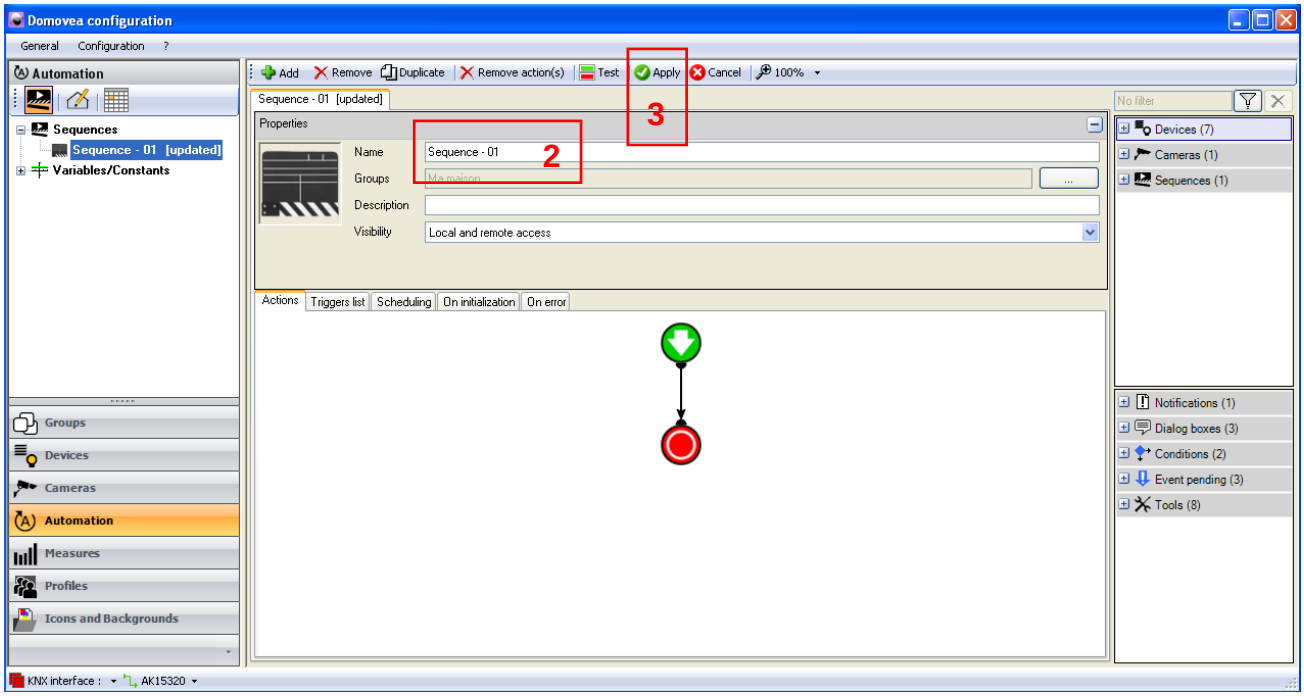
To create the **High wind speed** scenario:

- Click on Automation in the list of links,
- Click on **Add**, then **Add a sequence** (1) from the menu bar.



The sequence has been created and appears in the list of sequences. To make it clearer, it can be renamed by modifying the **Name** field (2).

- Enter the title **High wind speed**.
- Click on **Apply** (3) to confirm.



- ***Select devices***

The next step is to select the devices to be set by this sequence.

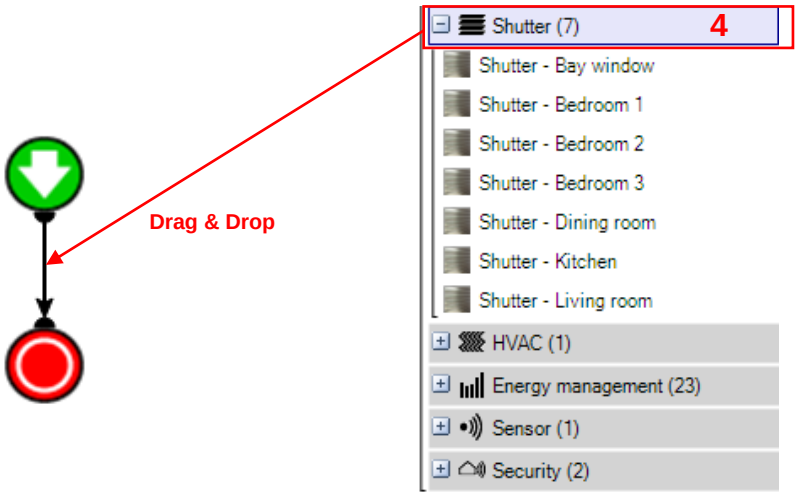
To select the devices to be set:

- Select the devices from the list of devices (4) and drag and drop them onto the body of the sequence.

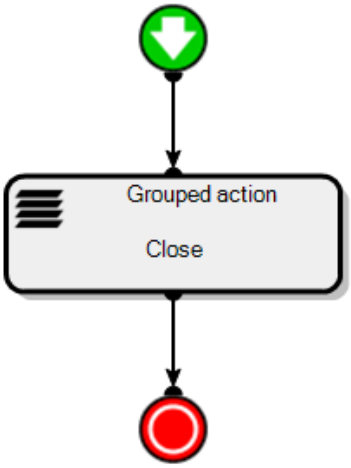
In this application:

- Move all the **shutter** devices.

It is also possible to move a group of devices as it is to move a single device.



The devices (or groups of devices) concerned are therefore displayed in the body of the sequence.

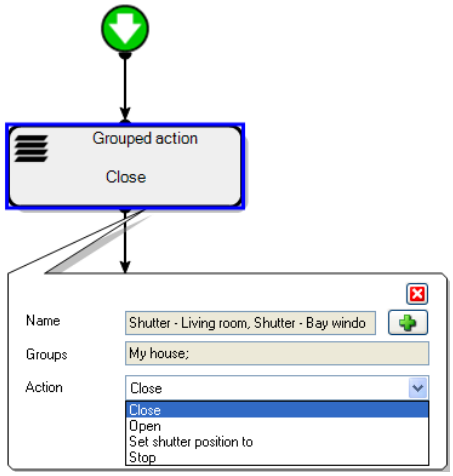


- ***Actions***

A double click (or right click and select configuration) on the device concerned will open its properties. This allows the user to choose the action to be carried out during the sequence.

Select the following from the drop-down list:

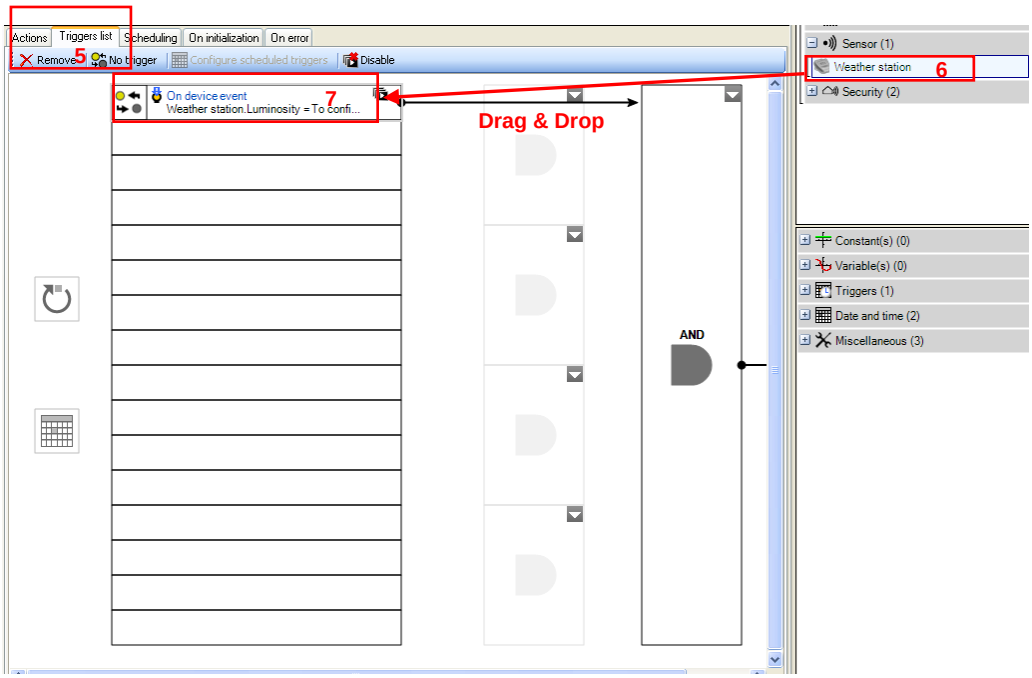
- **Close** for the shutters.



- ***Adding a trigger***

To add a trigger:

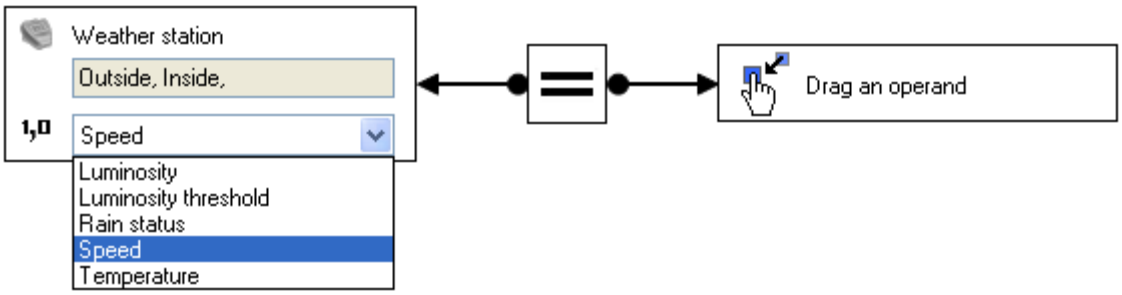
- Click on the **List of triggers** tab (5) in the list of tabs,
- Select **Weather station** from the list of devices (6),
- Drag and drop into a cell of the table (7).



The trigger operation appears in the lower part of the screen.

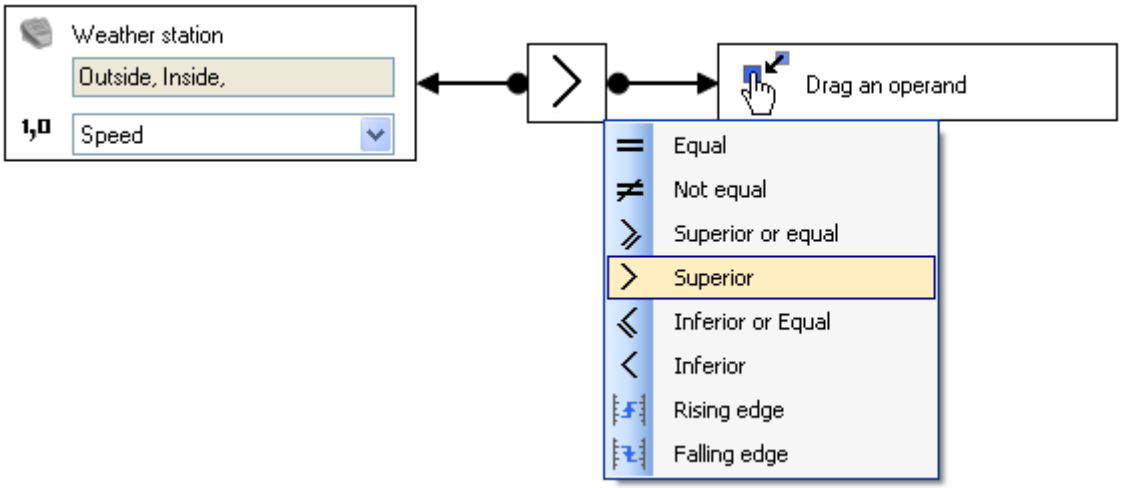
The left part of the operand is used for selecting the weather states.

- To follow this example, select **Speed** from the drop-down menu.



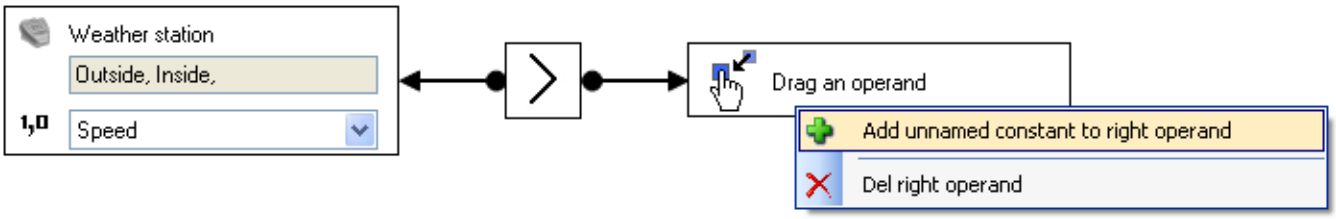
The middle part is used for defining the function sign.

- Select **the greater than sign**.



The right part of the operand is used to define the value at which the function is validated.

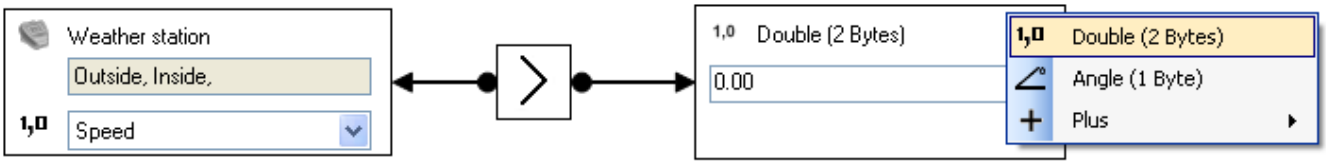
Right-click on this item and select **Unnamed constant**.



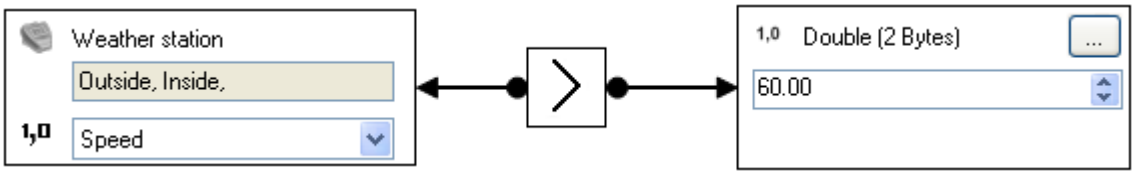
We can define the format of this value using the drop-down menu below.

To define this format:

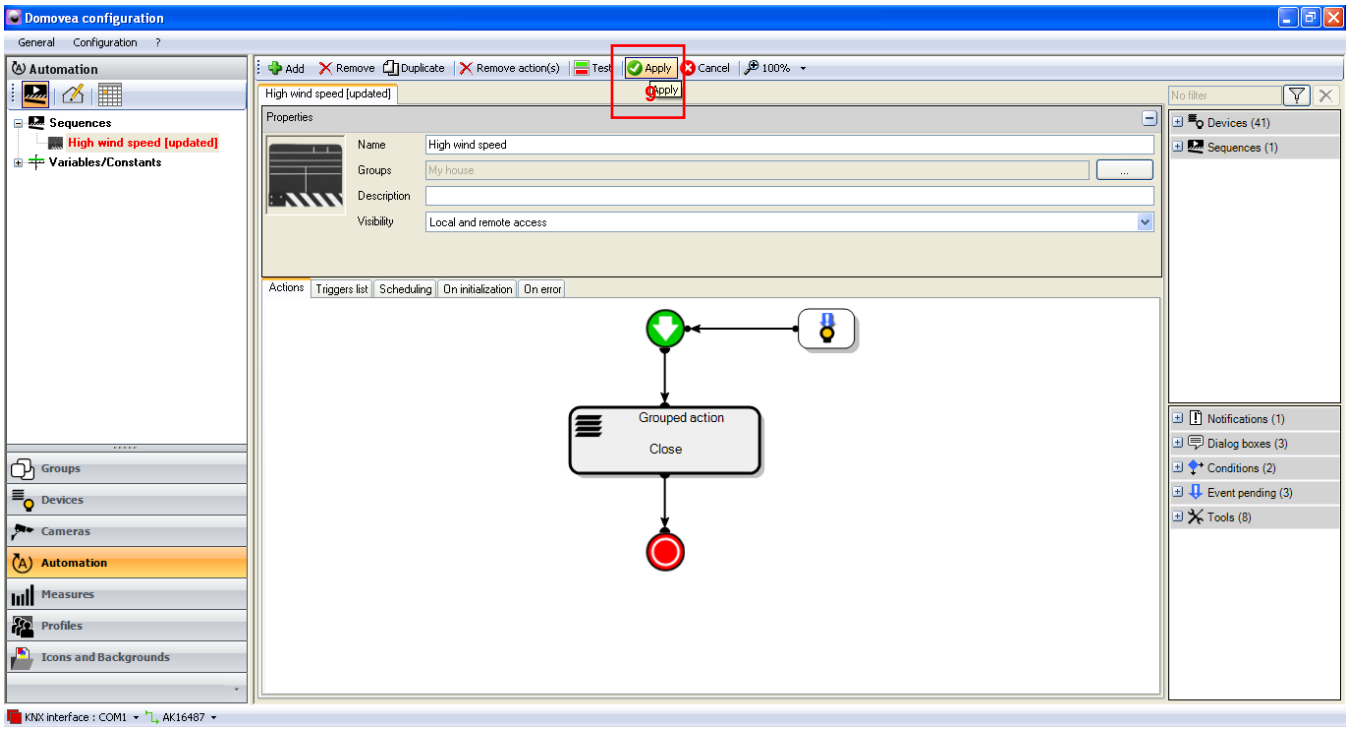
- Select **Real number (2 bytes)**,



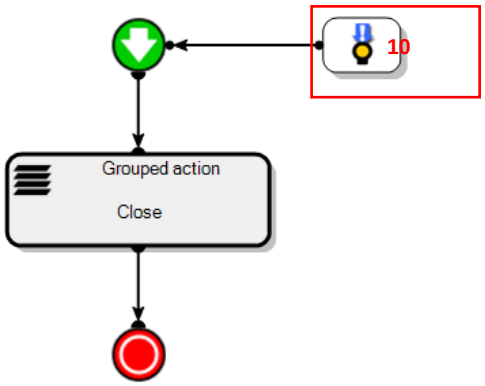
- Enter the number **60** for 60 km/h (8).



- Click on **Apply** (9) in the sequence tab to confirm the modifications.



The trigger has been inserted into the body of the sequence (10).



The **High wind speed** sequence will run when the wind speed exceeds 60 km/h.

3.2 EXAMPLE 2: ALARM ACTIVATION

Level: Easy

Uses: Actions, Triggers, Delay tool

Sequence

A sequence is an ordered list of actions.	

Actions

An action consists of changing the status of a device. This action may be a moving a shutter, switching on lighting, modifying a thermostat's HVAC mode, or sending an e-mail.	

Triggers

A trigger launches a sequence during a specific event.	

Delay

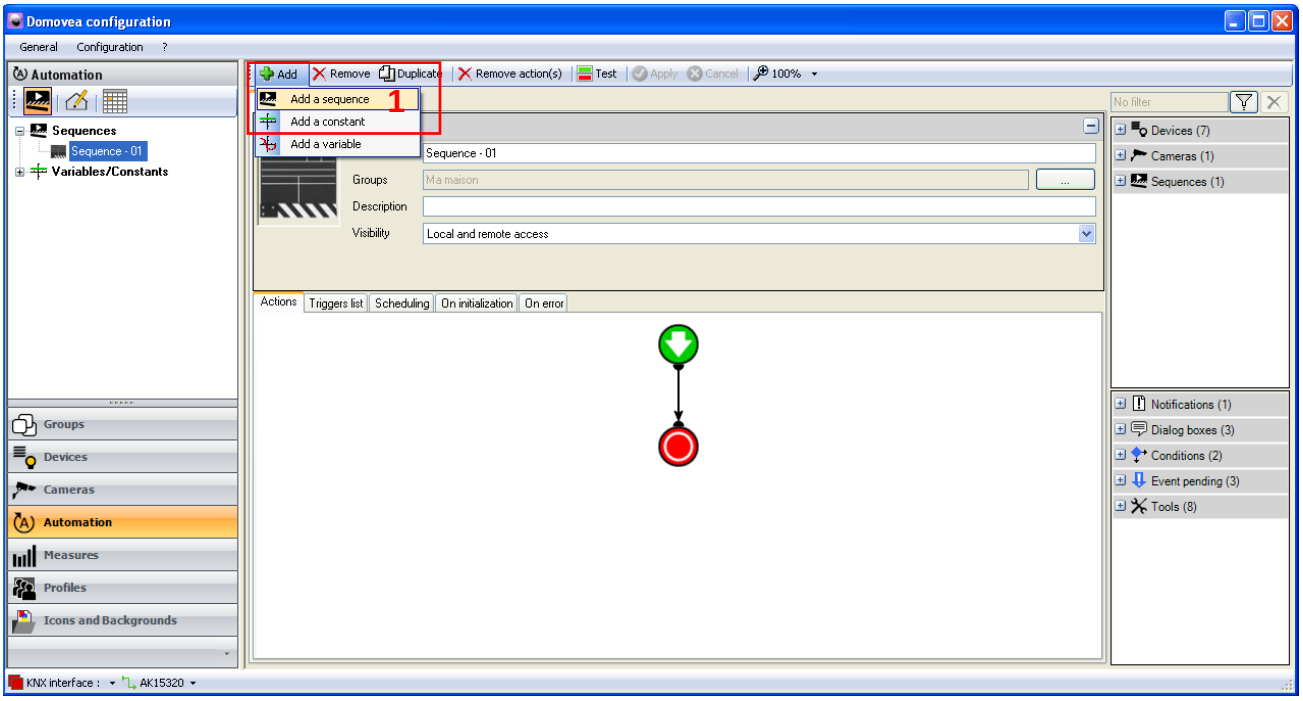
A delay is a time period that can be used to delay part or all of a sequence.	

The **Alarm activation** scenario is used to activate economy mode on the thermostats and switch off all the house lights 20 seconds after the alarm system is activated.

- ***Creation***

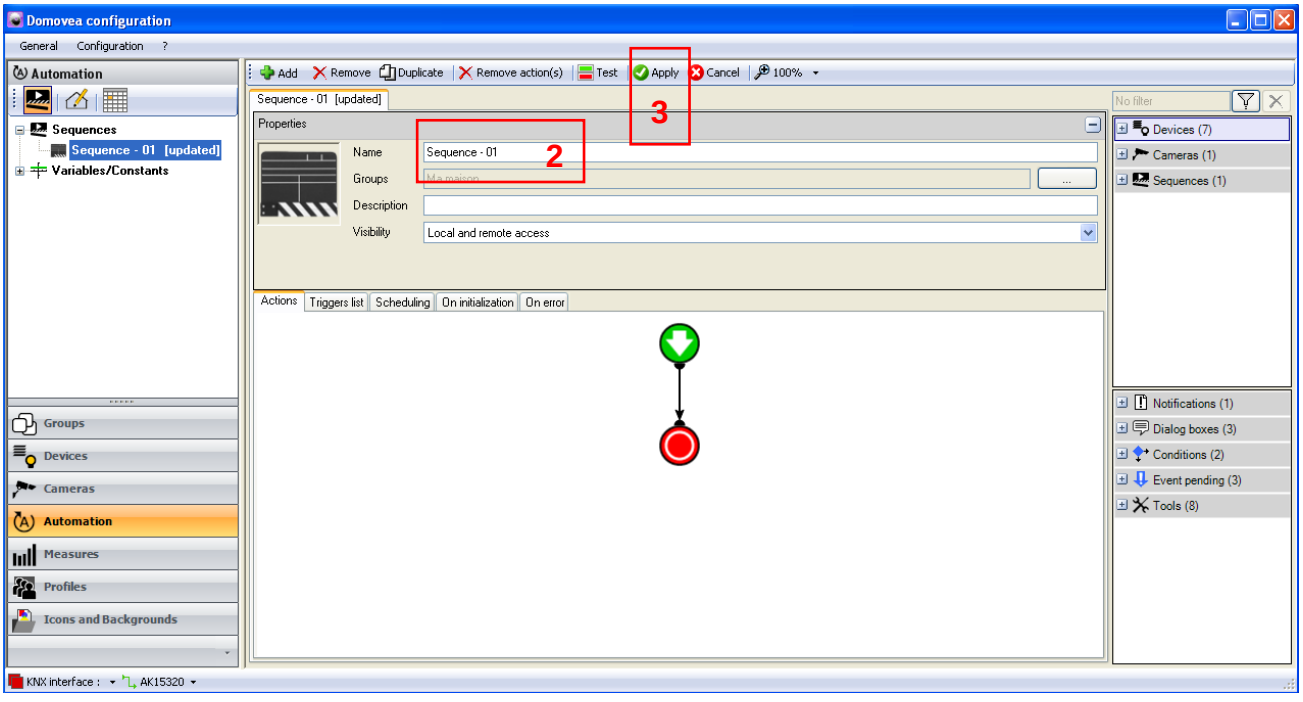
To create the **Alarm activation** scenario:

- Click on Automation in the list of links,
- Click on **Add**, then **Add a sequence** (1) on the menu bar.



The sequence has been created and appears in the list of sequences. To make it clearer, it can be renamed by modifying the **Name** field (2).

- Enter the **Alarm activation** title.
- Click on **Apply** (3) to confirm.



- ***Select devices***

The next step is to select the devices to be set by this sequence.

To select the devices to be set:

- Select the devices from the list of devices (4) and drag and drop them onto the body of the sequence.

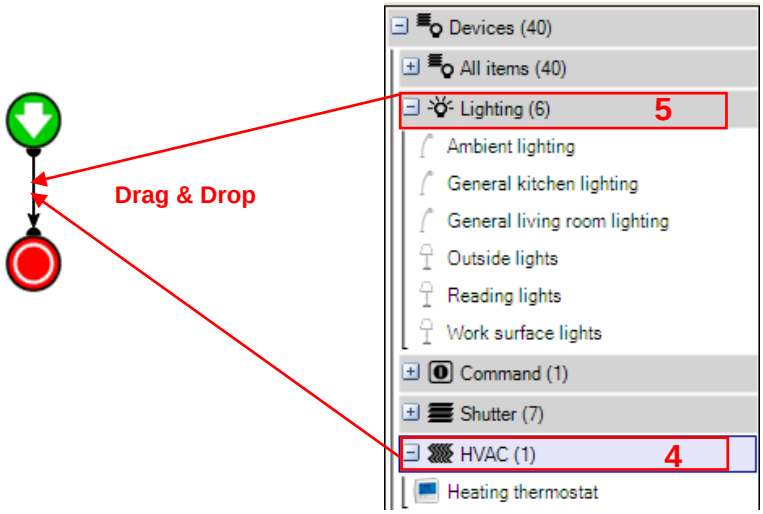
In this application:

- Move the **lighting** devices and **thermostat to control** groups.

