

# SPCway Plus Vizualisation Setup guide

---

**Adapted for SPCway Plus firmware 1.4**

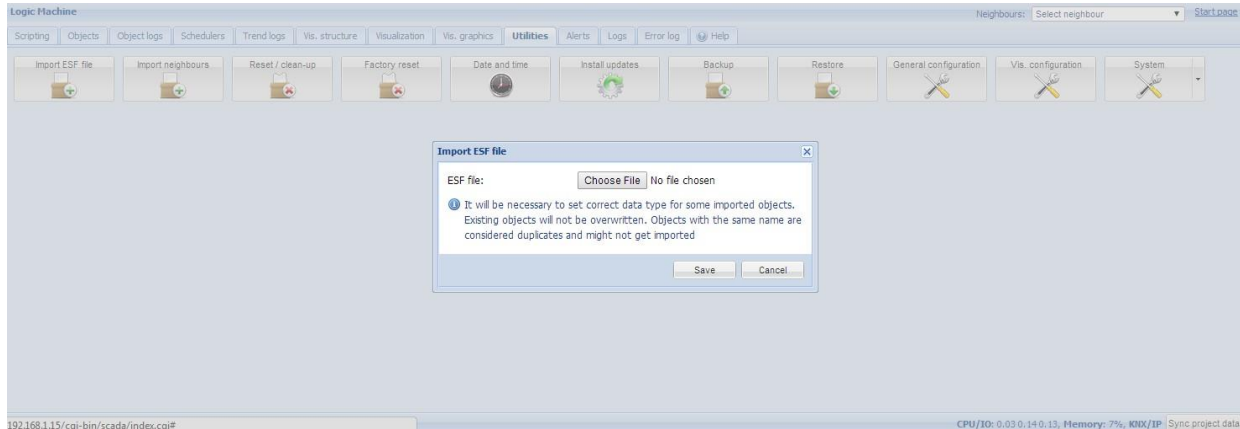
## Table of contents

1.	Quick guide - create visualization for iPad/PC .....	3
2.	Configuration .....	11
2.1	Objects .....	11
2.1.1	<i>Object parameters</i> .....	11
2.1.2	<i>RGB group object</i> .....	13
2.1.3	<i>Object visualization parameters</i> .....	14
2.1.4	<i>Change the object state</i> .....	19
2.1.5	<i>Custom values</i> .....	19
2.1.6	<i>Object control bar</i> .....	20
2.1.7	<i>Filter objects</i> .....	21
2.2	Visualization structure .....	22
2.2.1	<i>Levels / Plans</i> .....	22
2.2.2	<i>Layouts / Widgets</i> .....	26
2.3	Visualization .....	29
2.3.1	<i>Plan editor</i> .....	29
2.3.2	<i>Object</i> .....	30
2.3.3	<i>Link</i> .....	32
2.3.4	<i>Text Label</i> .....	34
2.3.5	<i>Image</i> .....	35
2.3.6	<i>Frame</i> .....	35
2.3.7	<i>Gauge</i> .....	37
2.3.8	<i>Camera</i> .....	37
2.3.9	<i>Graph</i> .....	39
2.4	Vis.graphics .....	41
2.5	Utilities .....	43
2.6	User access .....	47
2.7	Alerts .....	50
2.8	Error log.....	50
2.9	Logs .....	51
3.	User mode visualization.....	51
3.1	Custom design Usermode visualization .....	52
4.	Touch visualization .....	53