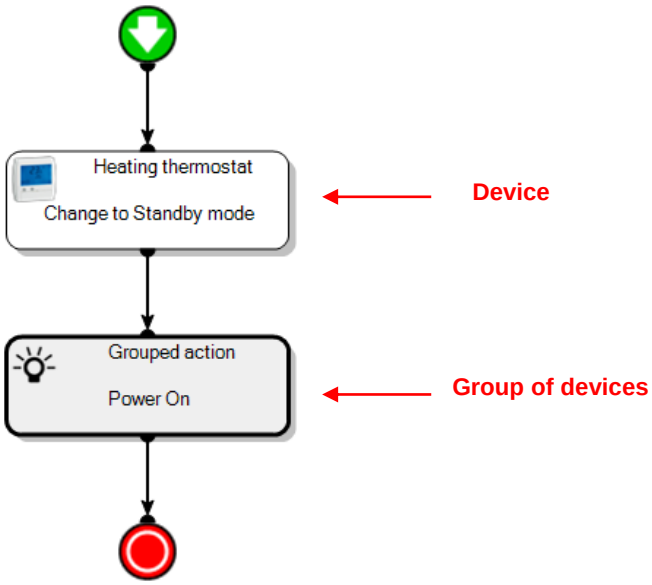
It is also possible to move a group of devices as it is to move a single device.

To move a group of devices:

- Select the title of the group (5) and drag and drop onto the body of the sequence.



The devices (or groups of devices) concerned are displayed in the body of the sequence.

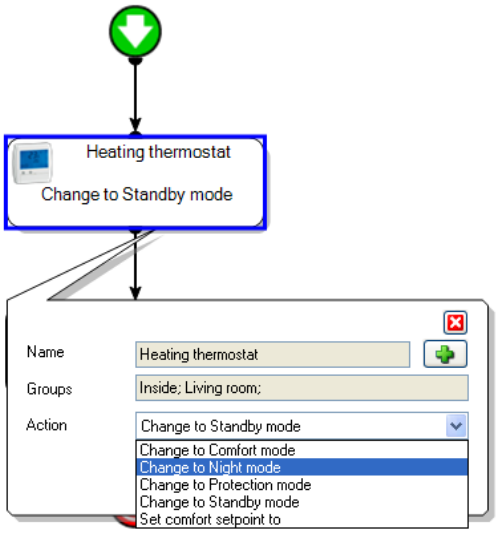


- ***Actions***

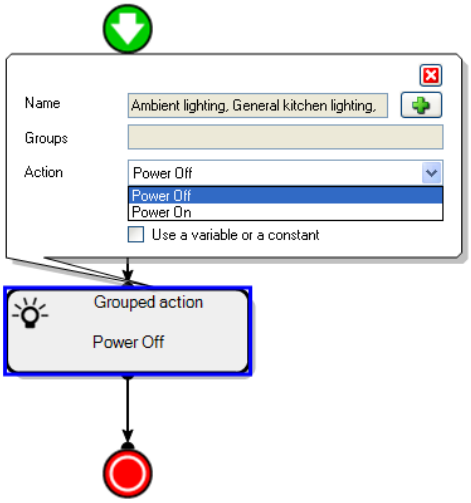
A double click (or right click and select configuration) on the device concerned will open its properties. This allows the user to choose the action to be carried out during the sequence.

Under device properties, select:

- **Change to Night mode** for the thermostat,



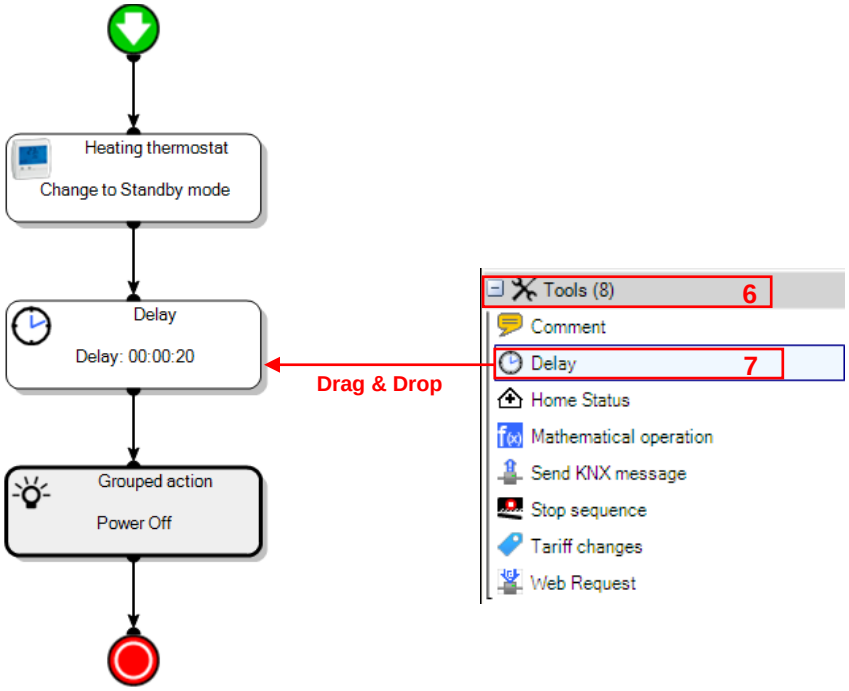
- **Power Off** for the lights,



- ***Delay tool***

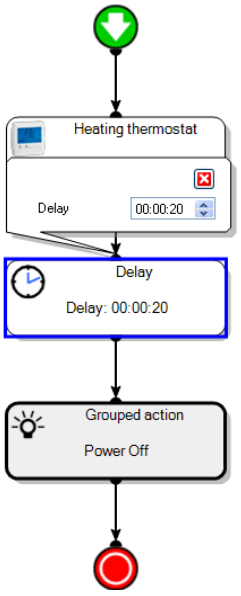
To delay powering off the lights, you have to add a **delay tool**:

- Develop the **Tools** menu (6) in the list of **advanced functions**,
- Select the **Delay** object (7) and drag and drop it just before the action that is to be scheduled. All the actions placed after this tool will be delayed.



As with actions, this tool's properties can be accessed by double clicking (or right clicking and selecting configuration).

In the properties window, set the time to 00:00:20. The format for this field is hh.mm.ss.

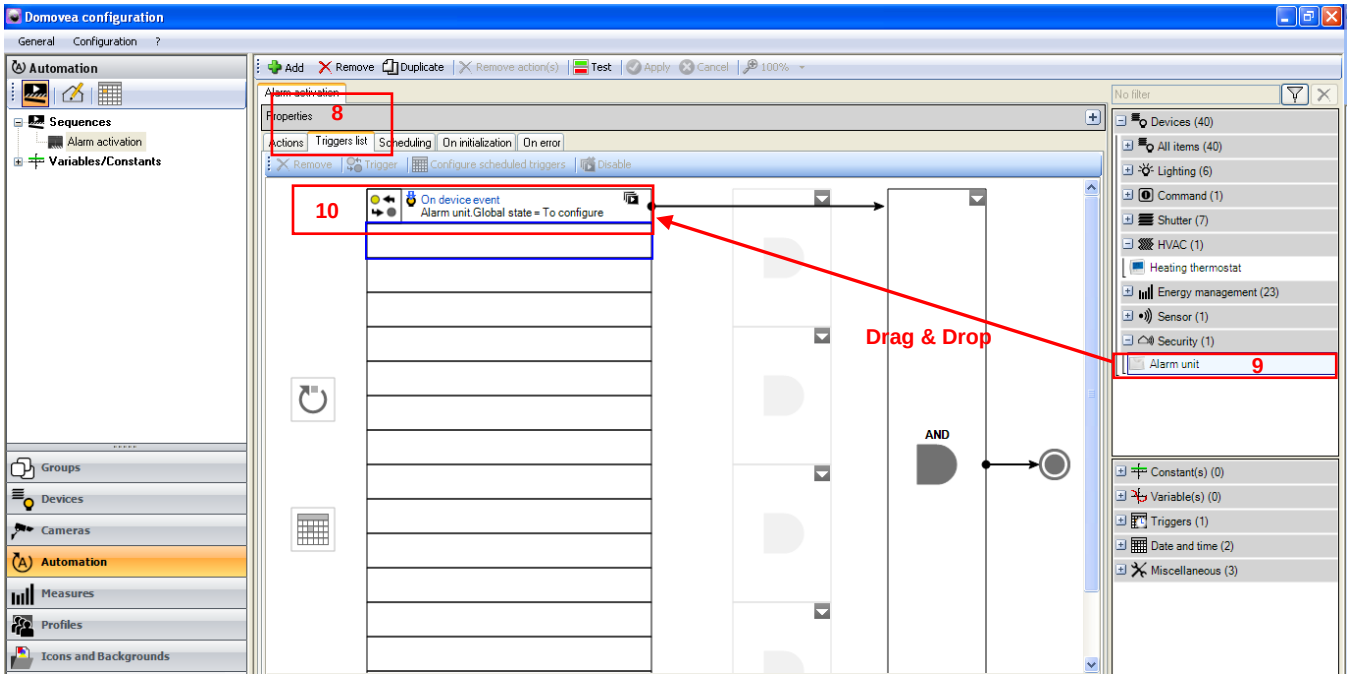


In this example, the lights will be powered off after a 20 second delay.

- ***Adding a trigger***

To add a trigger:

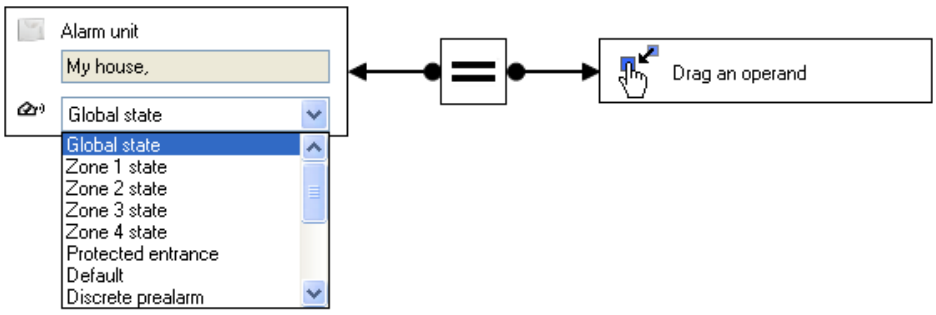
- Click on the **List of triggers** tab (8) in the list of tabs,
- Select **Alarm unit** from the list of devices (9),
- Drag and drop into a cell of the table (10).



The trigger operation appears in the lower part of the screen.

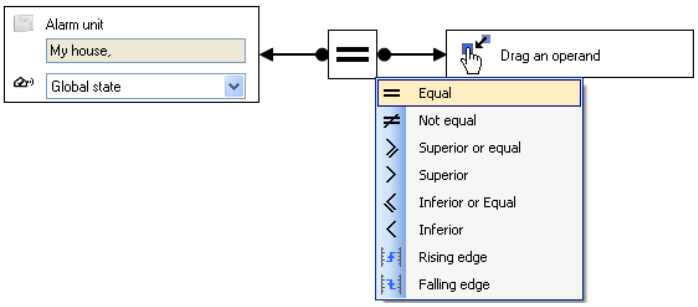
The left part of the operand is used for selecting the alarm states.

In this example, we select **Global state** from the drop-down menu.

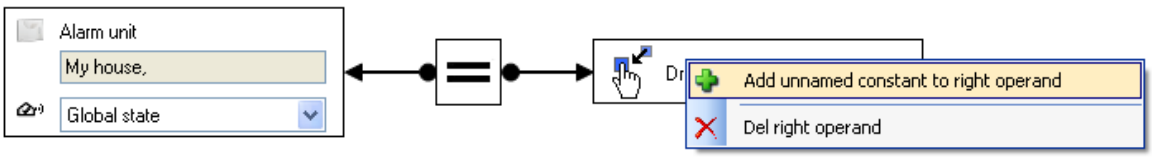


The middle part is used for defining the function sign.

- Select **the equals sign**.

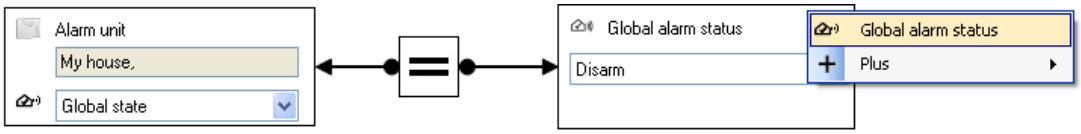


The right part of the operand is used to define the value at which the function is validated.
Right-click on this item and select **Unnamed constant**.

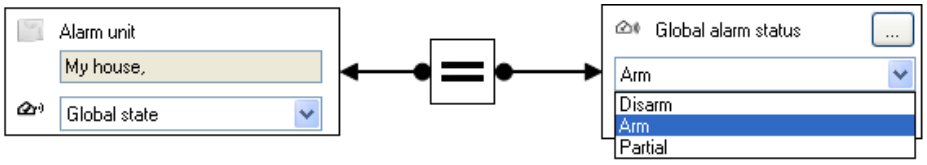


Use the drop-down menu below to define the states.

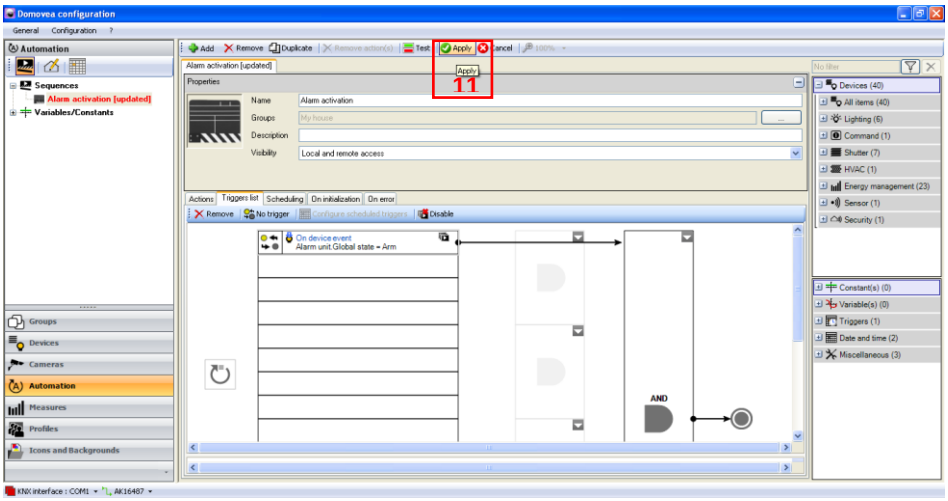
- Select **Global state,**



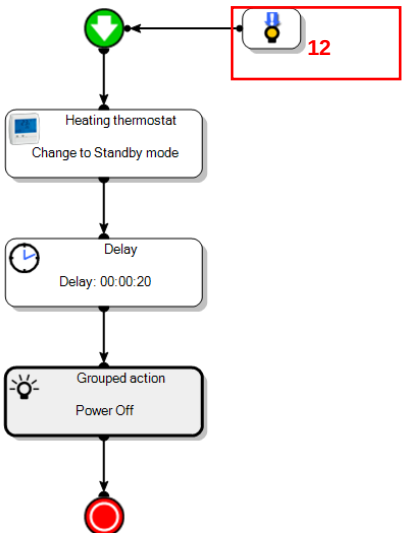
- Select **Arm** to activate the alarm,



- Click on **Apply** (11) in the sequence tab to confirm the modifications.



The trigger has been inserted into the body of the sequence (12).



The **Alarm activation** sequence will run when the alarm unit is activated.

3.3 EXAMPLE 3: HEAT PROTECTION

Level: Easy

Uses: Actions, Triggers

Sequence

A sequence is an ordered list of **actions** between the start and end of a sequence.	

Actions

An action consists of changing the status of a device. This action may be a moving a shutter, switching on lighting, modifying a thermostat's HVAC mode, or sending an e-mail.	

Triggers

A trigger launches a sequence during a specific event.	

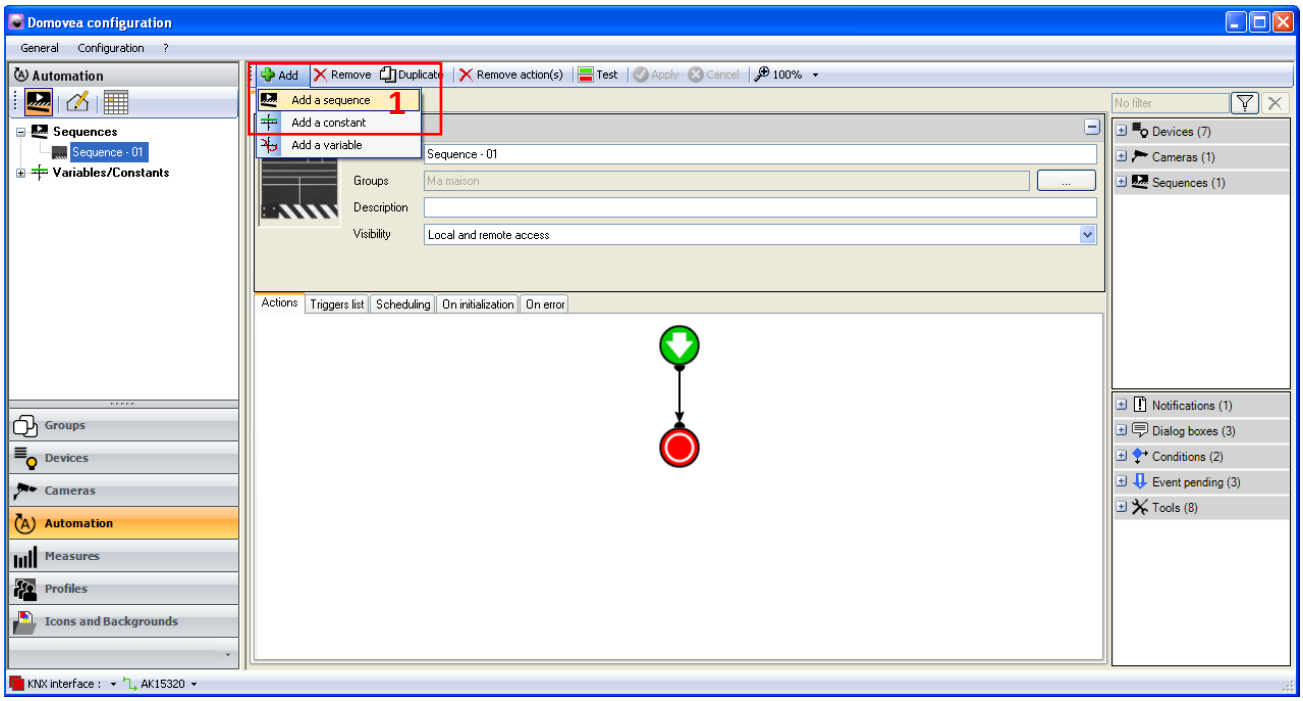
The **Heat protection** scenario is used to close all the house's shutters when the 2 conditions below are met:

- the outside temperature is above 25°C,
- the inside temperature is above 20°C.

- ***Creation***

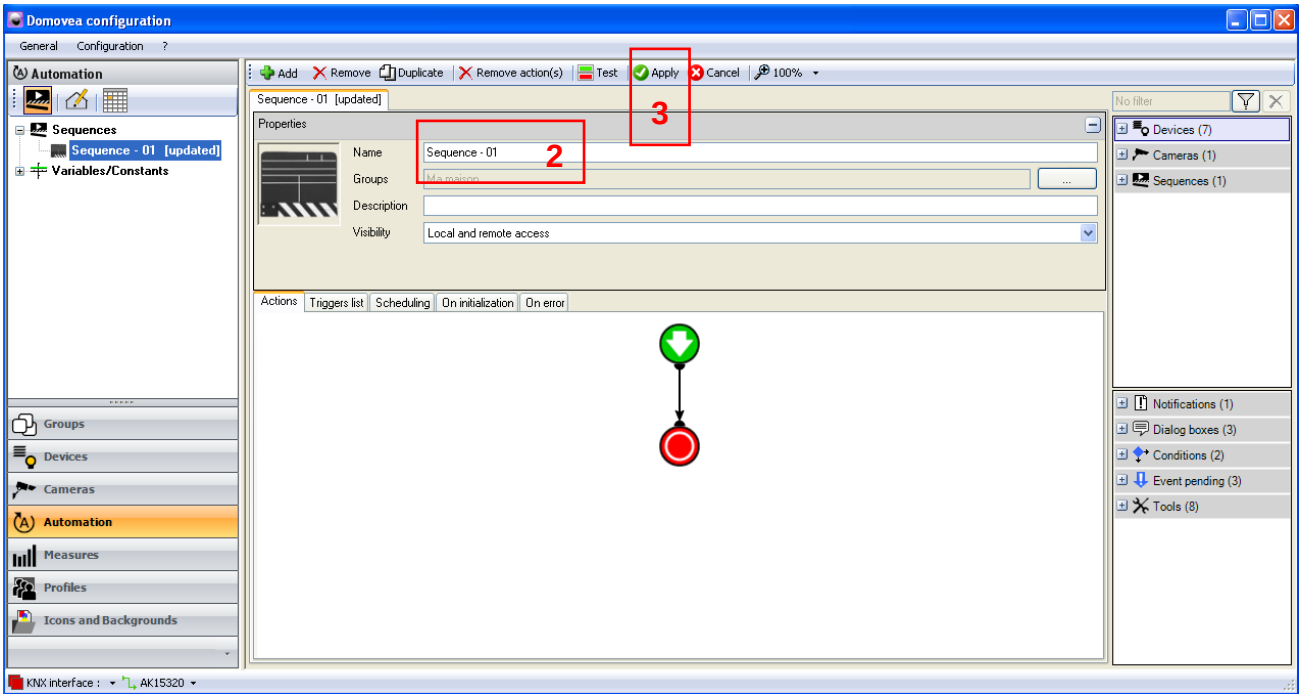
To create the **Heat protection** scenario:

- Click on Automation in the list of links,
- Click on **Add**, then **Add a sequence** (1) from the menu bar.



The sequence has been created and appears in the list of sequences. To make it clearer, it can be renamed by modifying the **Name** field (2).

- Enter the **Heat protection** name.
- Click on **Apply** (3) to confirm.



- ***Select devices***

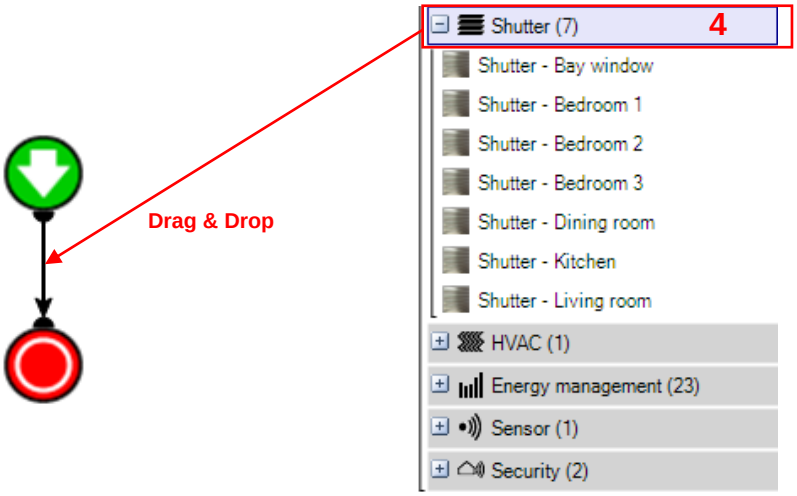
The next step is to select the devices to be set by this sequence.

To select the devices to be set:

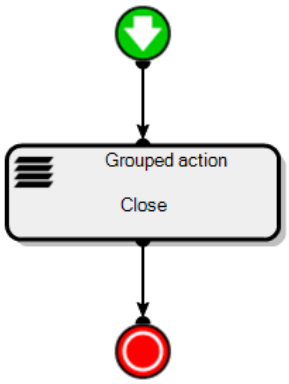
- Select the devices from the list of devices (4) and drag and drop them onto the body of the sequence.

In this application:

- Move all the **shutter** devices.



The devices (or groups of devices) concerned are therefore displayed in the body of the sequence.

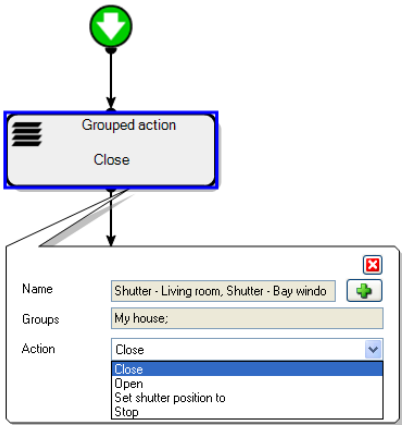


- ***Actions***

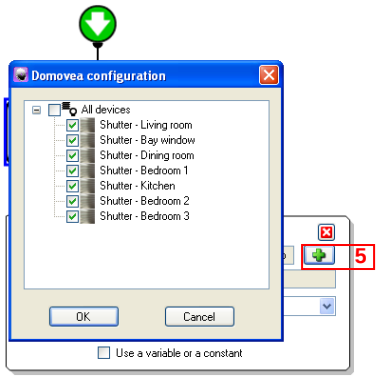
A double click (or right click and select configuration) on the device concerned will open its properties. This allows the user to choose the action to be carried out during the sequence.

Select the following from the drop-down list:

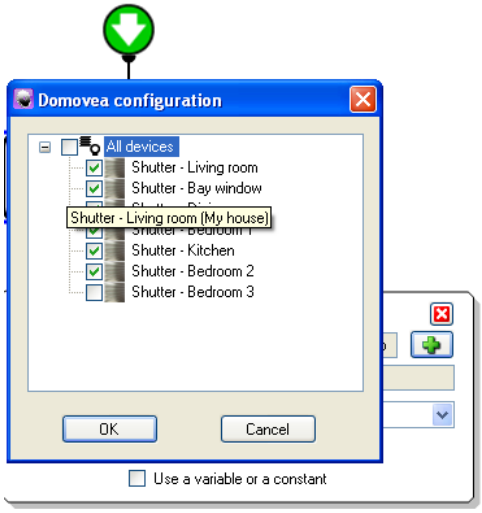
- **Close** for the shutters.



All the devices are ticked; you can select individual devices by using the + button (5).



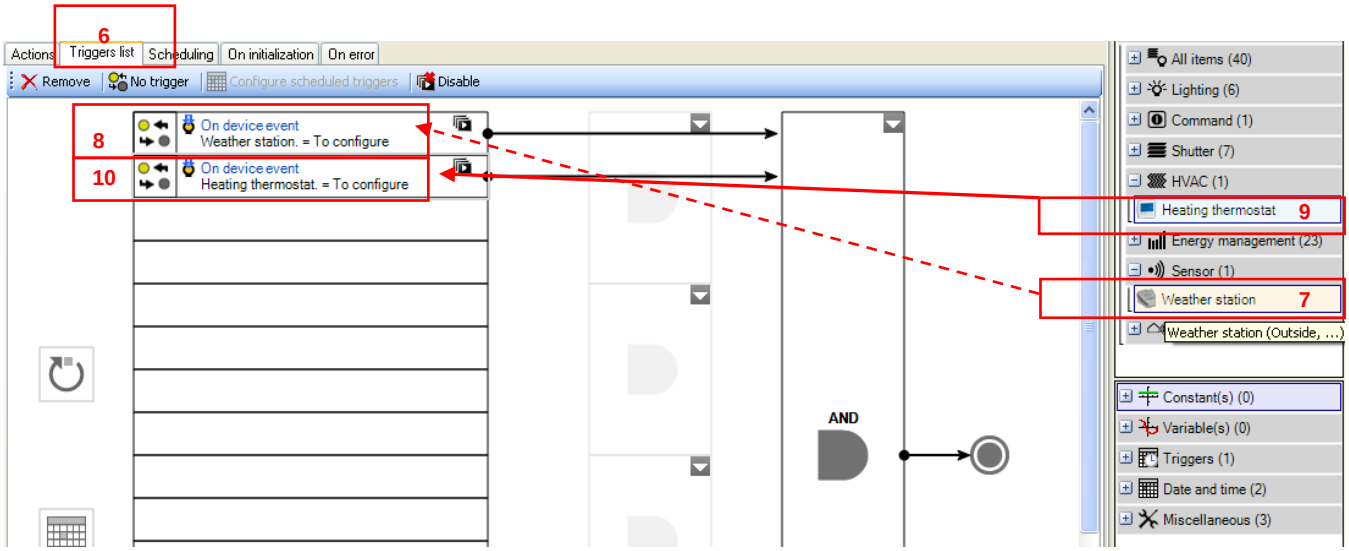
In this example, as we do not want the patio awning to be controlled at the same time as the house shutters, we simply deselect it.



- ***Adding a trigger***

To follow this example, we need to add two triggers:

- Click on the **List of triggers** tab (6) in the list of tabs,
- Select **Weather station** from the list of devices (7) for the outside temperature,
- Drag and drop the selection into a cell of the table (8).
- Select **Heating thermostat** from the list of devices (9) for the inside temperature,
- Drag and drop into a cell of the table (10).

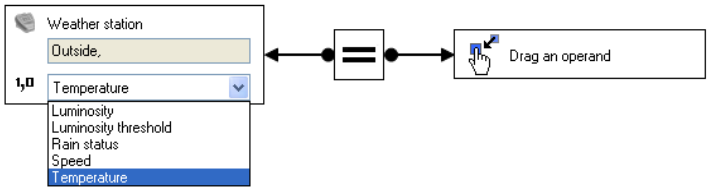


The trigger operation appears in the lower part of the screen.

The left part of the operand is used for selecting the weather states.

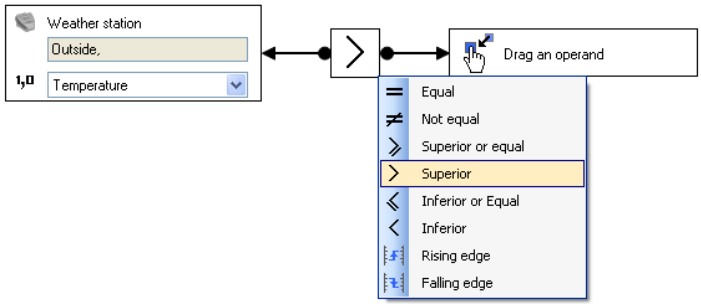
For the outside and inside temperature:

- In this example, you should select **Temperature** from the drop-down menu.



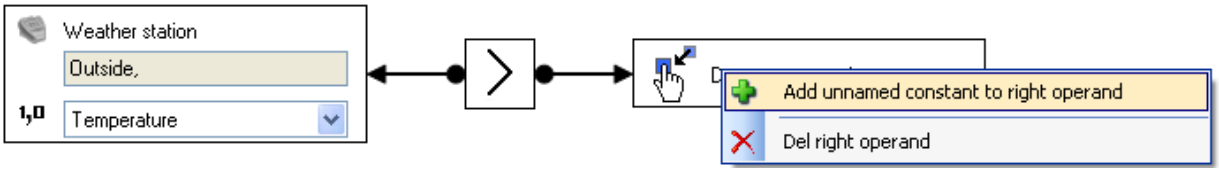
The middle part is used for defining the function sign.

- Select the **Greater than** symbol for the exterior and interior temperature.



The right part of the operand is used to define the value at which the function is validated.

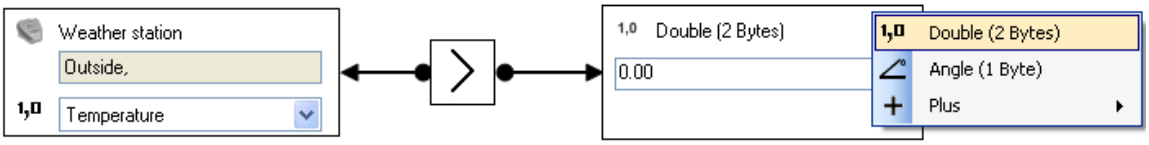
- Right-click on this item and select **Unnamed constant**.



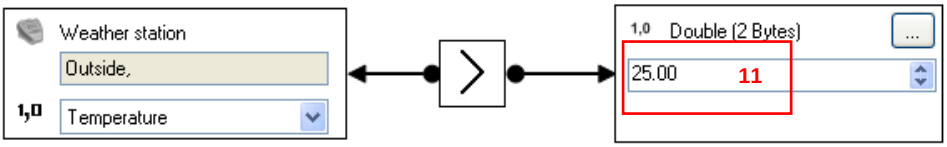
We can define the format of this value using the drop-down menu below.

To define this format:

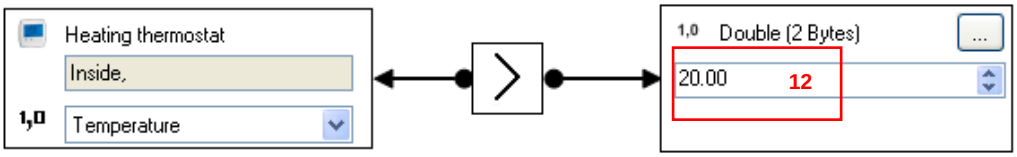
- Select **Real number (2 bytes)**,



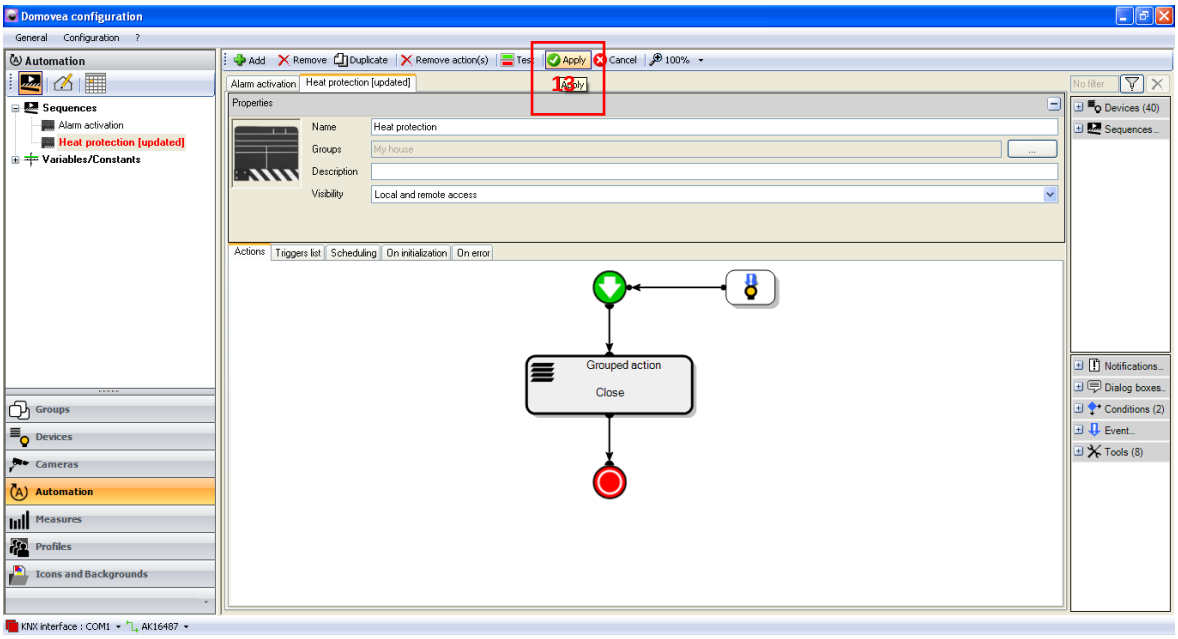
- Enter the number **25** for 25°C (11) for the outside temperature.



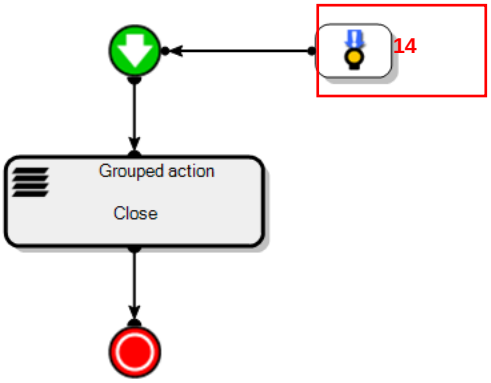
- Enter the number **20** for 20°C (12) for the inside temperature.



- Click on **Apply** (13) in the sequence tab to confirm the modifications.



The trigger has been inserted into the body of the sequence (14).



The **Heat protection** sequence will run when the outside temperature is above 25°C and the inside temperature is above 20°C.

3.4 EXAMPLE 4: ALARM NOTIFICATION

Level: Easy

Uses: Actions, Triggers, Notifications, Advanced functions

Sequence

A sequence is an ordered list of actions.	

Actions

An action consists of changing the status of a device. This action may be a moving a shutter, switching on lighting, modifying a thermostat's HVAC mode, or sending an e-mail.	

Triggers

A trigger launches a sequence during a specific event.	

Notifications

The notifications tool allows an e-mail to be sent or an information window to be displayed on the client screen.	

Advanced functions

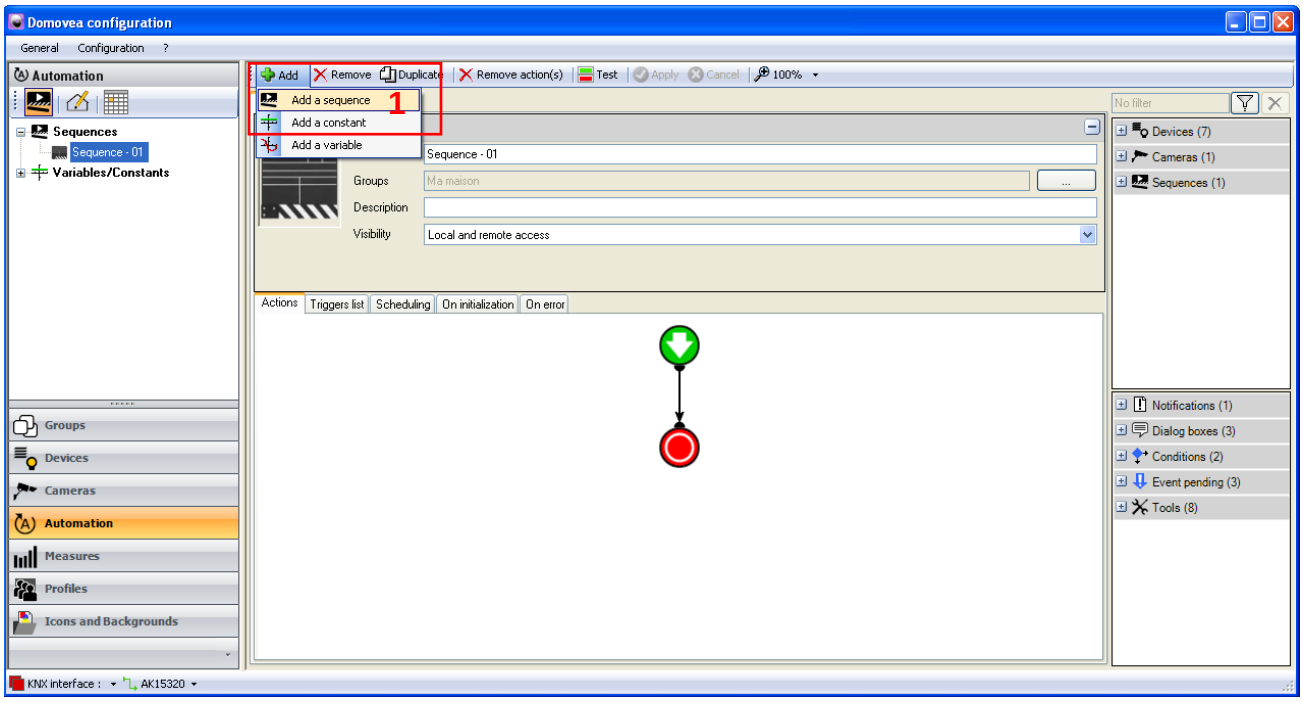
Advanced functions allow the user to add special tasks to a sequence. *This could be a formula for calculation, an If condition, sending a message, or sending a request via the web.*

The **Alarm notification** scenario is used to send an e-mail and display a pop-up when the alarm system detects an intruder.

- ***Creation***

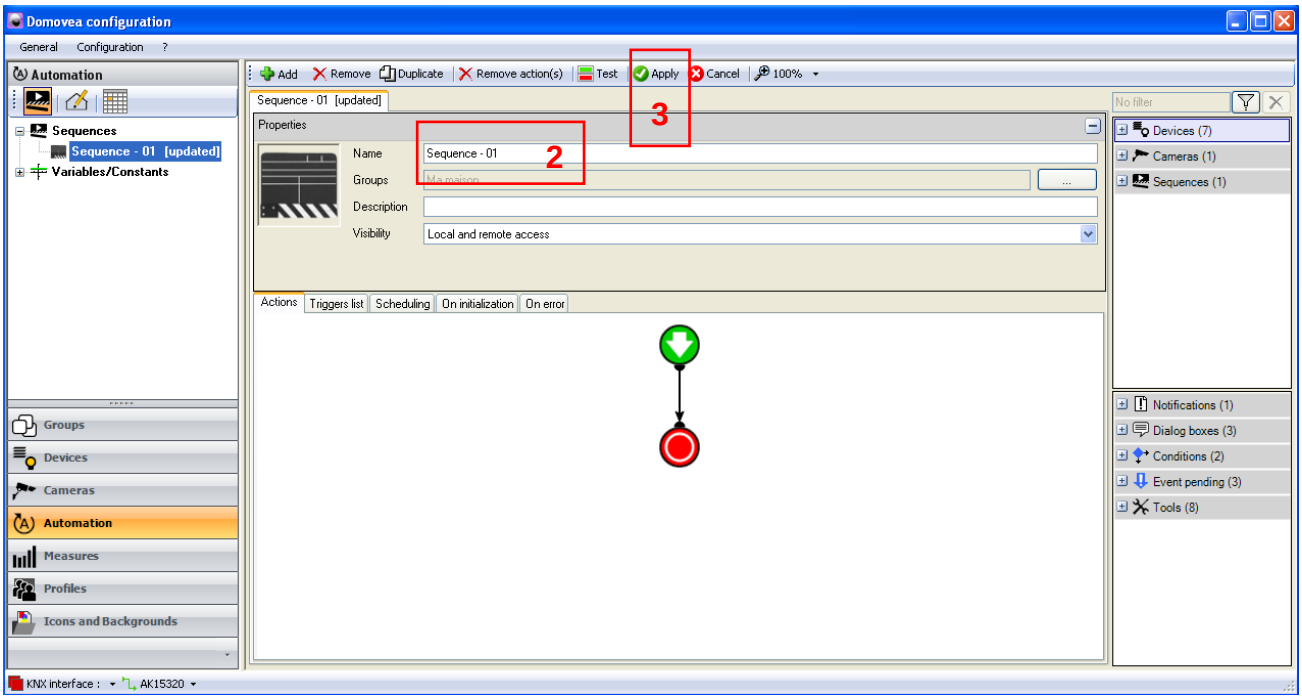
To create the **Alarm notification** scenario:

- Click on Automation in the list of links,
- Click on **Add**, then **Add a sequence** (1) from the menu bar.



The sequence has been created and appears in the list of sequences. To make it clearer, it can be renamed by modifying the **Name** field (2).

- Enter the **Alarm notification** name.
- Click on **Apply** (3) to confirm.



- ***Select devices***

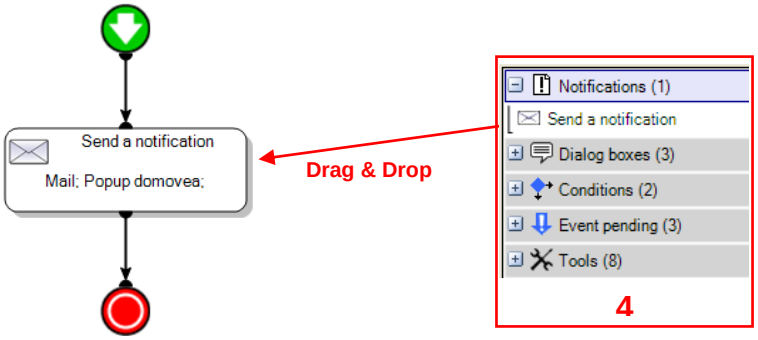
The next step is to select the devices to be set by this sequence.

To select the devices to be set:

- Select the devices from the list of devices and advanced functions (4) and drag and drop them into the body of the sequence.

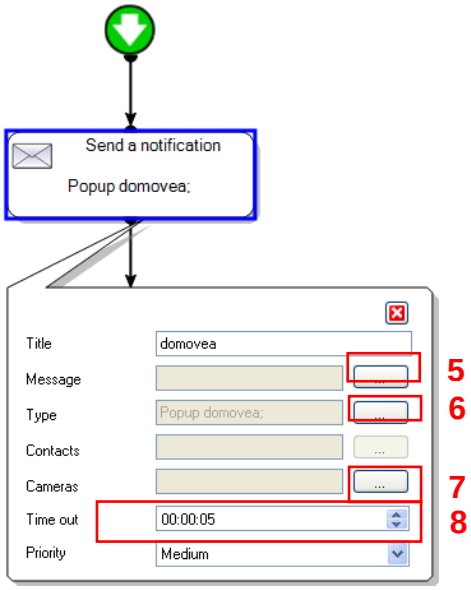
In this application:

- Move the advanced **Send a notification** function.



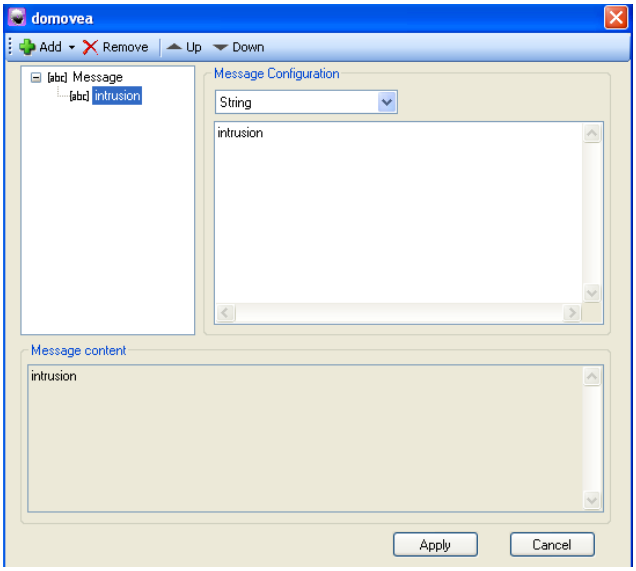
- ***Notification***

The contents of the notification must now be defined.
Double click on the **Send a notification** action to open its properties.



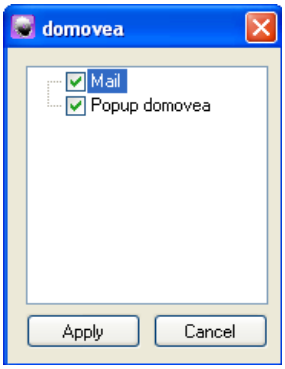
The **Message** field is used for entering the message to be displayed. To fill in this message:

- Click on button (5),
- Click on **Add**, then **String**,
- Enter the message that you wish to appear.



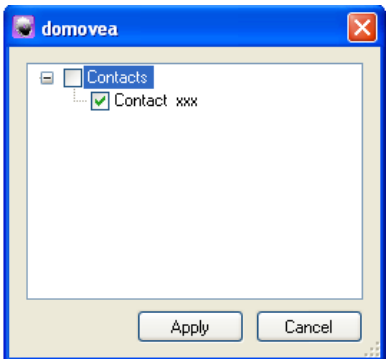
The **Type** field (6) is used for selecting the type of notification desired.

- The **E-mail** object is used to send an e-mail while the **Domovea pop-up** displays a window on the client.
- Tick the **E-mail** and **Domovea pop-up** boxes.



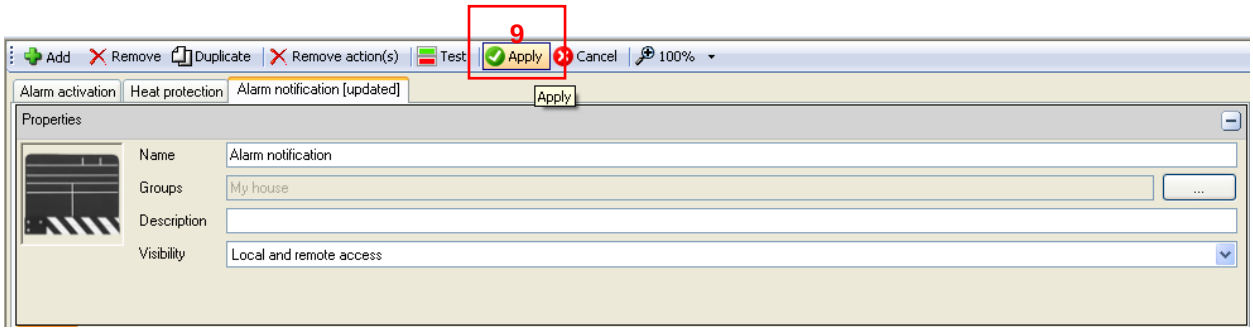
- Specify the e-mail recipient in the **Contacts** field (7).

The contacts available for selection must have been recorded previously when the server was being configured (see the domovea configuration documentation).



The **Time out** field (8) defines the period of time for which the notification will be displayed.

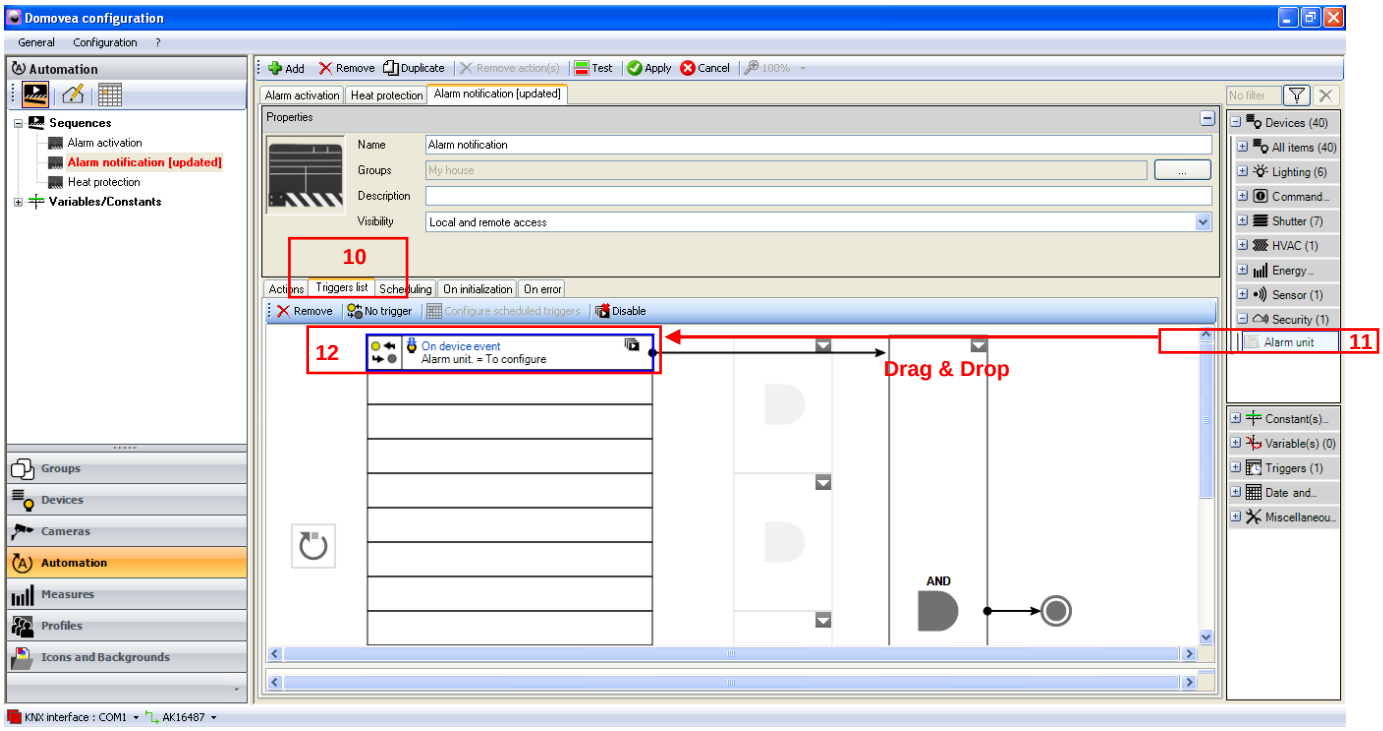
- Click on Apply (9) in the sequence tab to confirm the modifications.