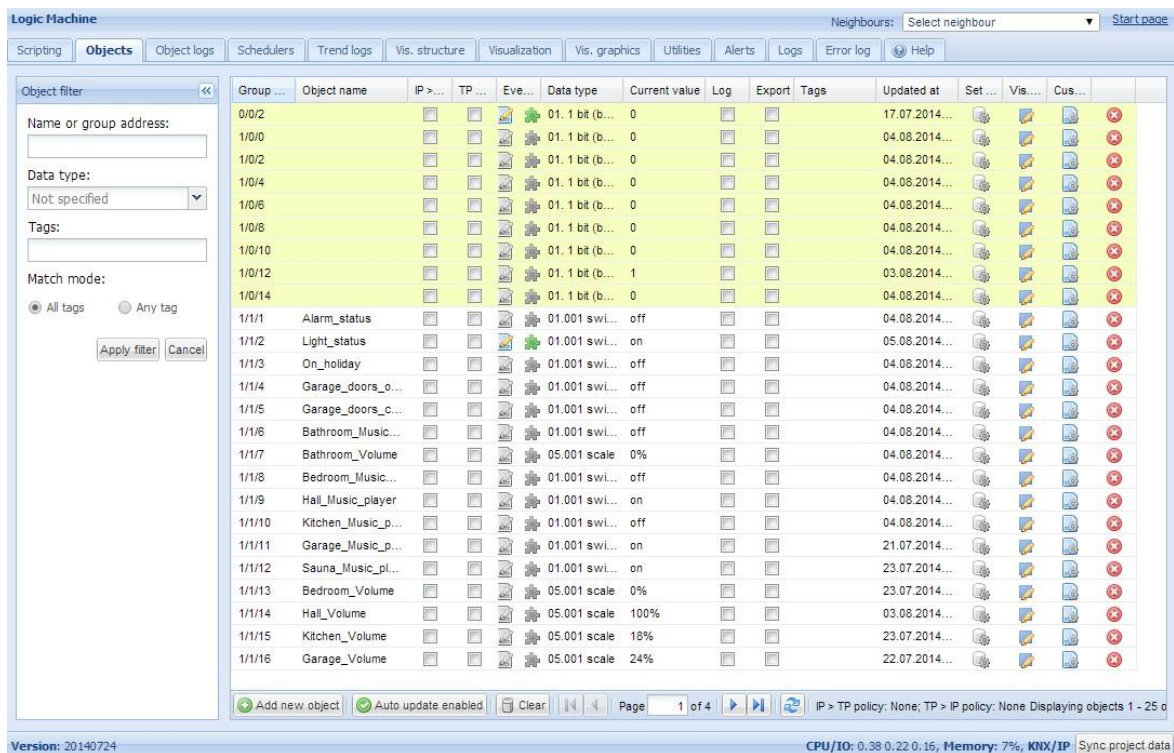
# 1. Quick guide - create visualization for iPad/PC

## Import objects

Fastest way is to import \*.ESF file from ETS in *Logic Machine* → *Utilities* → *Import ESF file*.



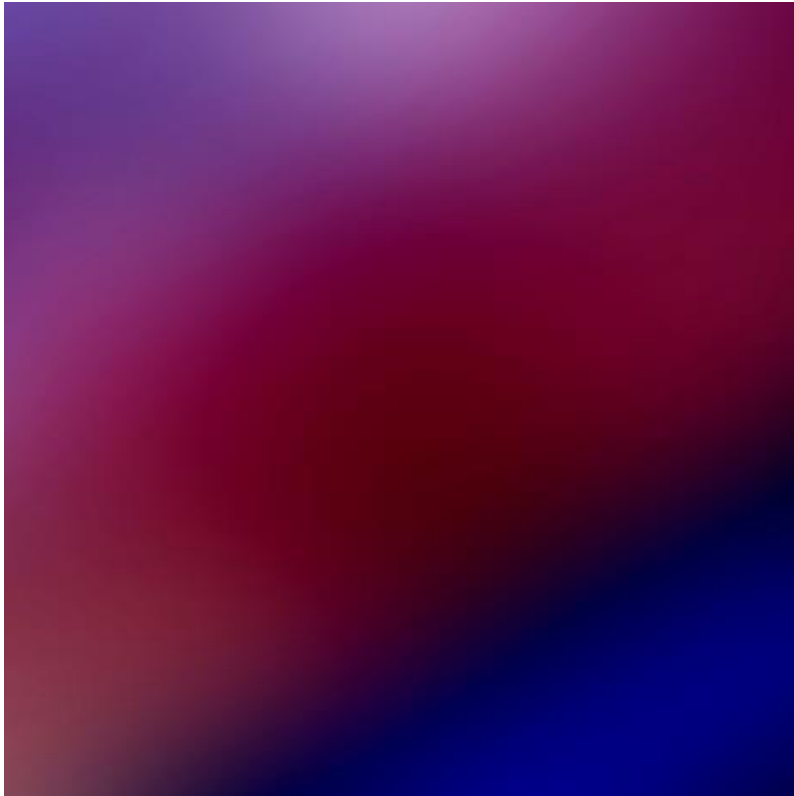
Or connect LM to the bus and it will detect objects automatically (in yellow) in *Objects* tab once they are activated. Objects can be added manually as well.