- ***Adding a trigger***

To add a trigger:

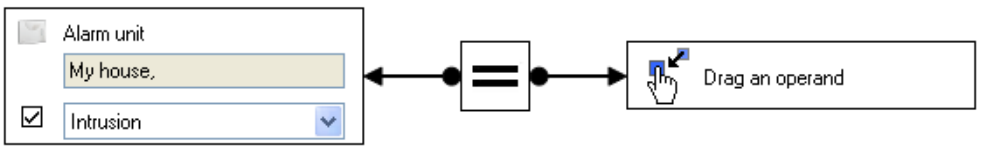
- Click on the **List of triggers** tab (10) in the list of tabs,
- Select **Alarm unit** from the list of devices (11),
- Drag and drop into a cell of the table (12).



The trigger operation appears in the lower part of the screen.

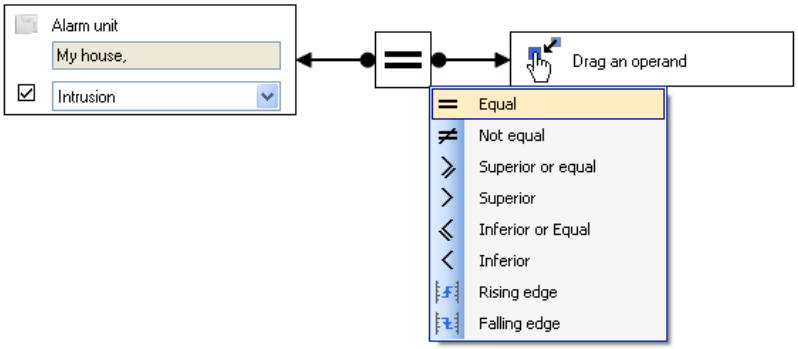
The left part of the operand is used for selecting the alarm states.

- In this example, you should select **Intrusion** from the drop-down menu.

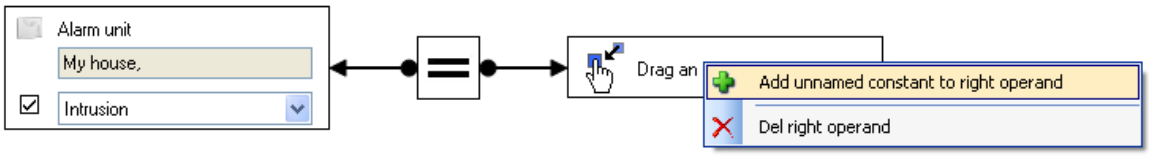


The middle part is used for defining the function sign.

- Select **the equals sign**.



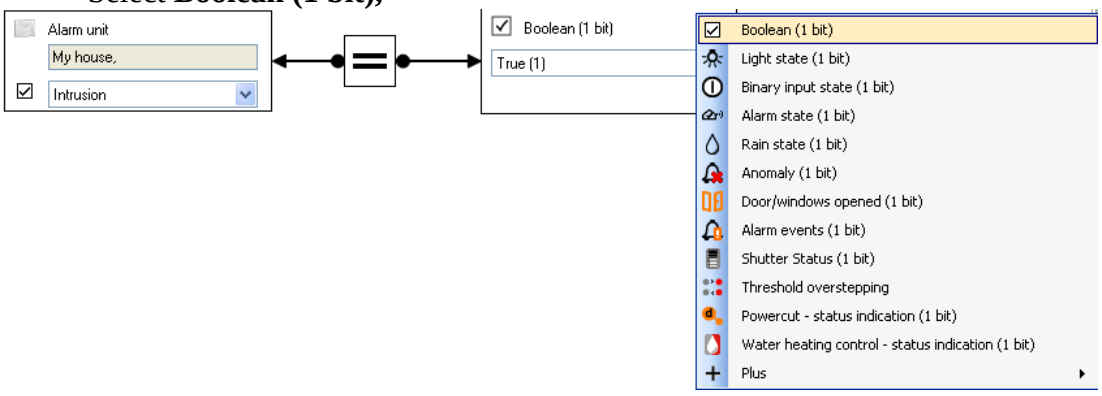
The right part of the operand is used to define the value at which the function is validated.
Right-click on this item and select **Unnamed constant**.



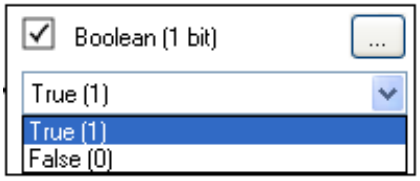
The user can define the format of this value using the dropdown menu below.

To define this format:

- Select **Boolean (1 bit),**



- Select **True (1)**.



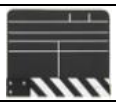
The **Alarm notification** scenario will be executed at the exact moment the alarm is triggered.

3.5 EXAMPLE 5: CAMERA IMAGE CAPTURE WHEN DOORBELL IS PRESSED

Level: Difficult

Uses: Actions, Triggers, Home Status, Notifications, Advanced functions

Sequence

A sequence is an ordered list of actions.	

Actions

An action consists of changing the status of a device. This action may be a moving a shutter, switching on lighting, modifying a thermostat's HVAC mode, or sending an e-mail.	 

Triggers

A trigger launches a sequence during a specific event.	

Home Status

Home Status is the general status of the home. It is possible to activate or deactivate sequences depending on their status.	

Notifications

The notifications tool allows an e-mail to be sent or an information window to be displayed on the client screen.	

Advanced functions

Advanced functions allow the user to add special tasks to a sequence. *This could be a formula for calculation, an If condition, sending a message, or sending a request via the web.*

The goal of this example is to have a camera capture an image when the doorbell is pressed if the Home Status is in **Short Absence** or **Long Absence** mode.

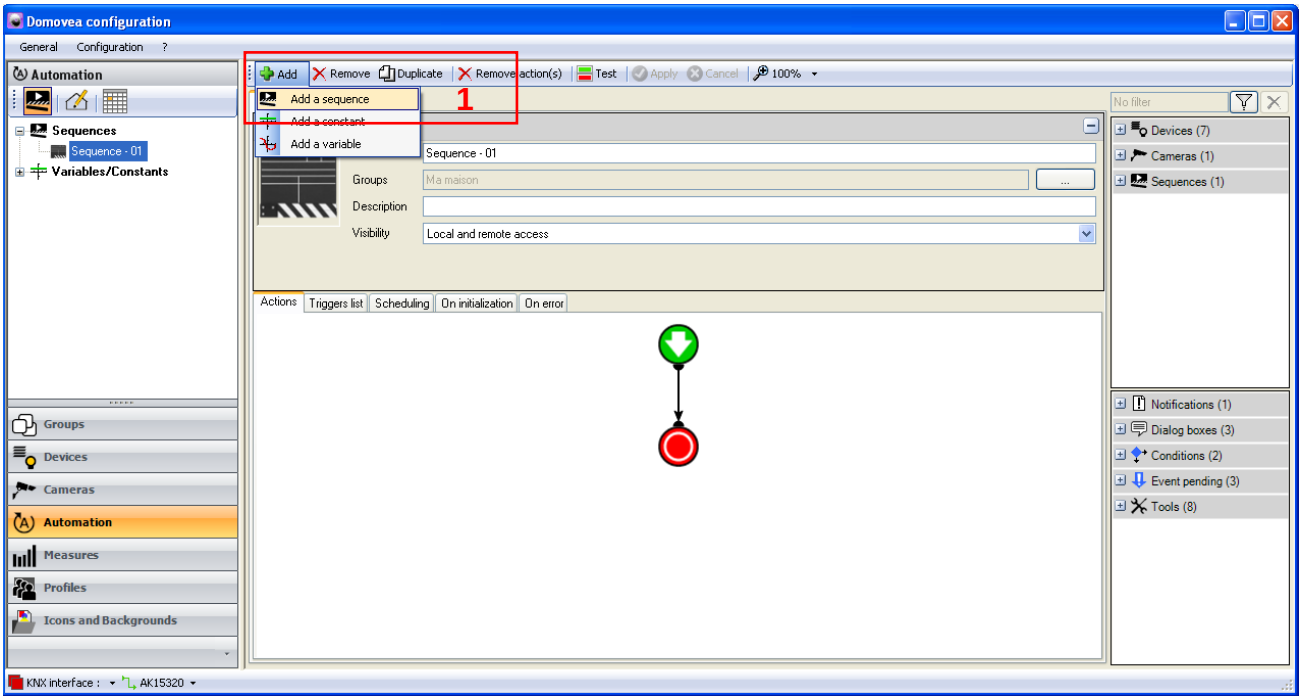
A notification including the camera image will also be displayed on the client screen.

The outdoor lighting will switch on for 1 minute 30.

- ***Creation***

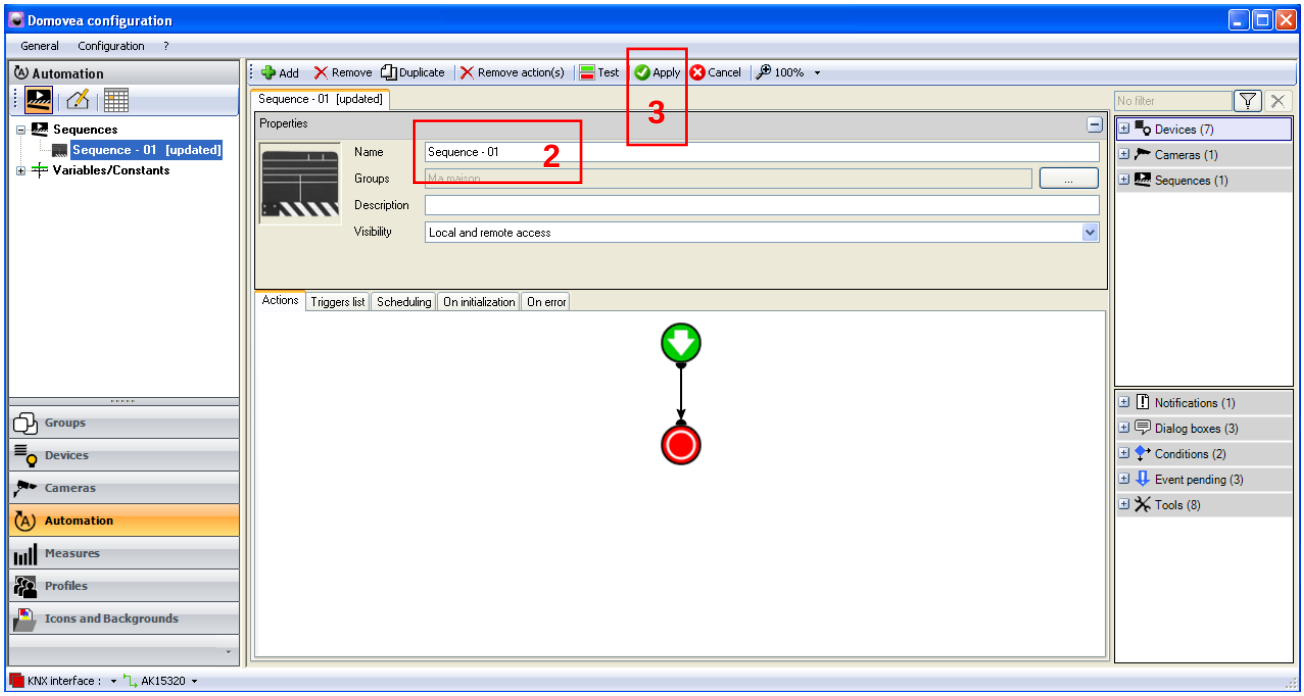
To create the **Camera image capture when doorbell is pressed** scenario:

- Click on Automation in the list of links,
- Click on **Add**, then **Add a sequence** (1) on the menu bar.



The sequence has been created and appears in the list of sequences. To make it clearer, it can be renamed by modifying the **Name** field (2).

- Enter the title **Camera image capture when doorbell is pressed**.
- Click on **Apply** (3) to confirm.



- ***Select devices***

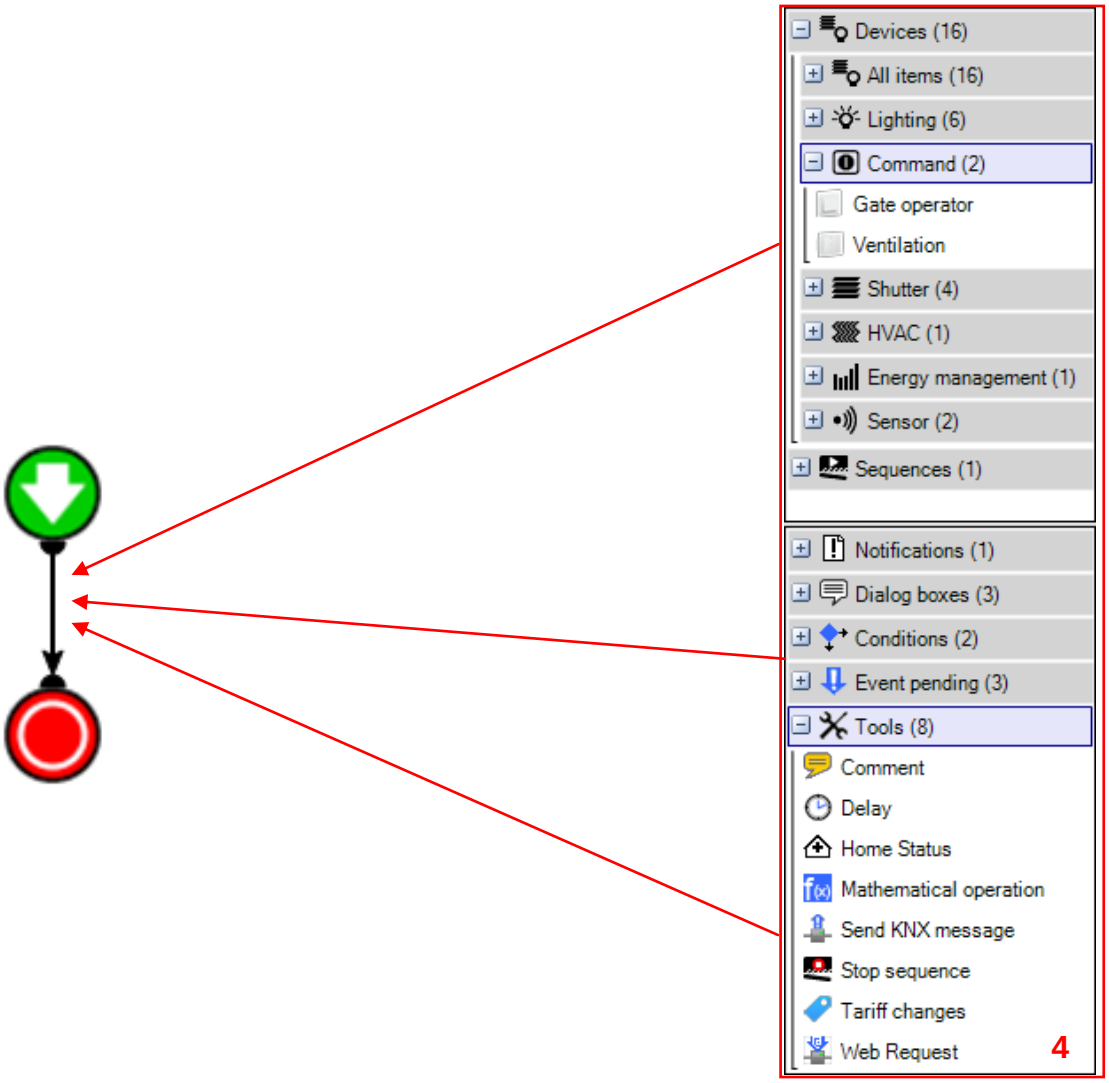
The next step is to select the devices to be set by this sequence.

To select the devices to be set:

- Select the devices from the list of devices and advanced functions (4) and drag and drop them into the body of the sequence.

In this application:

- Move the devices **Light - outdoor** and the advanced function **Send a notification**,
- Add a **Delay** tool and the device **Light - outdoor** again.

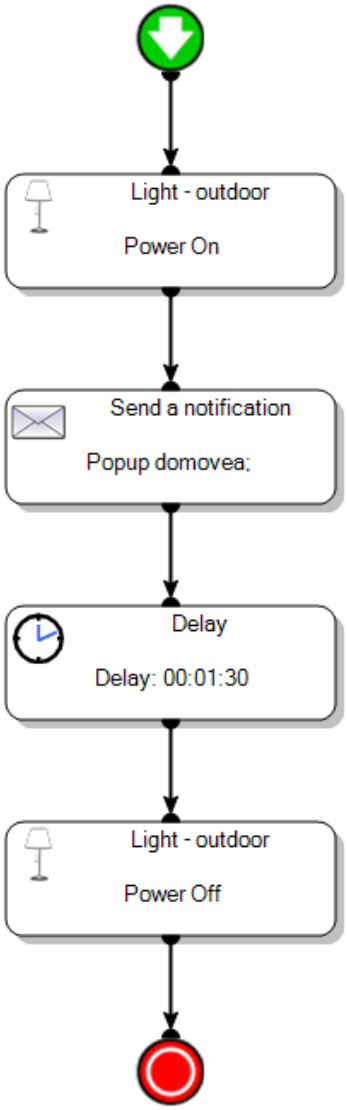


- ***Actions***

When the sequence is launched, the light will switch on and a notification will be sent on the client.

A set time will also be launched.

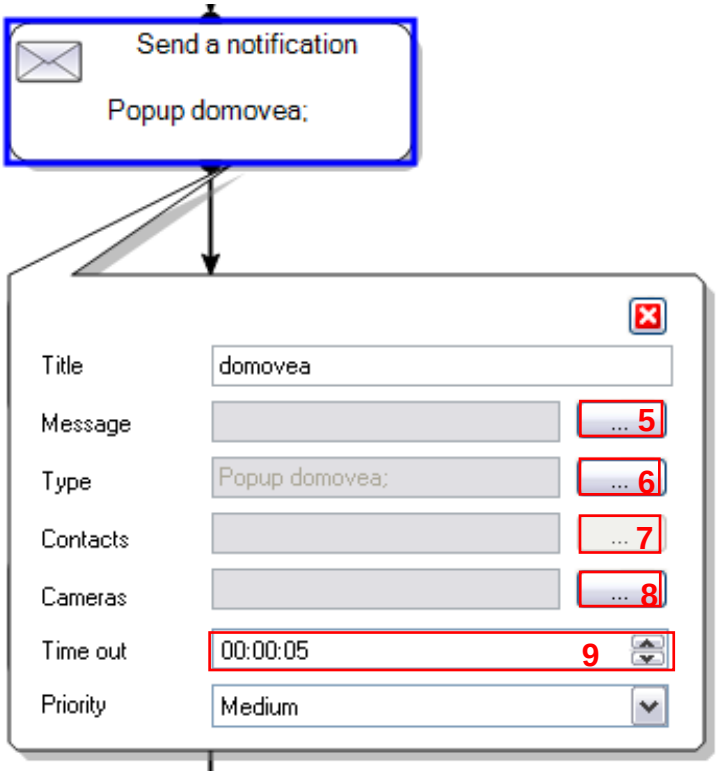
At the end of this set time, the light will switch off.



- ***Notification***

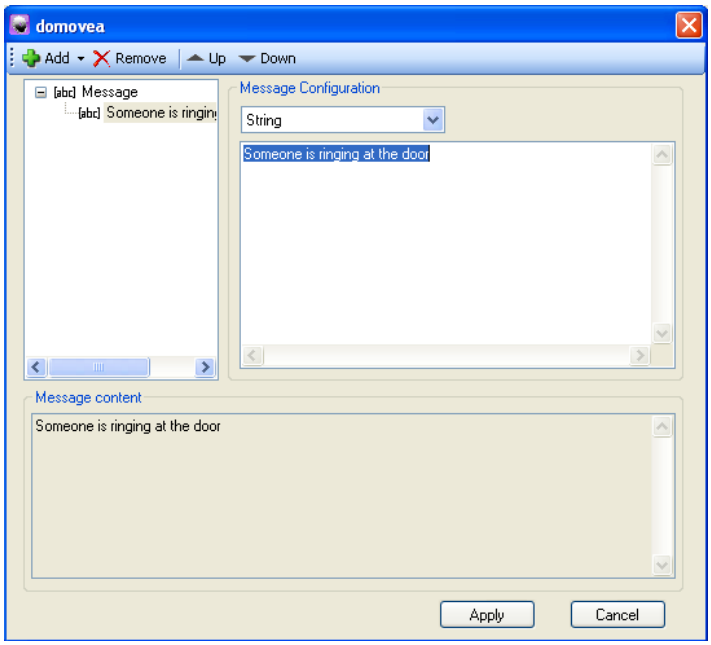
It is now necessary to define what will be sent in the notification.

Double-clicking on the **Send a notification** action opens its properties.



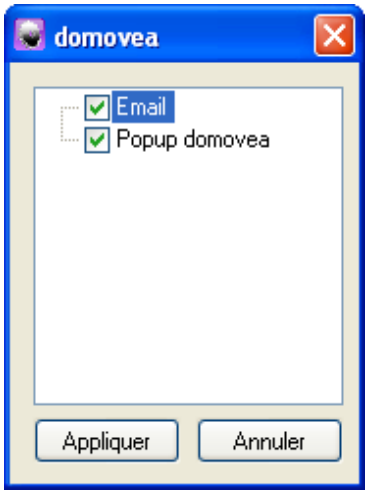
The **Message** field (5) allows the user to fill in the message to be displayed. To fill in this message:

- Click on button (5),
- Click on **Add**, then **String**,
- Enter the message that you wish to appear.



The **Type** field (6) allows the user to select the type of notification desired.

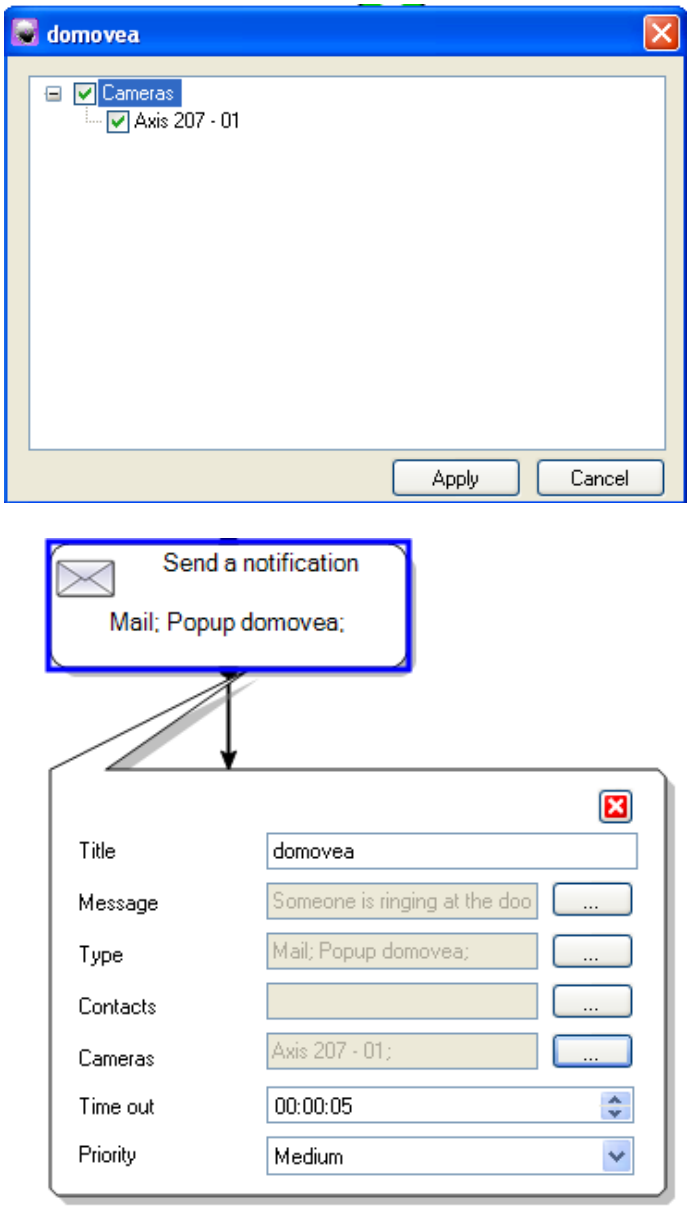
- The **E-mail** object is used to send e-mail when **Popup domovea** displays a window on the client.
- Tick the **E-mail** and **Popup domovea** boxes.



- Select the e-mail recipient in the **Contacts** field (7).

The contacts available for selection must have been recorded previously when the server was being configured (see the domovea configuration documentation).

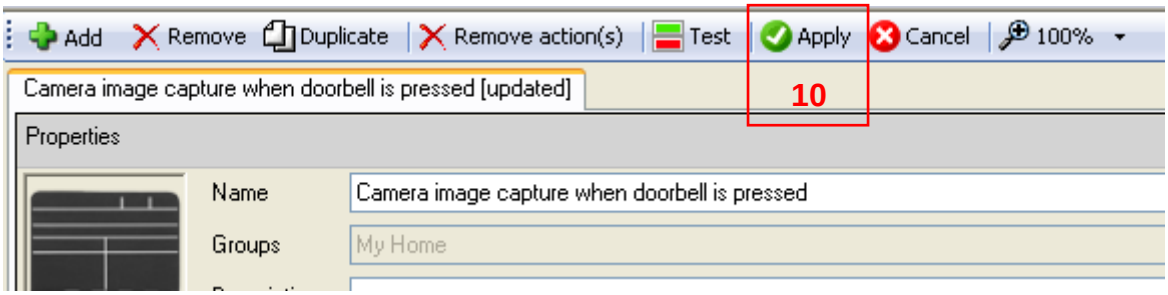
The **Cameras** field (8) allows the user to select the camera to be used for sending an image.



The **Time out** field (9) defines the period of time for which the notification will be displayed.

Therefore we have just created a notification that will display on the client and will e-mail an image from the **Entry camera**.

- Click on **Apply** (10) in the sequence tab to confirm the modifications.

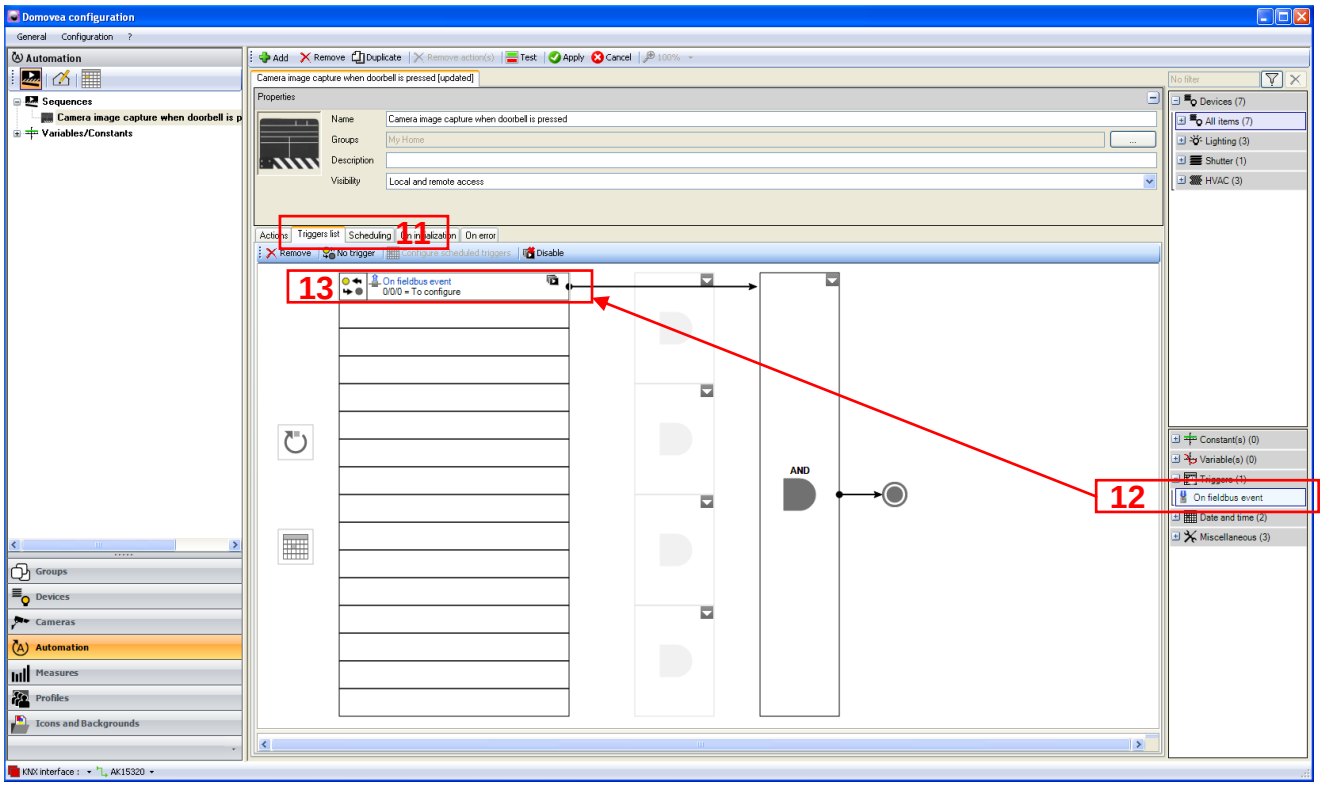


- ***Trigger***

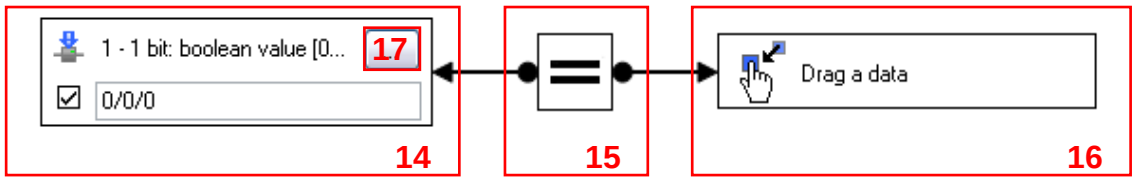
Now a trigger must be added to this sequence.

To add a trigger:

- Click on the **Triggers list** tab in the list of tabs (11),
- Select **On fieldbus event** (12) in the list of triggers as the bell is not given in the list of devices,
- Drag and drop into a cell of the table (13).



The trigger operation appears in the lower part of the screen.

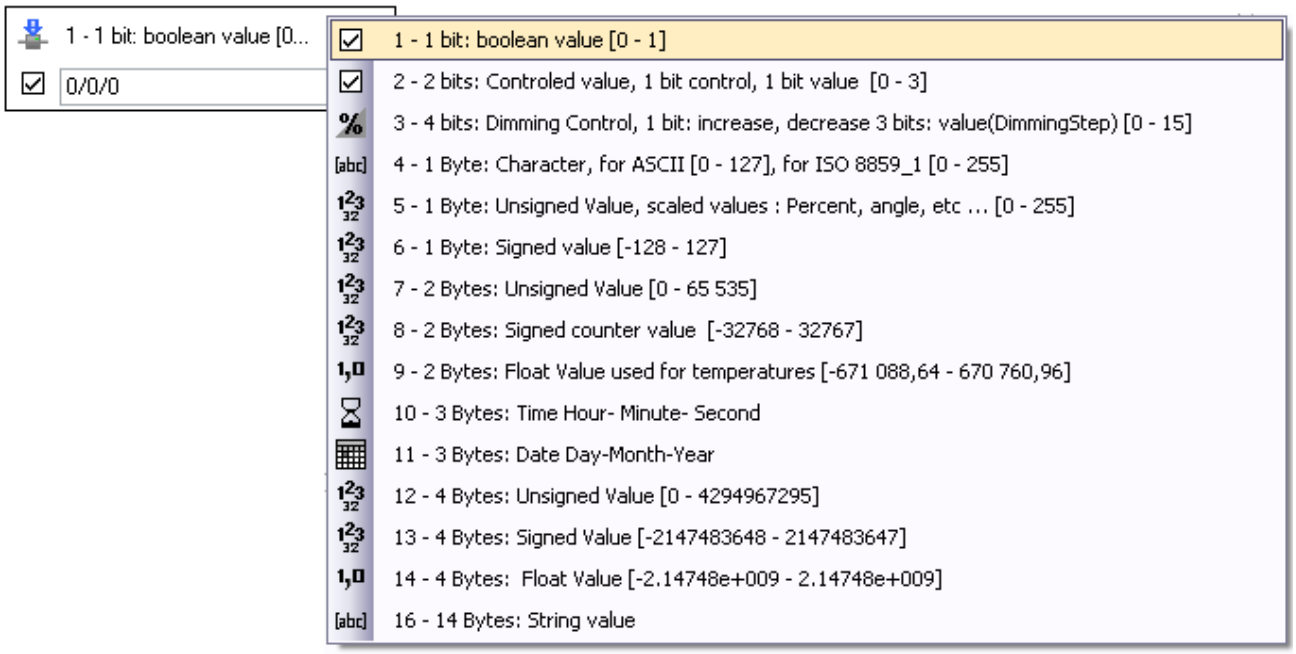


The left part of the operand (14) contains the address of the group that is to be used to launch the scenario.

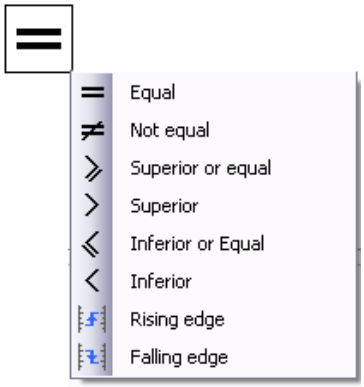
Pressing the button (17) allows the user to select the format for the address.

For a doorbell:

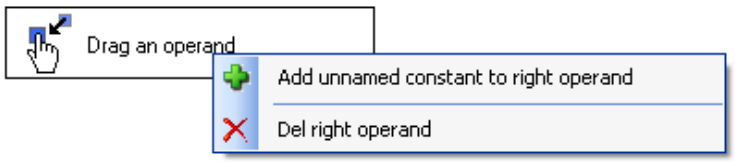
- Select the **1 bit** object: **boolean value [0 – 1]**,
- Then fill in the necessary part of the group's address (6/1/1 for example).



The middle part (15) allows the user to select the sign for the function.



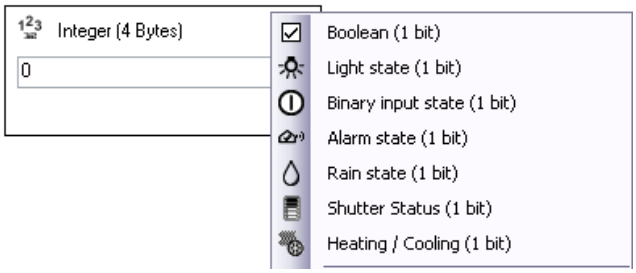
The right part of the operand (16) is used to define the value at which the function is validated. Right-click on this item and select **Unnamed constant**.



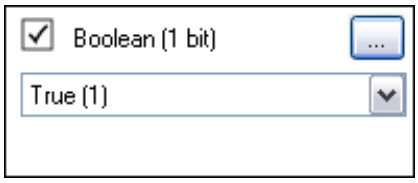
The user can define the format of this value using the dropdown menu below.

To define this format:

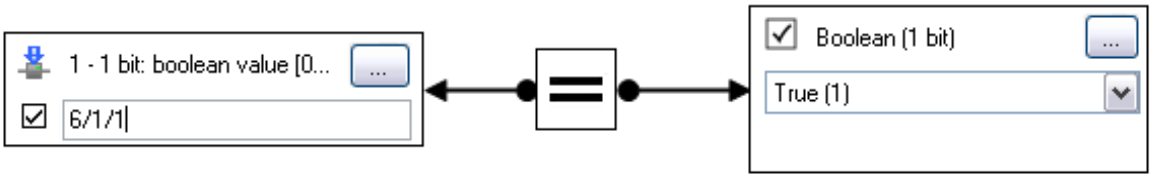
- Select **Boolean (1 bit)**,



- Select **True (1)**.



This function will be validated when the group address 6/1/1 (doorbell address) returns the value 1.



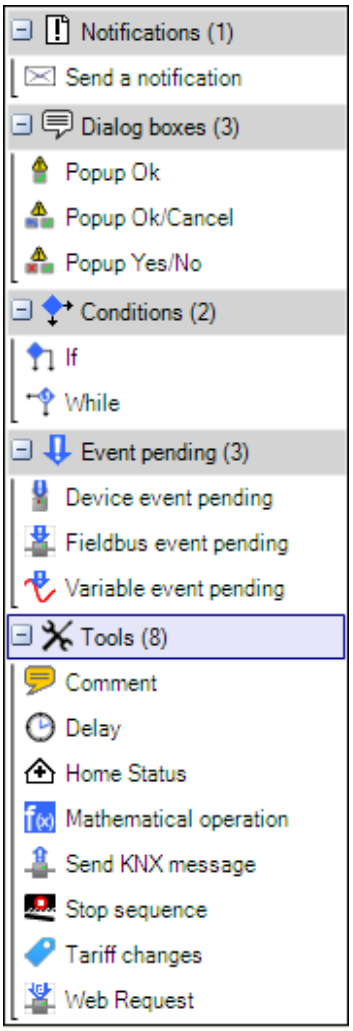
The **Camera image capture** scenario will be executed each time this function is validated; that is each time the doorbell is pressed.

4. ADVANCED FUNCTIONS

4.1 LIST OF ADVANCED FUNCTIONS

This section lists all the advanced functions available to the installer and user for creating various scenarios.

The parameters of each function are listed. In some cases, additional information is provided for better understanding.



4.1.1 NOTIFICATIONS

Allows an e-mail to be sent or an information window to be displayed on the client screen.

Send a notification:

Title: Enter the title of the notification

Message: Enter the message to be displayed.

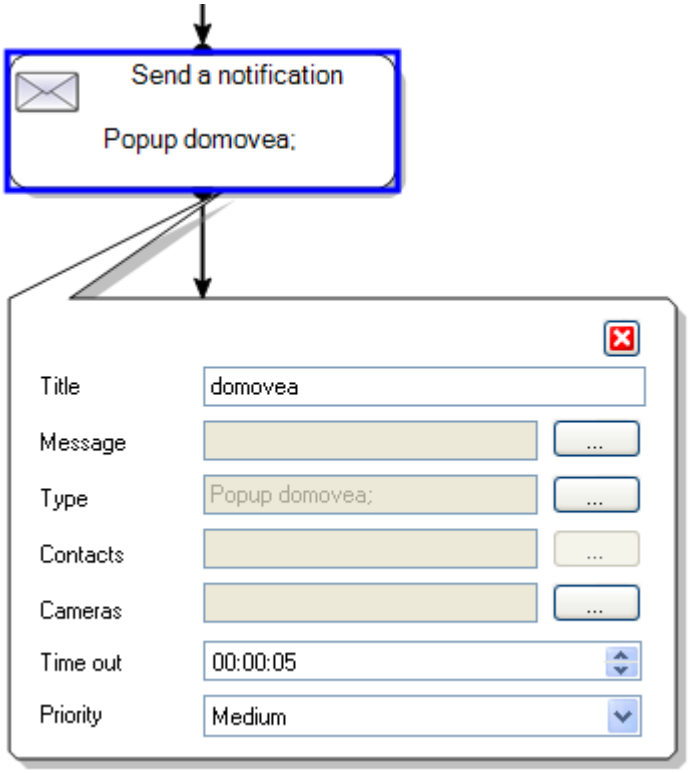
Type: Select the desired type of notification (E-mail or Popup domovea).

Contacts: Enter the e-mail recipient. The contacts available for selection must have been recorded previously when the server was being configured (see the domovea configuration documentation).

Cameras: Select the camera that is to send the image.

Time out: Set the period of time for which the notification will be displayed.

Priority: Three priority levels are available: *Low*, *Medium* or *High*.



4.1.2 DIALOG BOXES

Ok popup:

Displays a confirmation window on the client screen (***Ok***) associated with a message.

With this, the user can stop a sequence waiting for physical confirmation on the client.

Title: Enter the title of the notification

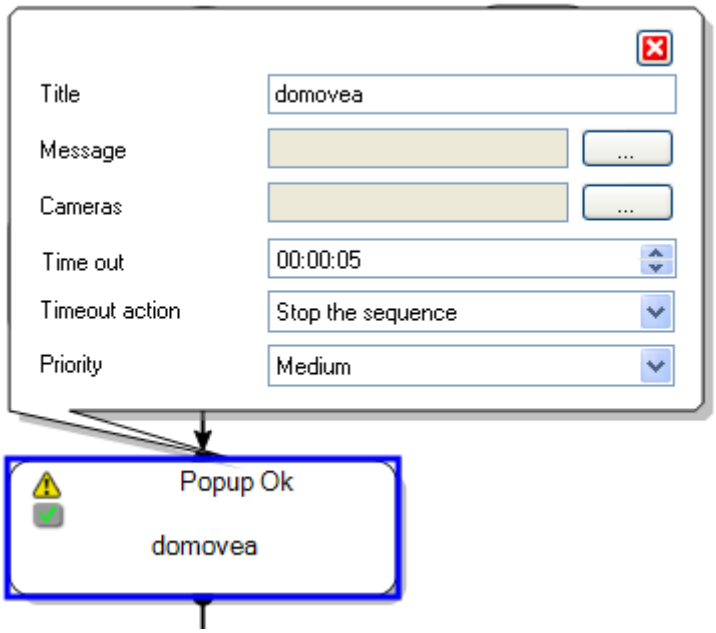
Message: Enter the message to be displayed.

Cameras: Select the camera that is to send the image.

Time out: Set the period of time for which the notification will be displayed.

Timeout action: Two actions are available: *Stop the sequence* or *Continue the sequence*.

Priority: Three priority levels are available: *Low*, *Medium* or *High*.

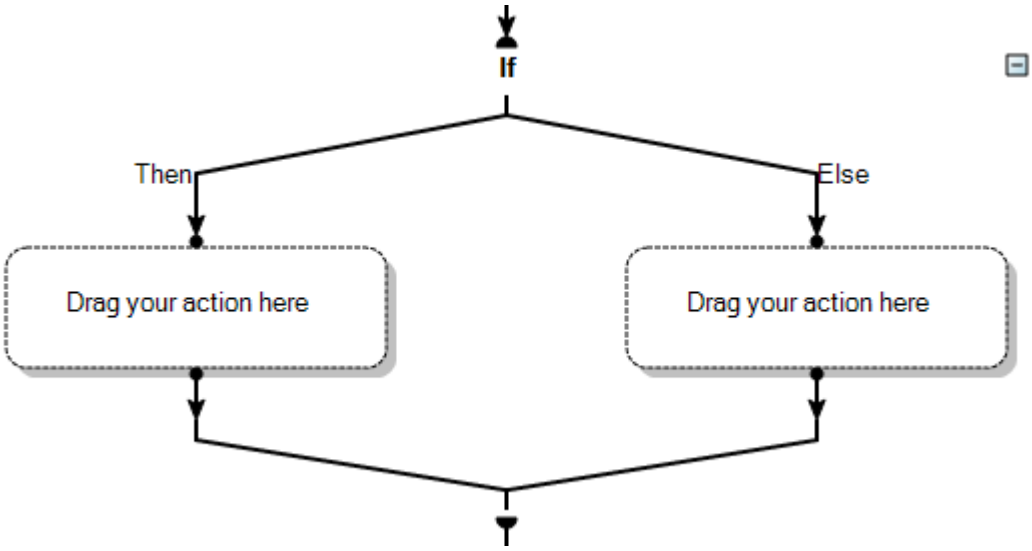


4.1.3 CONDITIONS

Allows the ***If*** and ***While*** functions to be added to a sequence.

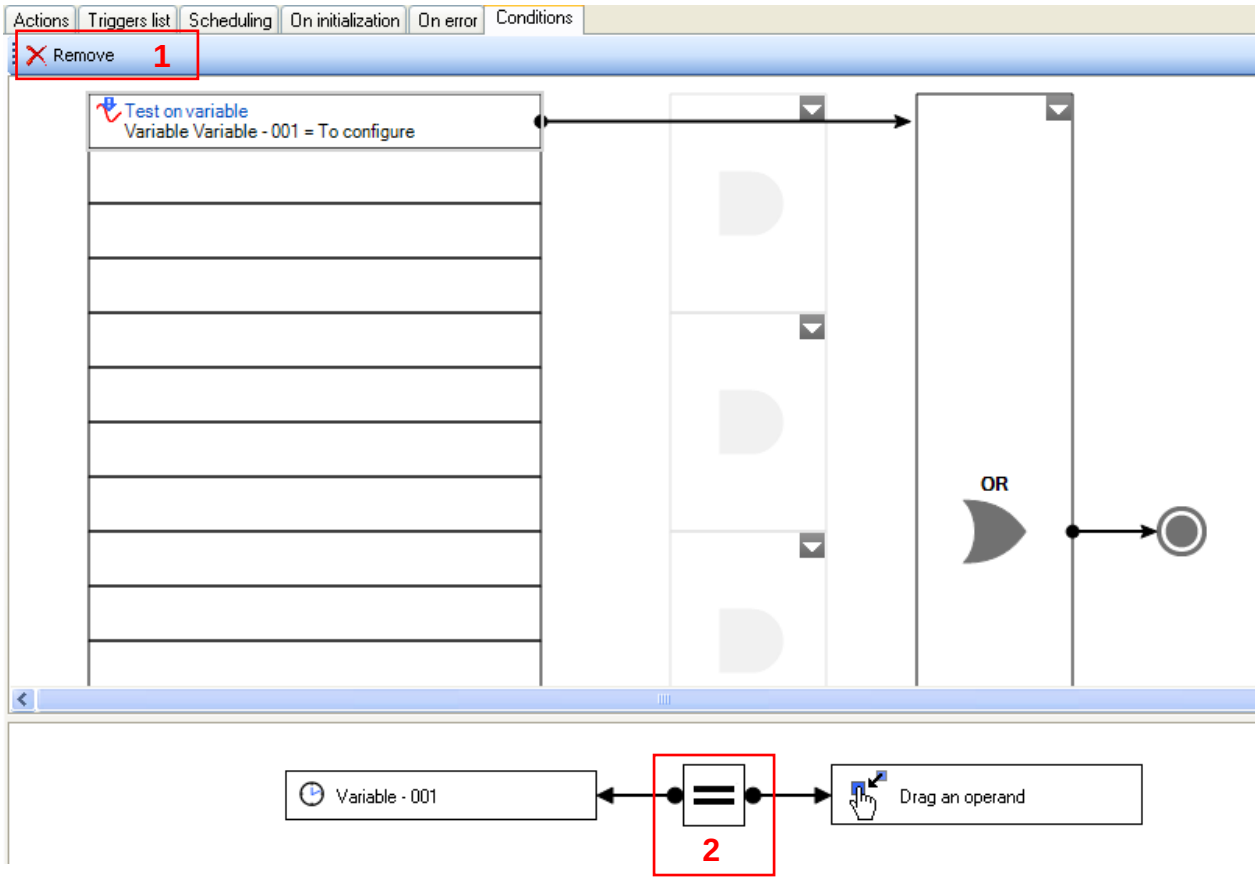
If condition:

The ***If*** condition creates a specific list of actions based on a condition.

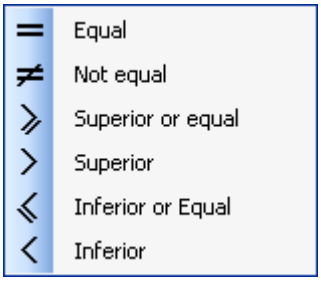


Click on **Yes** to define the condition.

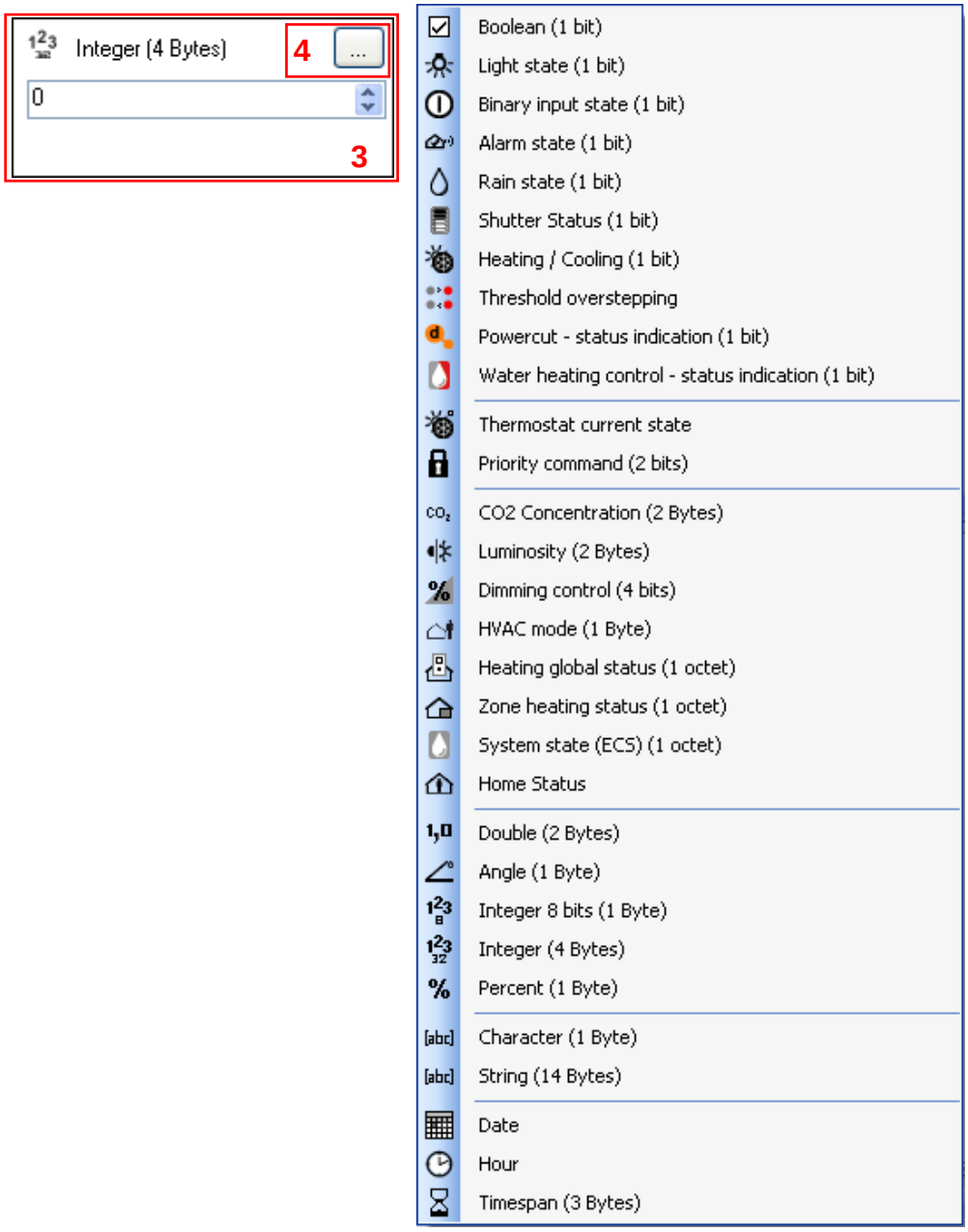
Remove *(1)*: Allows the user to delete the selected operand or logical operator.



Operator *(2)*: Allows the user to select the sign for the function (*Equal, Not equal, Superior or equal, Superior, Inferior or equal, or Inferior*).



Unnamed constant *(3)*: Different formats are available (4):



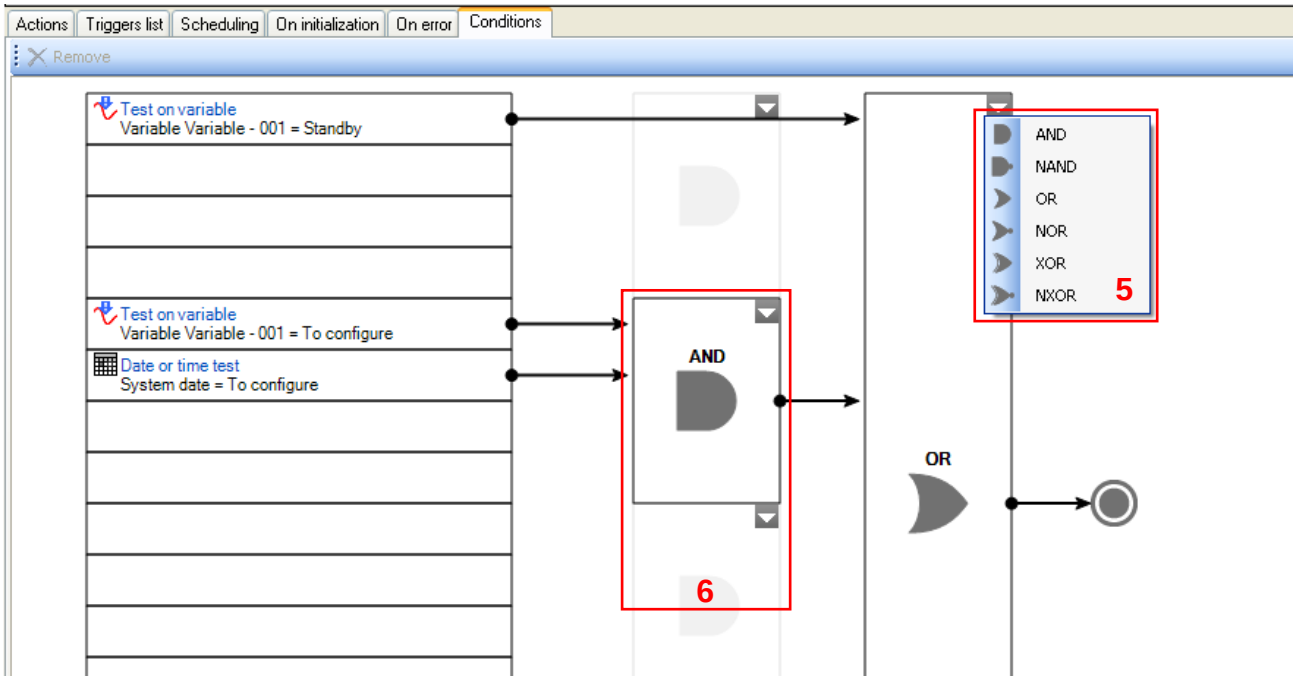
- ***Boolean (1 bit)***: *True (1)* or *False (0)*,
- ***Light state (1 bit)***: *Light on* or *Light off*,
- ***Binary input state (1 bit)***: *Active binary input* or *Inactive binary input*,
- ***Alarm state (1 bit)***: *Alarm active* or *Alarm inactive*,
- ***Rain state (1 bit)***: *Rain detected* or *Rain not detected*,
- ***Shutter status (1 bit)***: *Open* or *Closed*,
- ***Heating/Cooling (1 bit)***: *Cooling* or *Heating*,
- ***Threshold overstepping:*** *Alert* or *Normal*,
- ***Powercut – Status indication:*** *Enabled* or *Disabled*,
- ***Water heating control – Status indication:*** *Enabled* or *Disabled*,
- ***Thermostat current state:*** *Standby* or *Cooling* or *Heating*,
- ***Priority command (2 bits)***: *No priority command, Stop; No priority command, Run; Priority command, Stop or Priority command, Run*,
- ***CO2 Concentration (2 Bytes)***: *Very good quality air (less than 500 ppm), Good quality air (500 – 800 ppm), Air quality seems poor (800 – 1200 ppm), Area poorly ventilated (1200 – 1600 ppm) or Poor quality air (greater than 1600 ppm)*,
- ***Luminosity (2 Bytes)***: *Sunny (greater than 90000 lux), Partly cloudy (70000 - 90000 lux), Cloudy (25000 - 70000 lux), Rainy (3750 - 25000 lux), Room lit by sunlight (800 - 3750 lux), Neon lighting (500 - 800 lux), Chandelier lighting (200 - 500 lux), Light bulb (30 - 200 lux)* or *Dark (0 – 30 lux)*,
- ***Dimming control (4 bits)***: *Decrease 100%, Decrease 50%, Decrease 25%, Decrease 12%, Decrease 6%, Decrease 3%, Decrease 1%, Increase 100%, Increase 50%, Increase 25%, Increase 12%, Increase 6%, Increase 3%* or *Increase 1%*,
- ***HVAC mode (1 Byte)***: *Comfort mode, Economy mode, Reduced mode or Freeze protection/overheating protection mode*,
- ***Heating global status 1 octet)***: *Automatic, Short absence, Long absence, Holiday in reduced mode, Holiday in freeze-protection mode, Force freeze protection or Stop heating*,
- ***Zone heating status (1 octet)***: *Automatic, Exception, Scheduled exception, IRP absent, Reduced rate, Priority* or *Window open*,
- ***System state (ECS) (1 octet)***: *Automatic, Run exception*, or *Forced stop*,
- ***Home Status***: *At home, Short absence, Long absence, Surveillance, Night, Guest, Do not disturb*, or *Manual*,
- ***Double (2 Bytes)***
- ***Angle (1 Byte)***
- ***Integer 8 bits (1 Byte)***
- ***Integer (4 Bytes)***
- ***Percent (1 Byte)***
- ***Character (1 Byte)***: allows a single character to be entered,
- ***String (14 Bytes)***: allows 14 characters to be entered,
- ***Date***: *Date*, *A month* (January - December), *A year*, *Day of the week* (Monday - Sunday), *Day of the month* (1 - 31), *Day of the year* (1 - 365),

- ***Hour***
- ***Timespan***

Choice of logical connectors *(5):*

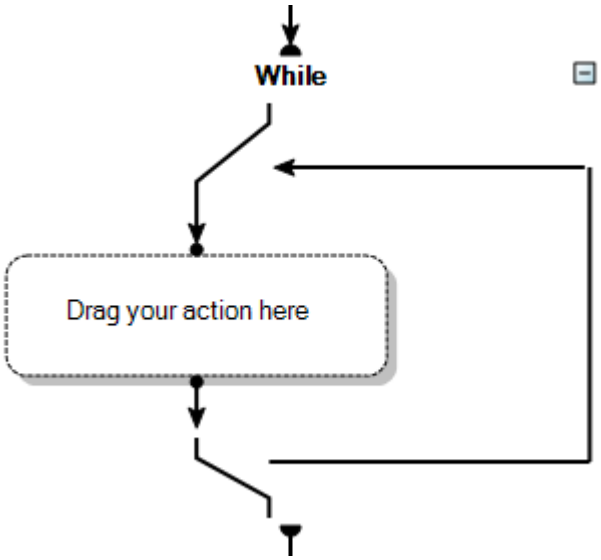
- ***AND:*** Allows the user to add an **AND** function to the condition. It returns a result with the value of 1 for two operands which can each have the value 1 or 0, only if both operands have the value 1.
- ***NAND:*** Allows the user to add a **NAND** function to the condition. It returns a result with the value of 1 for two operands which can each have the value 1 or 0, only if at least one of the two operands has the value 0.
- ***OR:*** Allows the user to add an **OR** function to the condition. It associates a result with the value of 1 to two operands which can each have the value 1 or 0, only if at least one of the operands has the value 1.
- ***NOR:*** Allows the user to add a **NOR** function to the condition. It returns a result with the value of 1 for two operands which can each have the value 1 or 0, only if both operands have the value 0.
- ***XOR:*** Allows the user to add an **XOR** function to the condition. It returns a result with the value of 1 for two operands which can each have the value 1 or 0, only if both operands have different values.
- ***NXOR:*** Allows the user to ad an **NXOR** function to the condition. It returns a result with the value of 1 for two operands which can each have the value 1 or 0, only if both operands have identical values.

Choice of a second logical connector *(6):* Allows the user to add a second level of condition using the same elements as previously described.



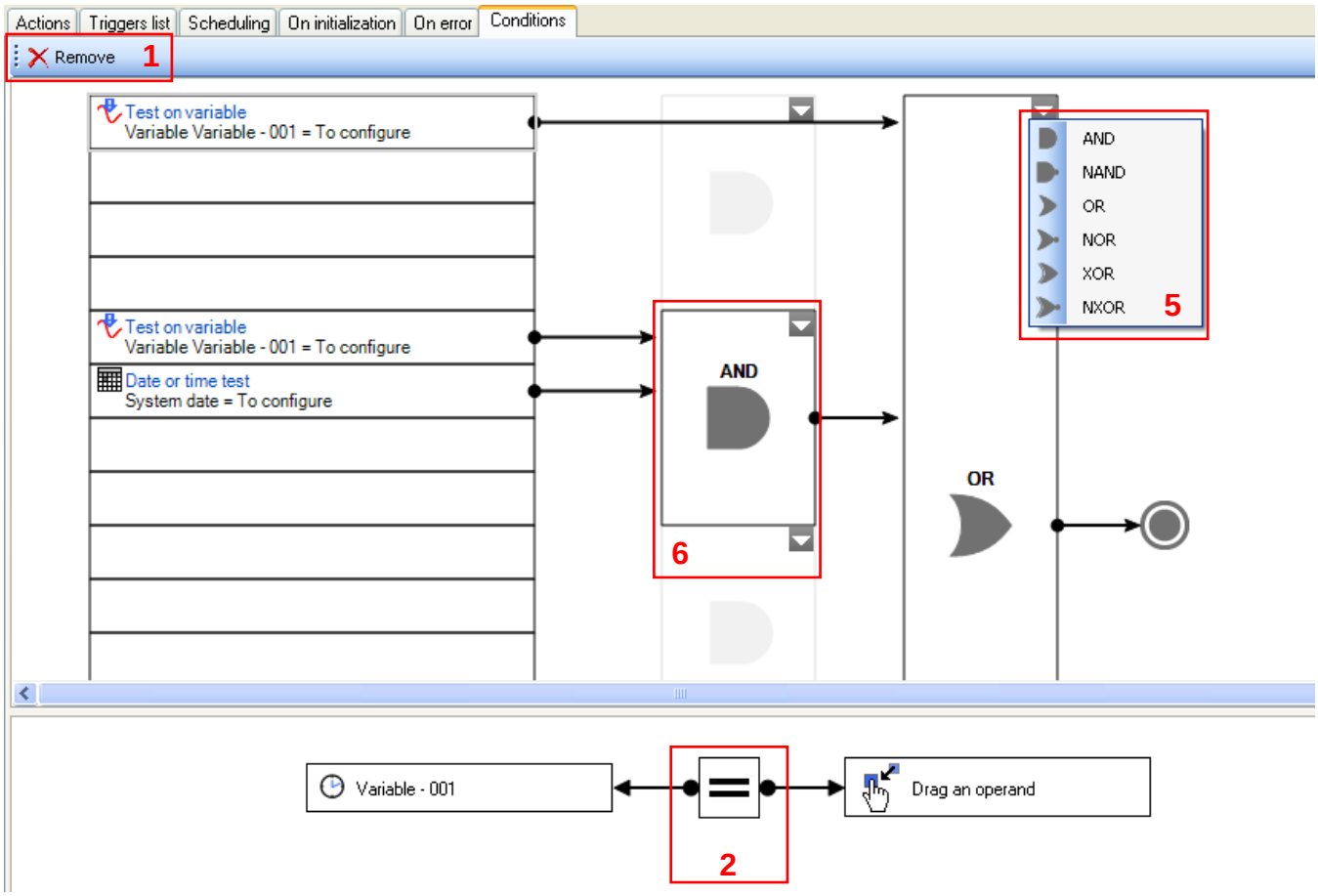
While Condition:

The ***While*** condition enables actions to be carried out while a condition is or is not being met.



Click on **While** to define the condition.

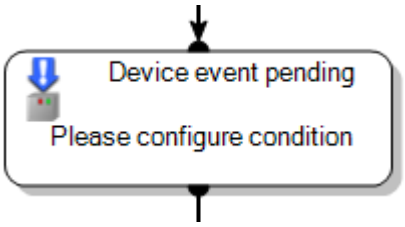
In this condition, we find the same item as in the ***If*** condition described previously.



4.1.4 ACTIVE TIME OUT

Allows the user to block a sequence and condition it to restart on an event.

Device event:

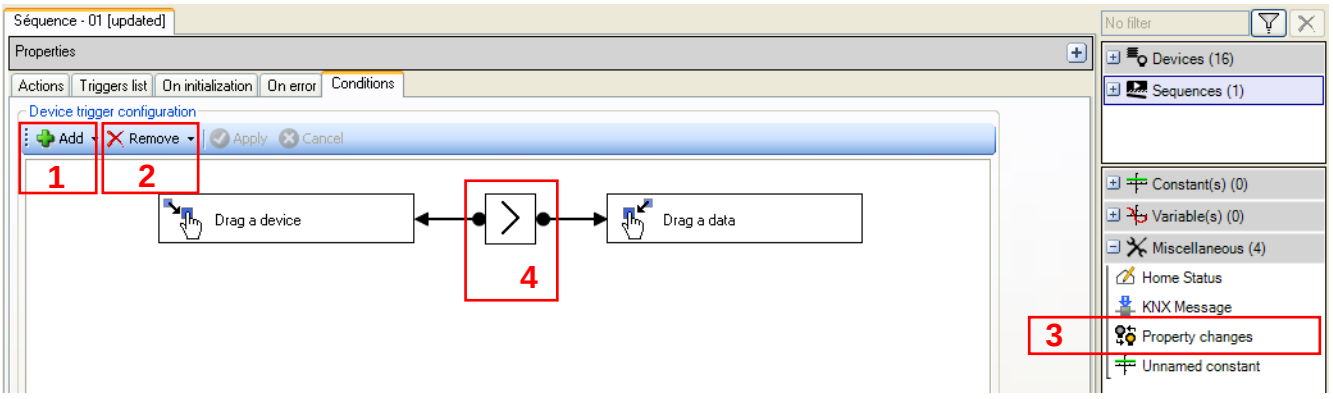


Add *(1)*: Allows a device to be added to the left of the operand and an unnamed constant to be added to the right of the operand.

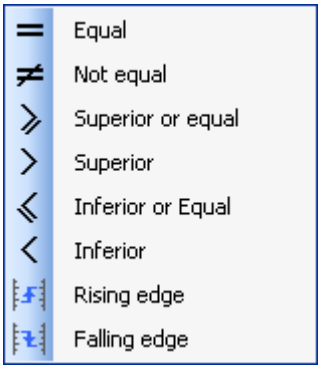
NOTE: See §.4.1.3 to view the various formats for unnamed constants.

Remove *(2)*: Allows the user to delete the left or right operand.

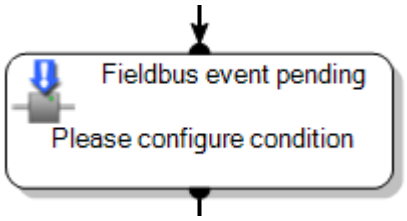
Property changes *(3)*: Enables the user to create a trigger, which will be launched each time the value of the property is changed.



***Operator** (4)*: Allows the user to select the sign for the function (*Equal, Not equal, Superior or equal, Superior, Inferior or equal, Inferior, Rising edge* (change from the binary value 0 to the binary value 1) or *Falling edge* (change from the binary value 1 to the binary value 0).



Fieldbus event:

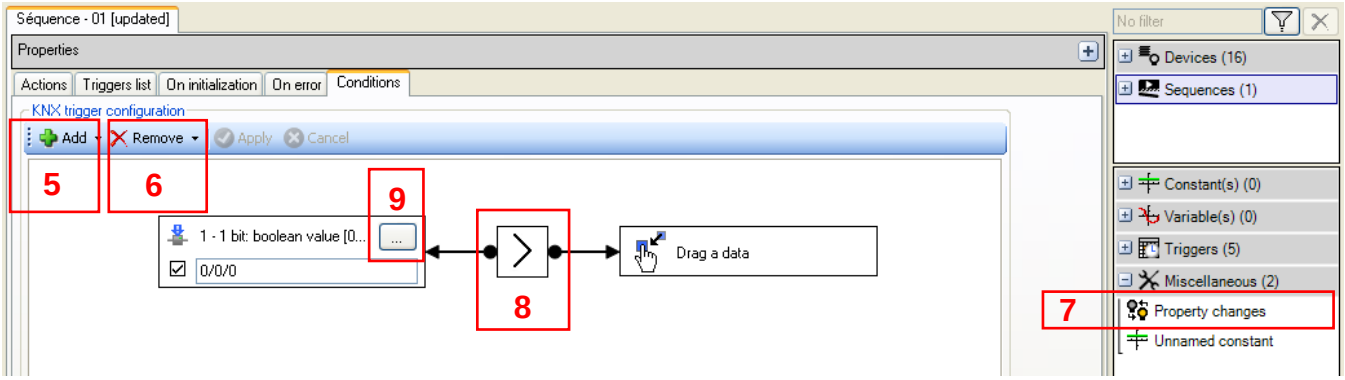


***Add** (5)*: Allows the user to add an unnamed constant to the right of the operand.

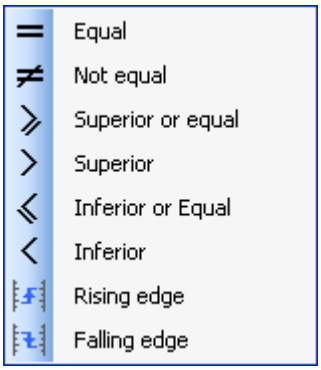
NOTE: See §.4.1.3 to view the various formats for unnamed constants.

***Remove** (6)*: Allows the user to delete the right operand.

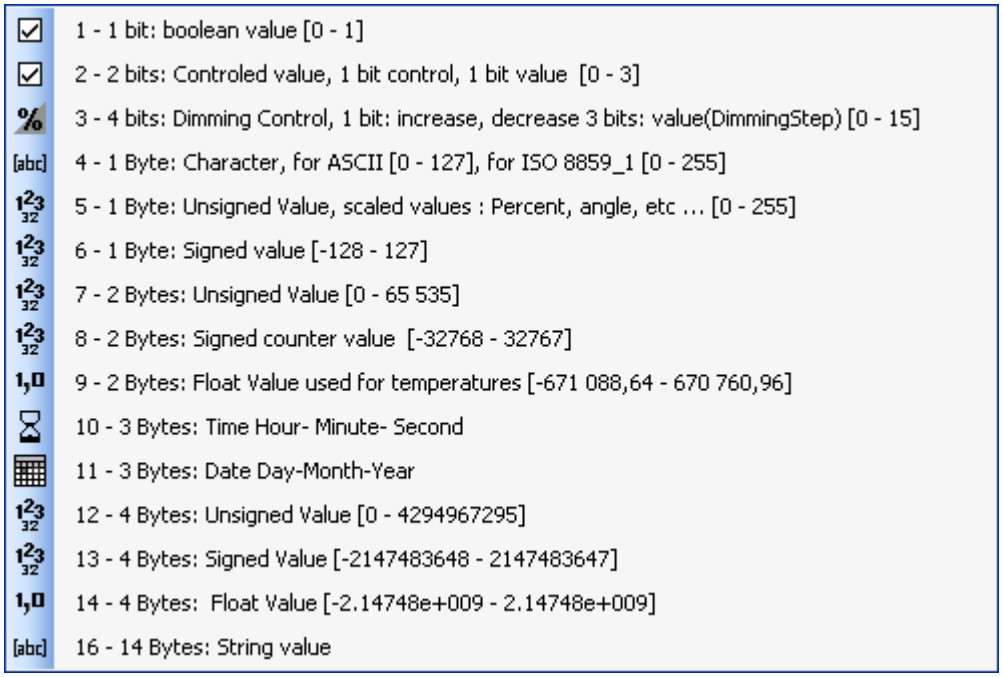
***Property changes** (7)*: Enables the user to create a trigger, which will be launched each time the value of the property is changed.



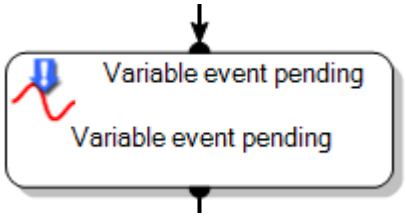
Operator *(8)*: Allows the user to select the sign for the function (*Equal, Not equal, Superior or equal, Superior, Inferior or equal, Inferior, Rising edge* (change from the binary value 0 to the binary value 1) or *Falling edge* (change from the binary value 1 to the binary value 0).



Format *(9)*: Allows the user to select the address format.



Variable event:

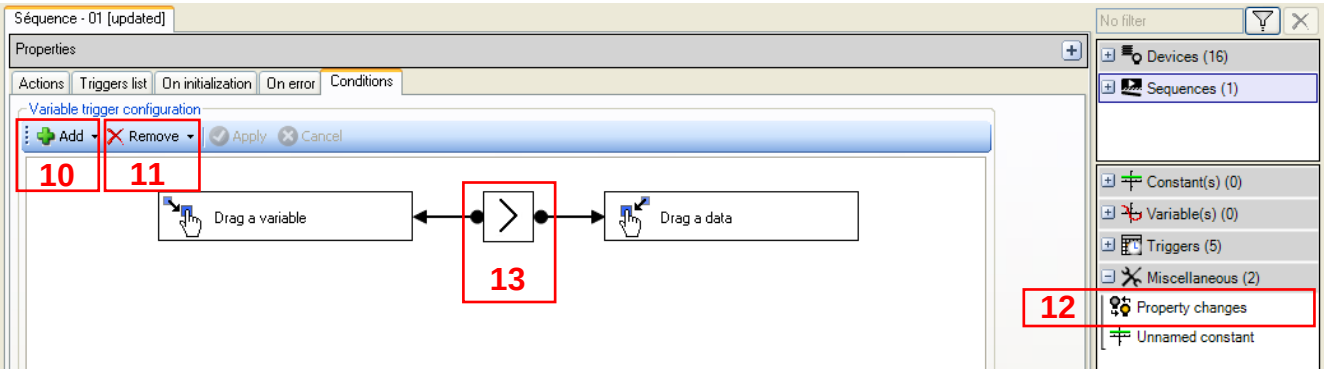


Add *(10)*: Allows the user to add an unnamed constant to the right of the operand.

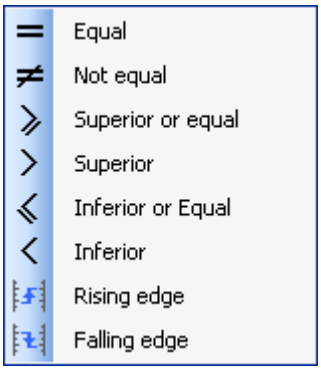
NOTE: See §.4.1.3 to view the various formats for unnamed constants.

Remove *(11)*: Allows the user to delete the left or right operand.

Property changes *(12)*: Enables the user to create a trigger, which will be launched each time the value of the property is changed.



Operator *(13)*: Allows the user to select the sign for the function (*Equal*, *Not equal*, *Superior or equal*, *Superior*, *Inferior or equal*, *Inferior*, *Rising edge* (change from the binary value 0 to the binary value 1) or *Falling edge* (change from the binary value 1 to the binary value 0).

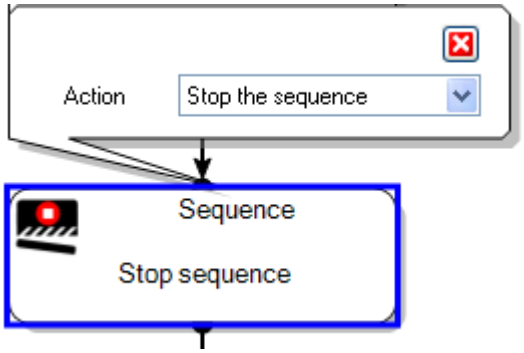


4.1.5 TOOLS

Stop the sequence:

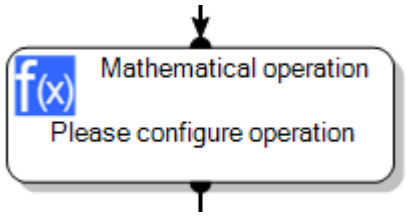
Stops a sequence.

Action: Two actions are available: *Stop the sequence* or *Play error sequence* (see §.4.5 – On error sequence).



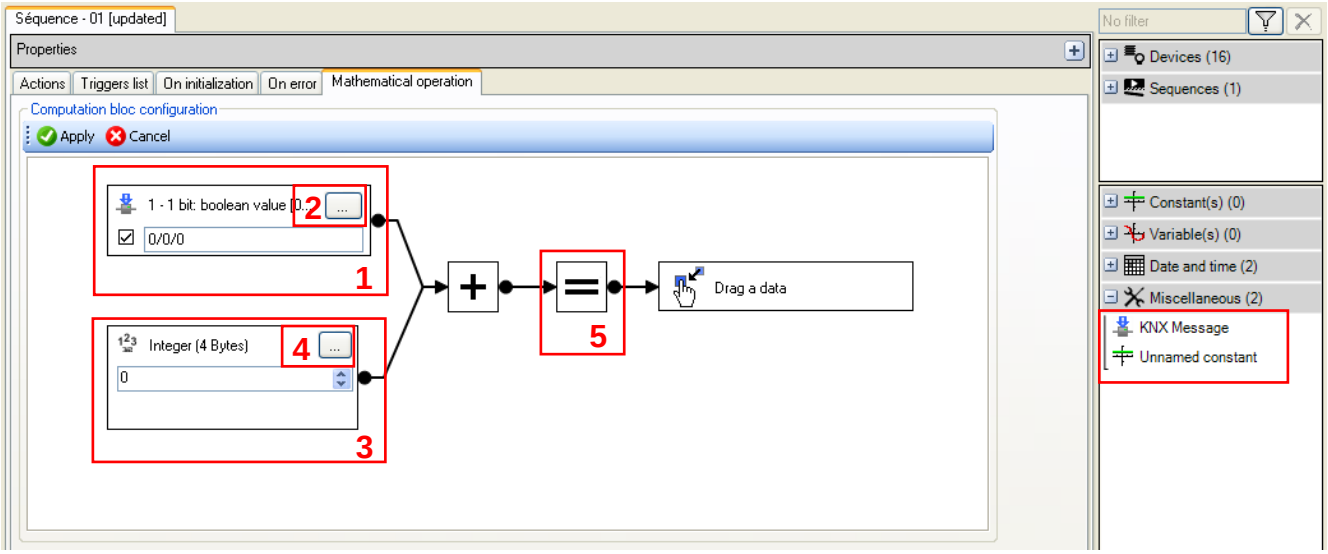
Mathematical operation:

Performs calculations. For example, this tool can calculate the average temperature in the house.

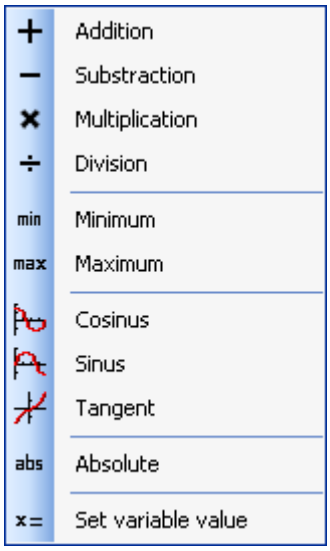


KNX Message *(1)*: See §.4.1.4 to view the various formats available (2).

Unnamed constant *(3)*: See §.4.1.3 to view the various formats available (4).

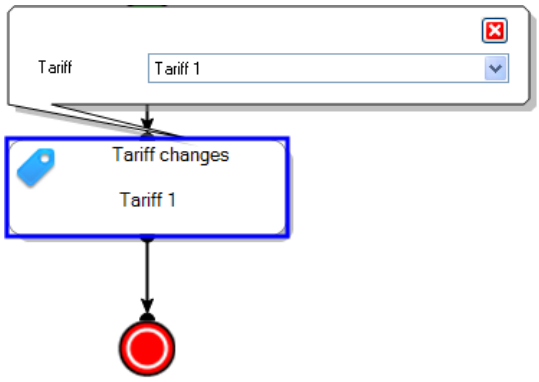


Operator *(5)*: Allows the user to select the sign for the mathematical operation (*Addition*, *Substraction*, *Multiplication*, *Division*, *Minimum*, *Maximum*, *Cosinus*, *Sinus*, *Tangent*, *Absolute* or *Set variable value*).



Tariff changes:

Allows the user to change the tariff for metering the electrical energy. This tariff change affects all metering devices present in domovea. The conditional list of tariff choices is dependent on the subscription type defined in the measurement function.



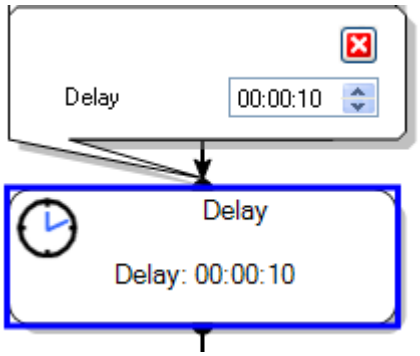
Comment:

Allows the user to add a comment to the sequence diagram.

Click on the window to enter the comment.

Delay:

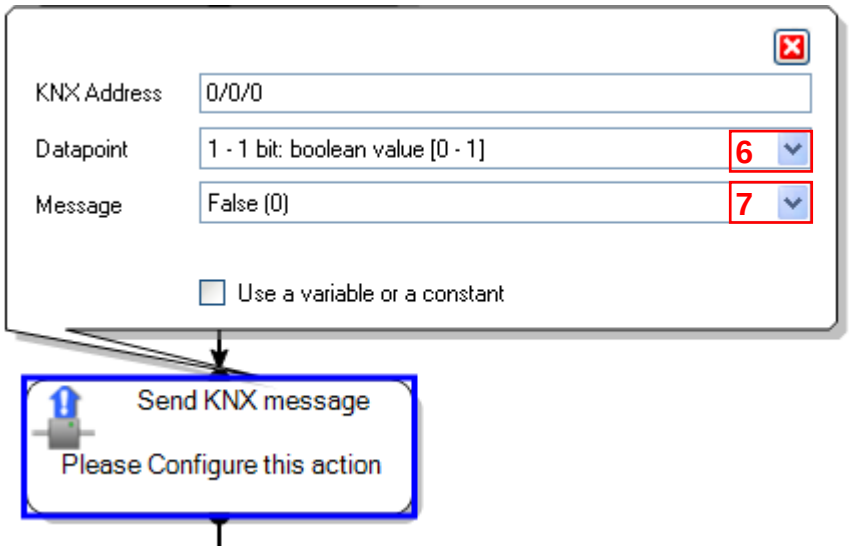
Allows the user to add a time out before the following actions are executed.



Send KNX message:

Enables a message to be sent over the KNX bus.

KNX Address: Allows the user to fill in the KNX address that this message concerns.



Datapoint: Allows the user to define the format of the message to be sent over the KNX bus.

Message: Allows the user to define the format of the message to be sent over the KNX bus.

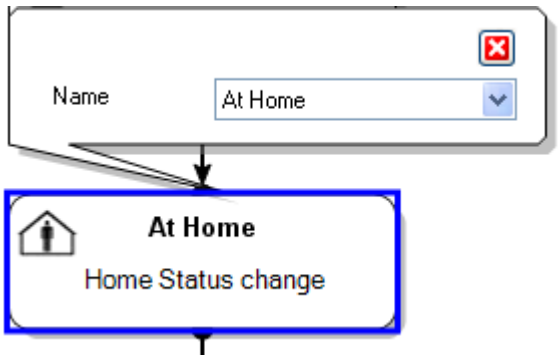
The following table lists all the formats available in the **Datapoint** Dropdown menu (6) with the related **Messages** (7):

Datapoint	Message
1 - 1 bit: Boolean value [0 – 1]	False (0) or True (1)
2 - 2 bits: Controlled value, 1 bit control, 1 bit value [0 - 3]	0 - 3
3 - 4 bits: Dimming control, 1 bit: Increase, decrease 3 bits: value [0 - 15]	Increase 100%, Increase 50%, Increase 25%, Increase 12%, Increase 6%, Increase 3%, Increase 1%, Decrease 100%, Decrease 50%, Decrease 25%, Decrease 12%, Decrease 6%, Decrease 3%, Decrease 1%
4 - 1 Byte: Character, for ASCII [0 - 127], for ISO 8859_1 [0 - 255]	
5 - 1 Byte: Unsigned value, scaled values: Percent, angle, etc … [0 - 255]	0 - 255
6 - 1 Byte: Signed value [-128 – 127]	-128 - 127
7 - 2 Bytes: Unsigned value [0 - 65 535]	0 - 65535
8 - 2 Bytes: Signed counter value [-32768 - 32767]	-32768 - 32767
9 - 2 Bytes: Float value used for temperatures [-671 088,64 - 670 760,96]	
10 - 3 Bytes: Time: Hour - Minute - Second	
11 - 3 Bytes: Date: Day - Month - Year	
12 - 4 Bytes: Unsigned value [0 - 4294967295]	0 - 4294967295
13 - 4 Bytes: Signed value [-2147483648 – 2147483647]	-2147483648 - 2147483647
14 - 4 Bytes: Float value [-2.14748e+009 - 2.14748e+009]	-2.14748e+009 - 2.14748e+009
16 - 14 Bytes: String value	14 characters

Home Status:

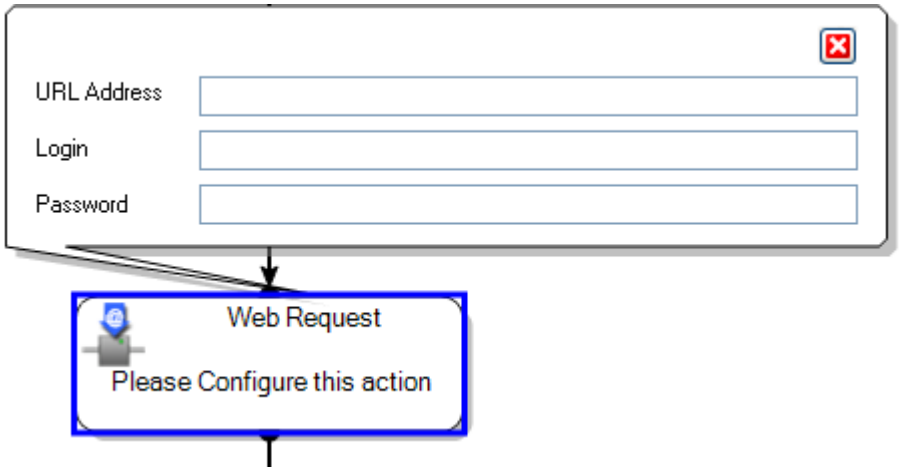
Changes the current Home Status.

Name: Eight statuses are available: *At home, Short Absence, Long Absence, Surveillance, Night, Guest, Do not disturb*, or *Manual*.



Web request:

Allows a web request to be made to pilot an item supporting this type of protocol.

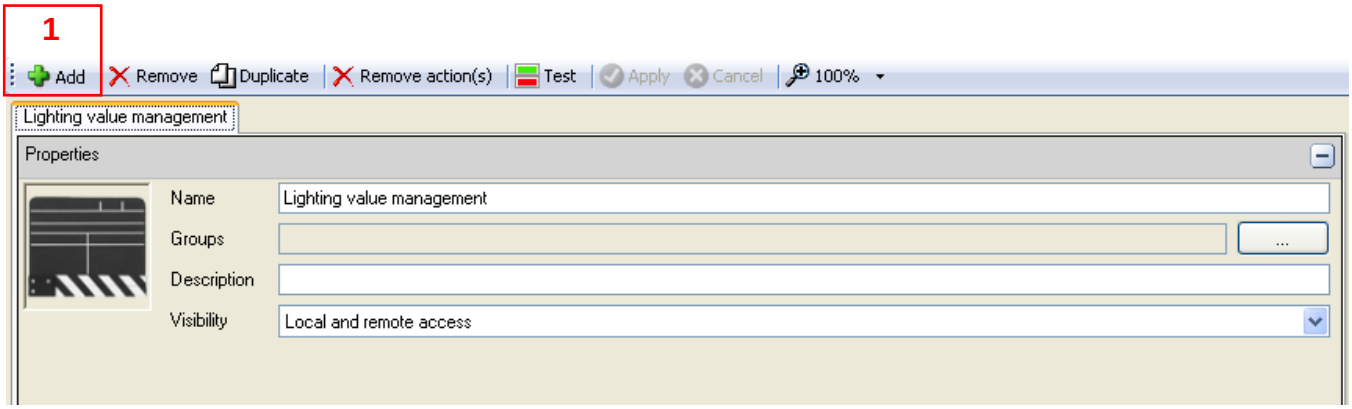


4.2 CONSTANT/VARIABLE

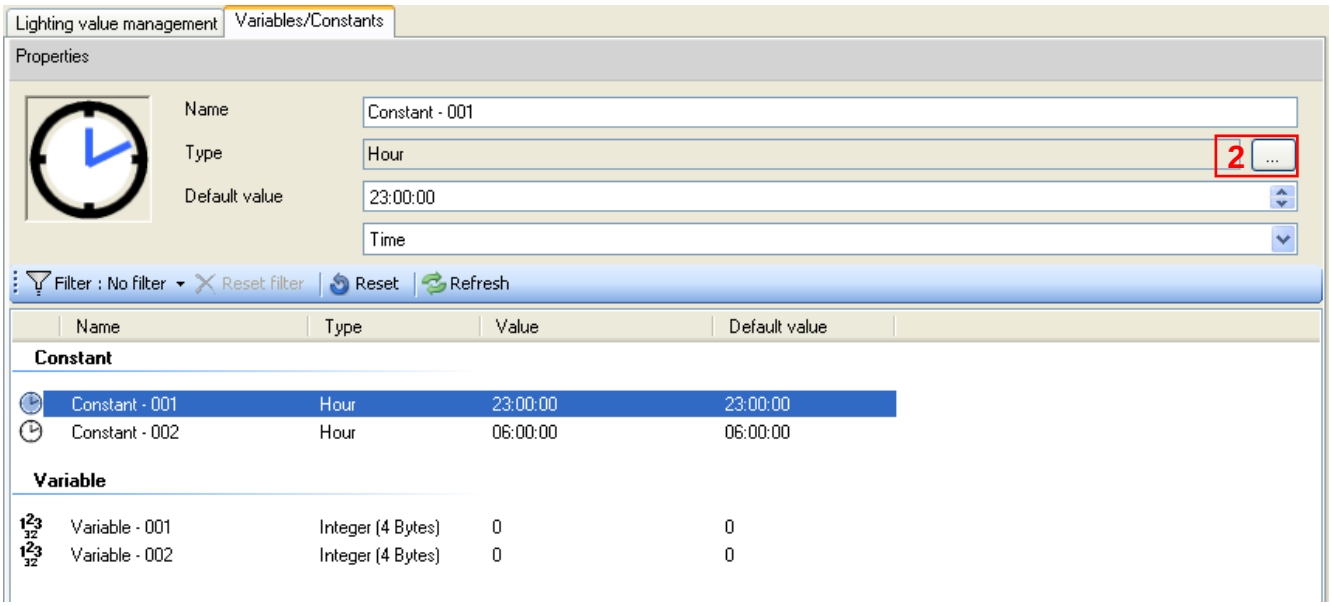
Add a constant:

A constant is a preset value that cannot be changed by the client. It can be used in multiple sequences.

To add a constant, click **Add** (1), then select **Add a constant** in the menu bar.



Type: See §.4.1.3 to view the different formats (2).



Default value: The default value differs according to the type of constant chosen

Example:

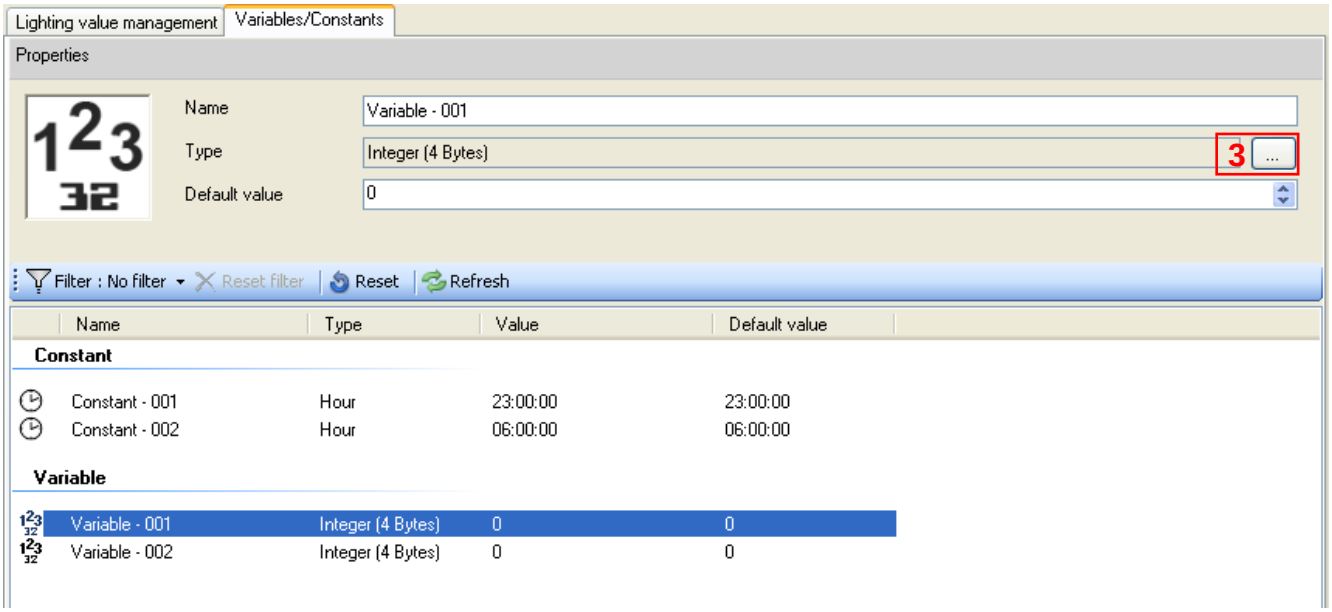
- ***Light status (1 bit):*** *Light on or Light off;*
- ***Shutter status (1 bit):*** *Open or Closed.*

Add a variable:

A variable is linked to an object or a device, it takes a value and modifies it each time the relevant device or object is modified.

To add a variable, click **Add** (1), then select **Add a variable** in the menu bar.

Type: See §.4.1.3 to view the different formats (3).



Default value: The default value differs according to the type of variable chosen

Example:

- ***Light status (1 bit)***: *Light on* or *Light off*;
- ***Shutter status (1 bit)***: *Open* or *Closed*.

NOTE: See §.3.6 (example 6) to set the value of a variable.

4.3 LIST OF TRIGGERS

A trigger launches a sequence during a specific event.

To add a trigger:

- Click on the **Triggers list** tab (1) in the list of tabs,

For the triggers: On **device event** (2), On **variable event** (3) or On **fieldbus event** (4):

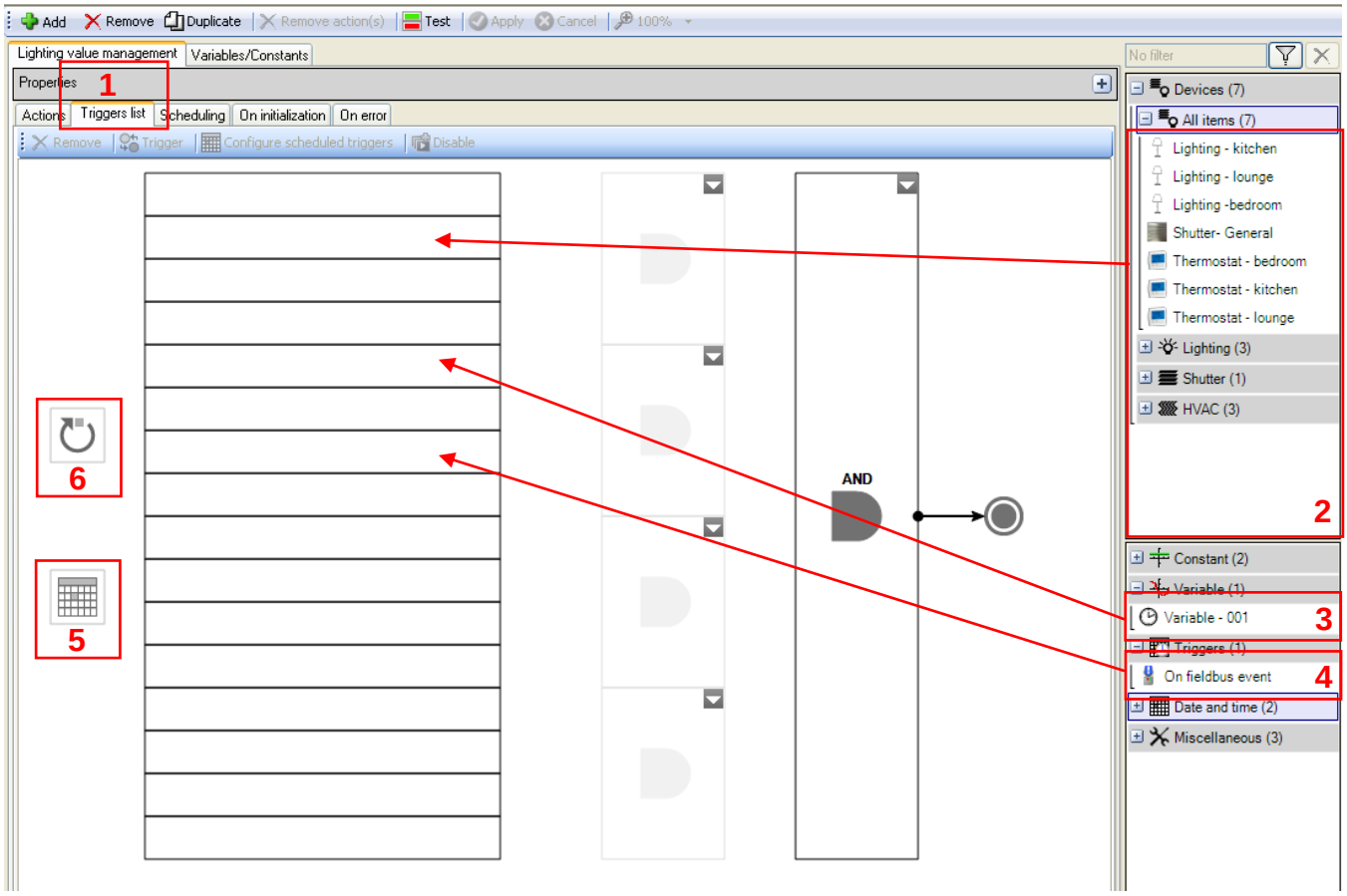
- Select the element and drag and drop it into one of the cells of the table.

For a **Scheduled** trigger:

- Double click on the icon (5).

For a **Cyclic** trigger:

- Click on the icon (6)



- **On device event**

Allows a sequence to be launched at the time a device changes its state.

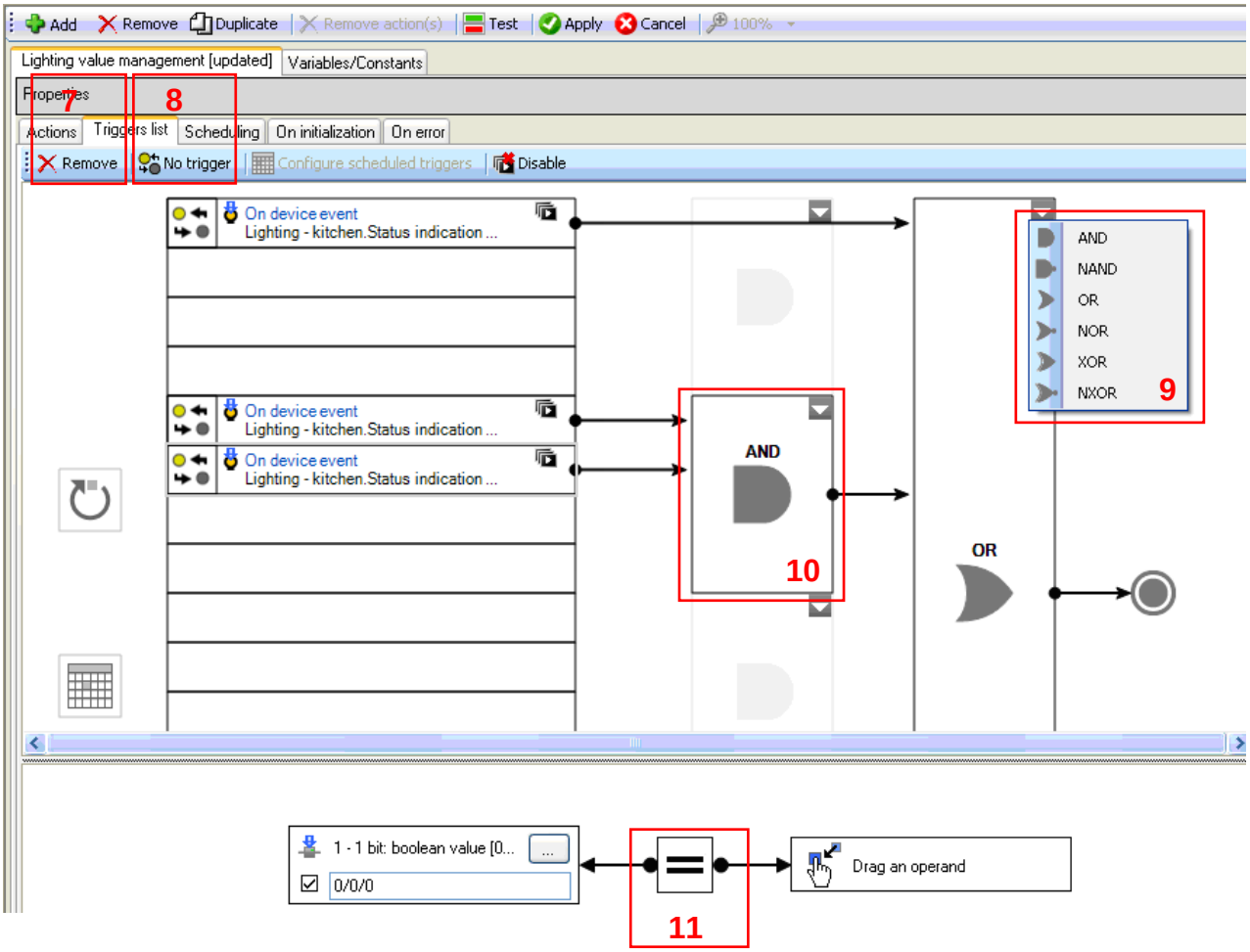
Example: Lower the shutters if the outdoor temperature sensor detects a temperature below 32°C.

Remove *(7)*: Allows the user to remove the selected device or logical operator.

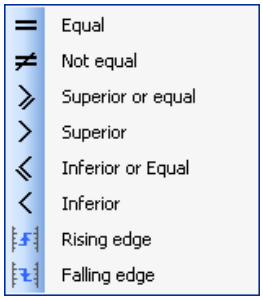
No trigger *(8):* Enables the user to create a trigger, which will be launched each time the value of the property is changed.

Choice of logical connectors *(9) (10):* Allows the user to add one or more logical operators.

NOTE: See §.4.1.3 to view the various formats for unnamed constants.



Operator *(11)*: Allows the user to select the sign for the function (*Equal*, *Not equal*, *Superior or equal*, *Superior*, *Inferior or equal*, *Inferior*, *Rising edge* (change from the binary value 0 to the binary value 1) or *Falling edge* (change from the binary value 1 to the binary value 0).



- **On fieldbus event**

Launches a sequence when a selected value on the bus is read.

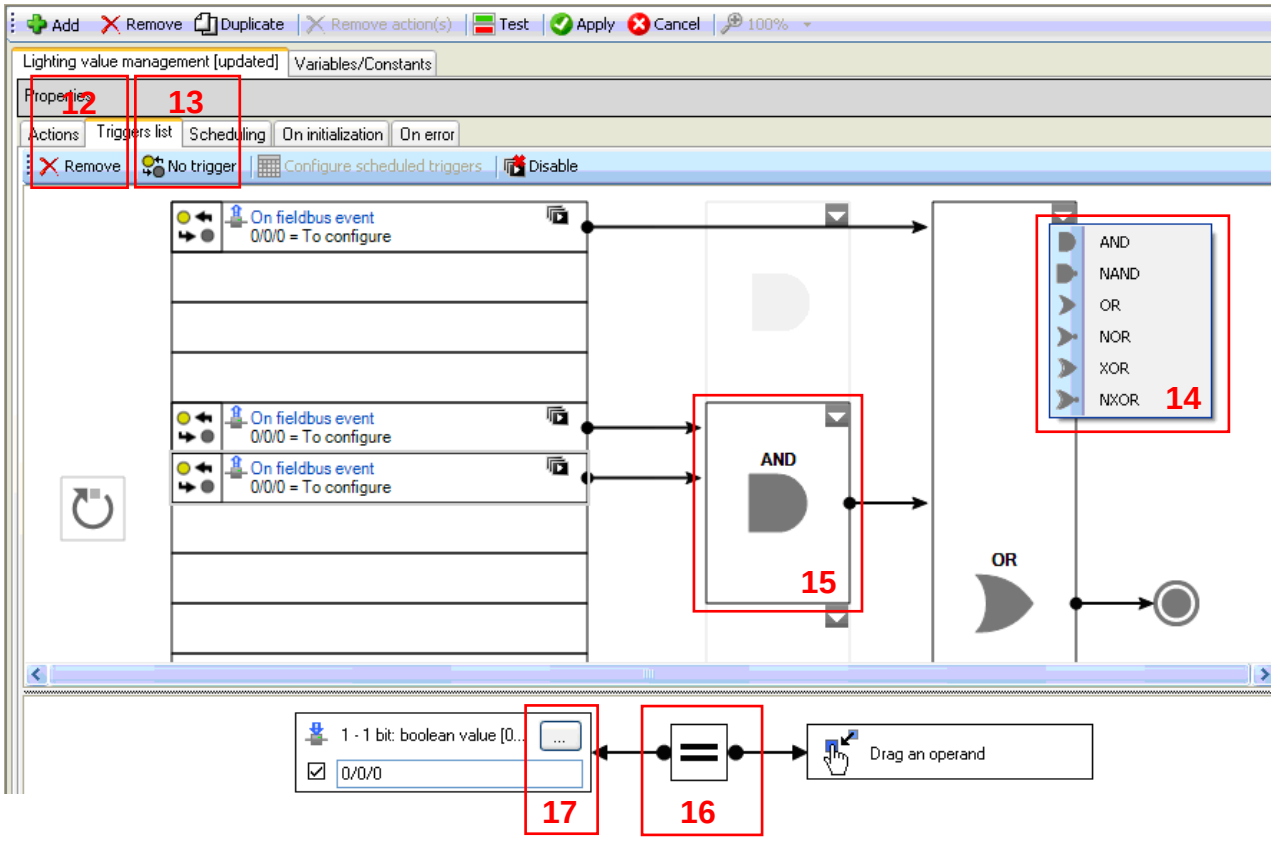
Example: Pressing the button on a doorbell (not listed in domovea) can initiate a chime and switch on a light for 30s.

Remove *(12)*: Allows the user to remove the selected fieldbus event or operator.

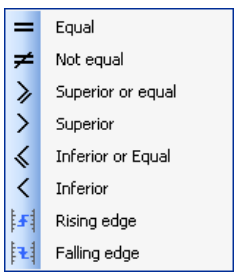
No trigger *(13):* Enables the user to create a trigger, which will be launched each time the value of the property is changed.

Choice of logical connectors *(14) (15):* Allows the user to add one or more logical operators.

NOTE: See §.4.1.3 to view the various formats for unnamed constants.



Operator *(16)*: Allows the user to select the sign for the function (*Equal*, *Not equal*, *Superior or equal*, *Superior*, *Inferior or equal*, *Inferior*, *Rising edge* (change from the binary value 0 to the binary value 1) or *Falling edge* (change from the binary value 1 to the binary value 0).



Format *(17)*: Allows the user to select the address format.

NOTE: See §.4.1.4 to view the different formats.

- **On variable event**

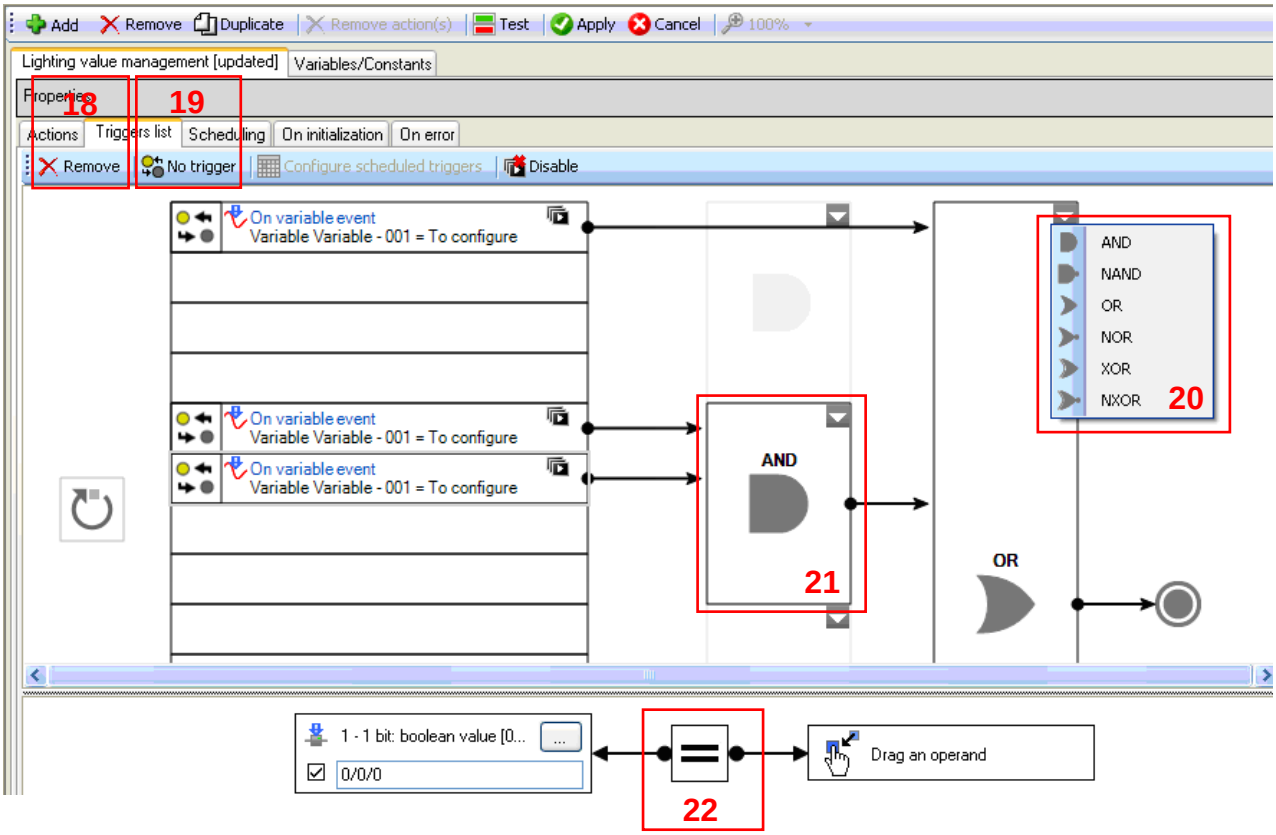
Launches a sequence based on the status of a variable.

Remove *(18)*: Allows the user to remove the selected variable or operator.

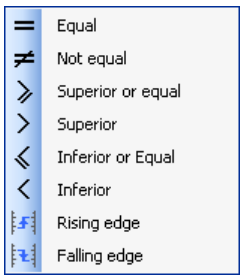
No trigger *(19):* Enables the user to create a trigger, which will be launched each time the value of the property is changed.

Choice of logical connectors *(20) (21):* Allows the user to add one or more logical operators.

NOTE: See §.4.1.3 to view the various formats for unnamed constants.



Operator *(22)*: Allows the user to select the sign for the function (*Equal*, *Not equal*, *Superior or equal*, *Superior*, *Inferior or equal*, *Inferior*, *Rising edge* (change from the binary value 0 to the binary value 1) or *Falling edge* (change from the binary value 1 to the binary value 0).

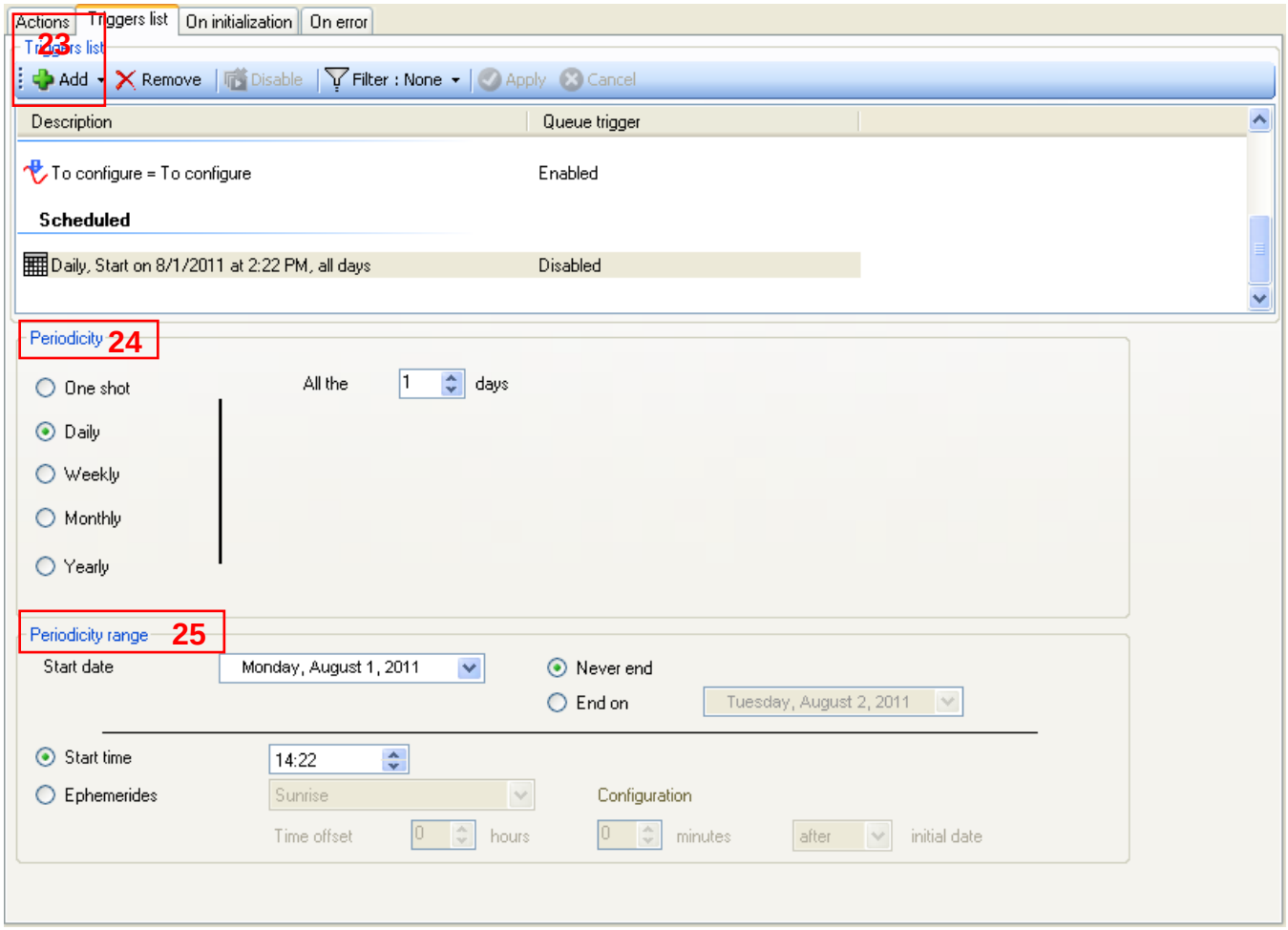


- **Scheduled**

Launches a sequence at a specific time.

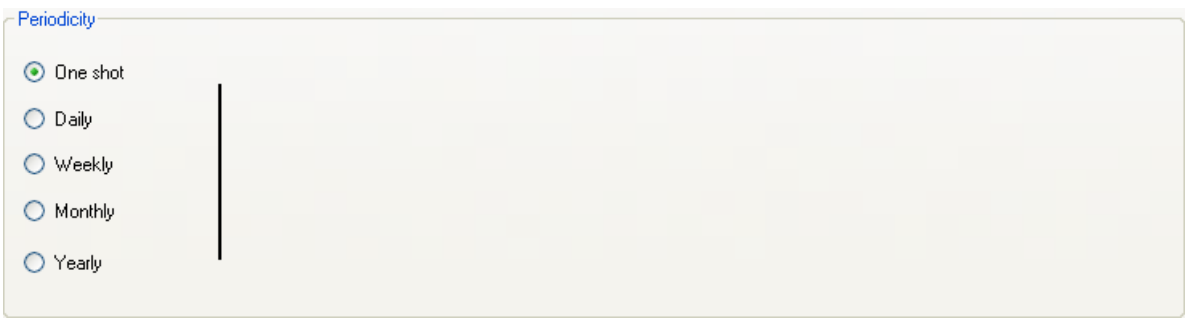
Example: Opens motorized shutters in the morning at a previously-specified time.

Add *(23)*: Allows the user to add a Scheduled trigger.

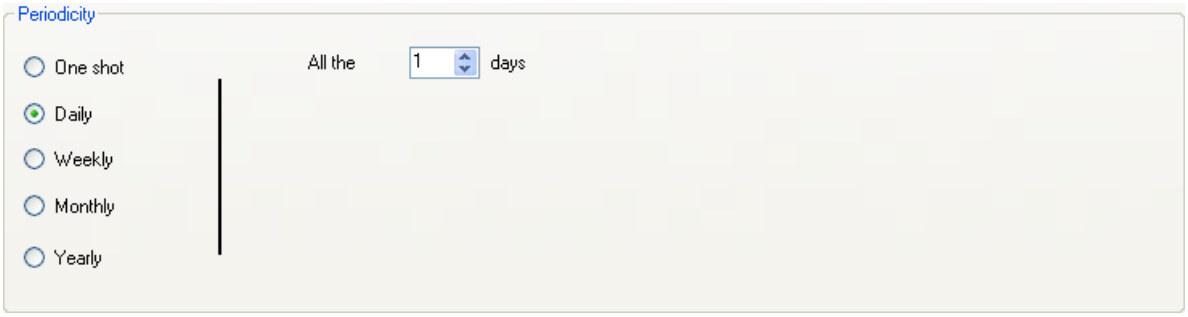


Periodicity *(24)*: Enables the trigger frequency to be defined. Five periodicities are available:

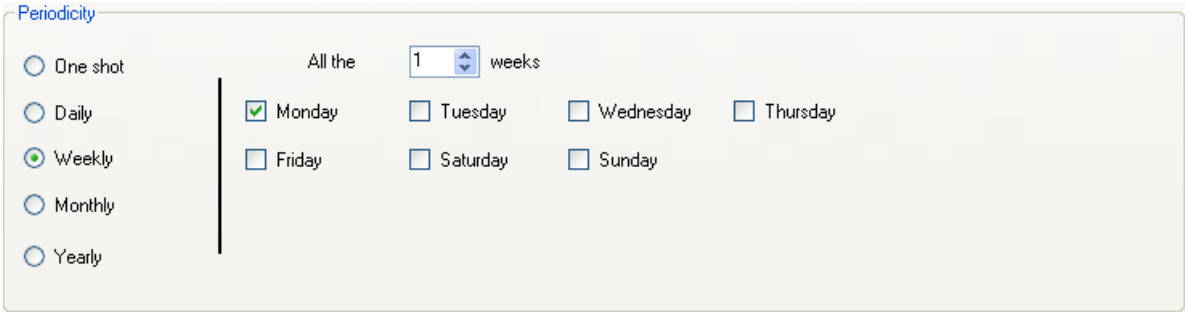
- ***Once***:



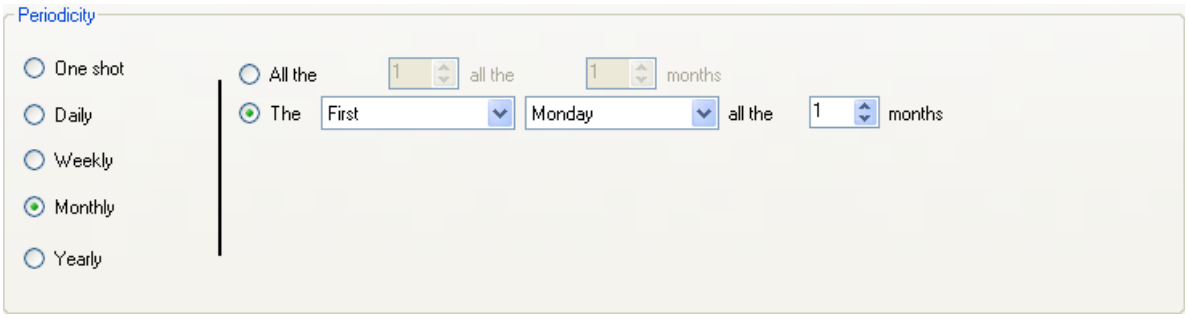
- ***Daily***:



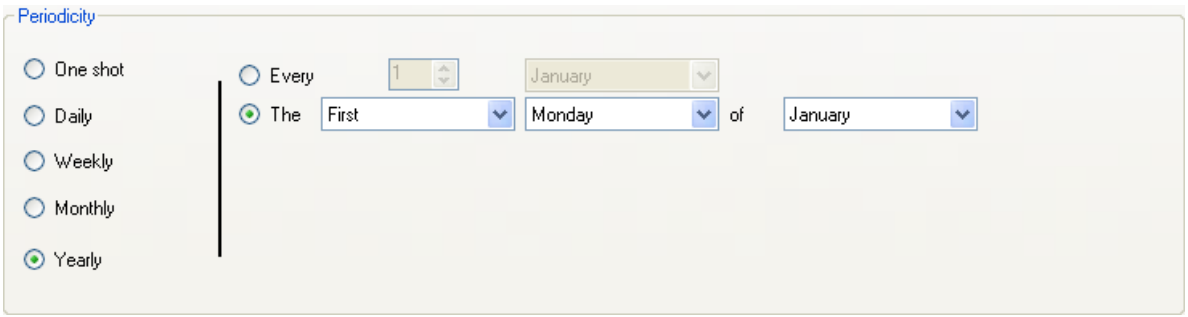
- ***Weekly***:



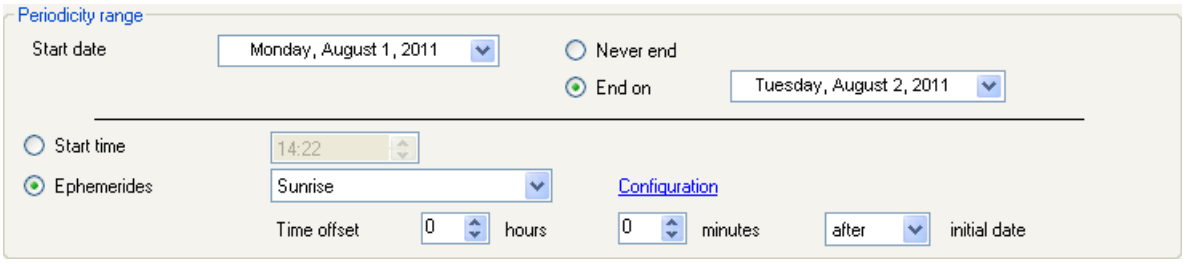
- ***Monthly***:



- ***Yearly***:



Periodicity range *(25)*: Enables the periodicity range for the trigger to be defined.

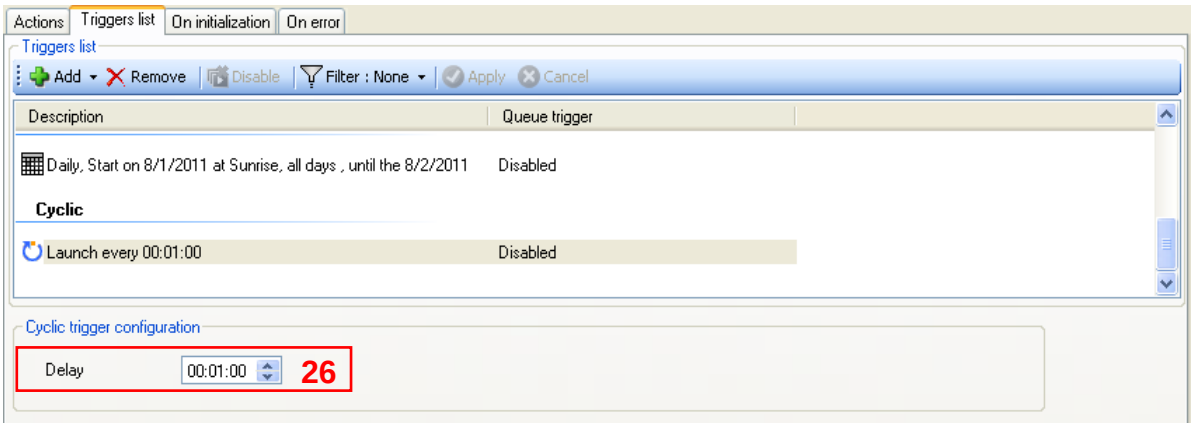


- **Cyclic**

Launches a sequence cyclically.

Example: Restarts a water heater every 3h.

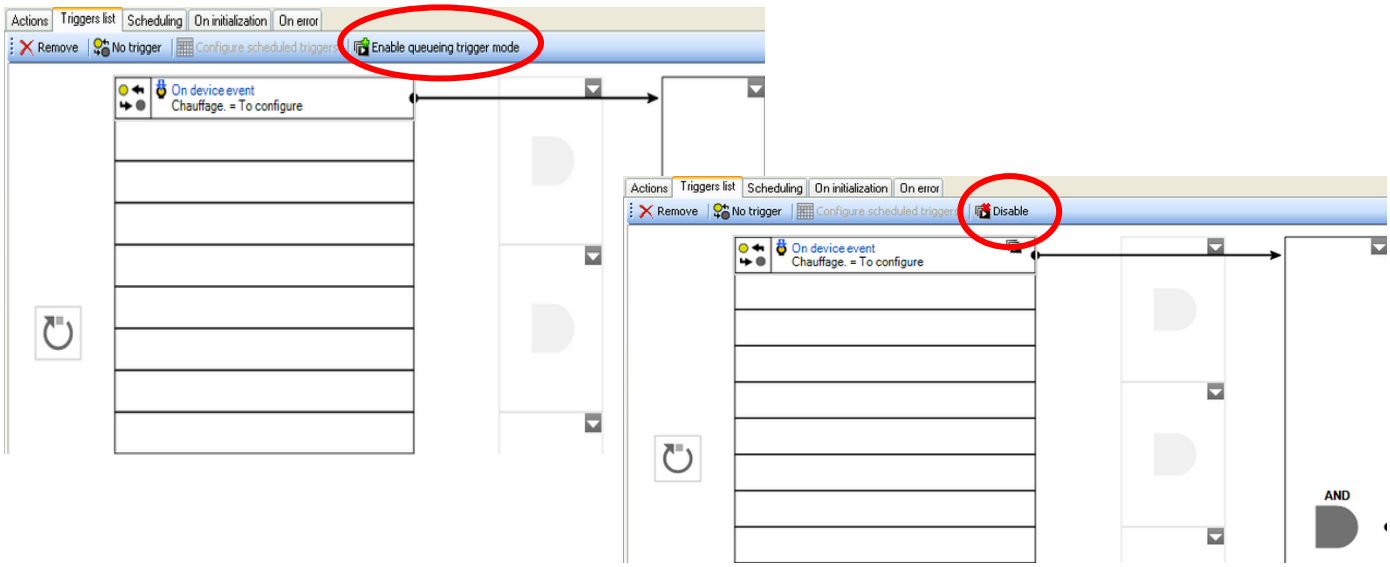
Delay *(26)*: Enables a delay to be set between two triggers (format: hh:mm:ss).



4.4 ENABLE/DISABLE

This function defines whether it is necessary to save the triggers during initiation of a sequence.

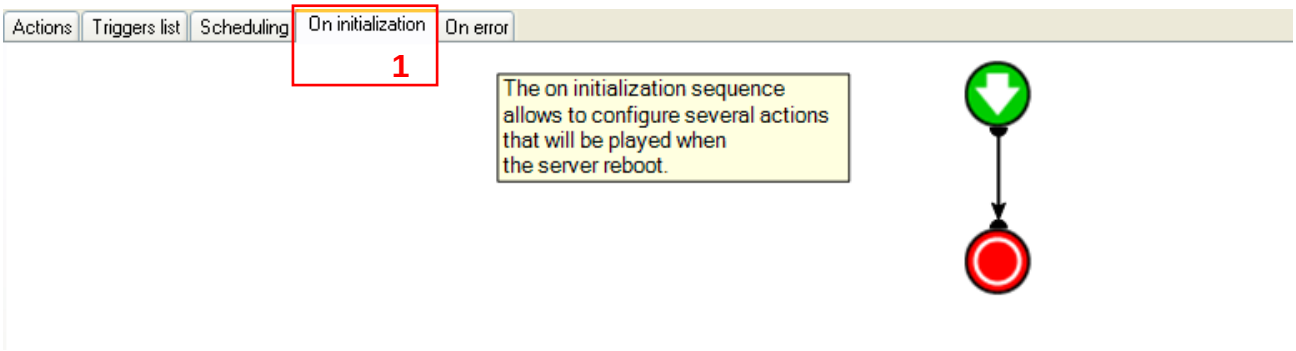
If storage is enabled and a new instance of the trigger occurs while the sequence is still running (during a launch phase for example), the trigger will be saved and the sequence will be begun again just after its first run.



4.5 ON INITIALIZATION SEQUENCE

The on initialization sequence allows to configure several actions that will be played when the server reboot.

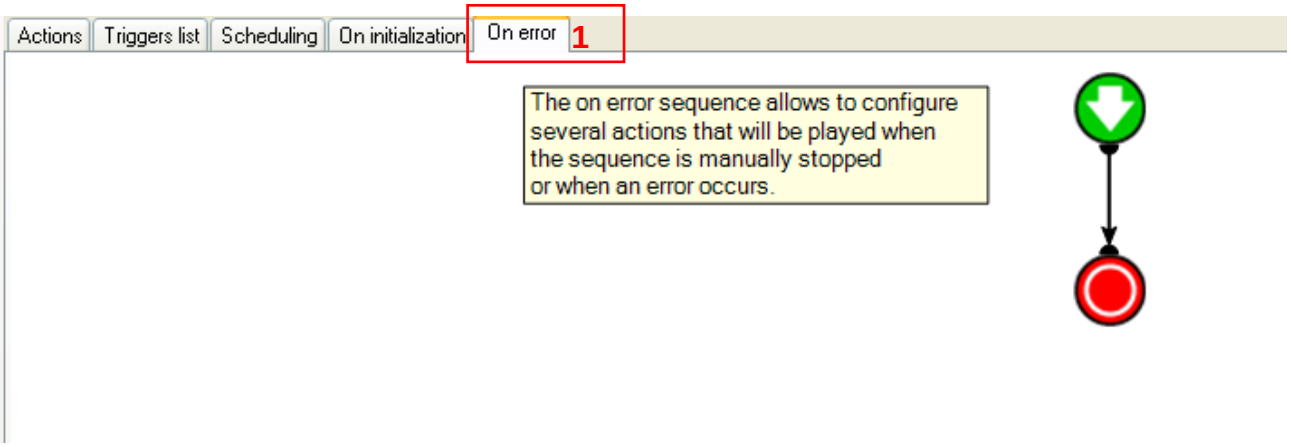
To define this sequence, click on the **On initialization** tab (1) in the list of tabs.



4.6 ON ERROR OR STOP SEQUENCE

The on error or stop sequence allows to configure several actions that will be played when the sequence is manually stopped or when an error occurs.

To define this sequence, click on the **On error** tab (1) in the list of tabs.



5. GLOSSARY

Sequence

A sequence is an ordered list of actions.	

Actions

An action consists of changing the status of a device. This action may be a moving a shutter, switching on lighting, modifying a thermostat's HVAC mode, or sending an e-mail.	

Triggers

A trigger launches a sequence during a specific event.	

Home Status

Home Status is the general status of the home. *It is possible to activate or deactivate sequences depending on their status.*	

Advanced functions

Advanced functions allow the user to add special tasks to a sequence. *This could be a formula for calculation, an If condition, sending a message, or sending a request via the web.*

Delay

A delay is a time period that can be used to delay part or all of a sequence.	

Notifications

The notifications tool allows an e-mail to be sent or an information window to be displayed on the client screen.	

Constants

A constant is a preset value that cannot be changed by the client.	

Variables

A variable is linked to an object or a device, it takes a value and modifies it each time the relevant device or object is modified.