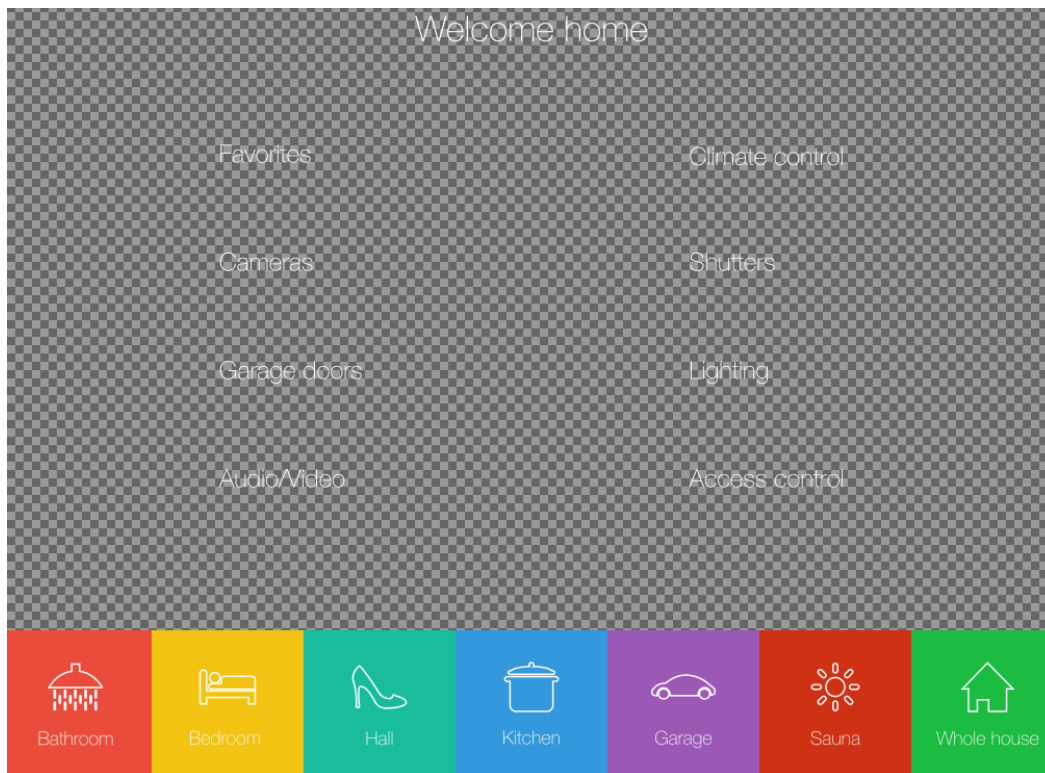
Prepare graphics

Either in Adobe Illustrator or any ready images can be used. In this example we use professionally created designs in Illustrator in SVG form (so we can do scaling depending of the screen size and not losing the quality).

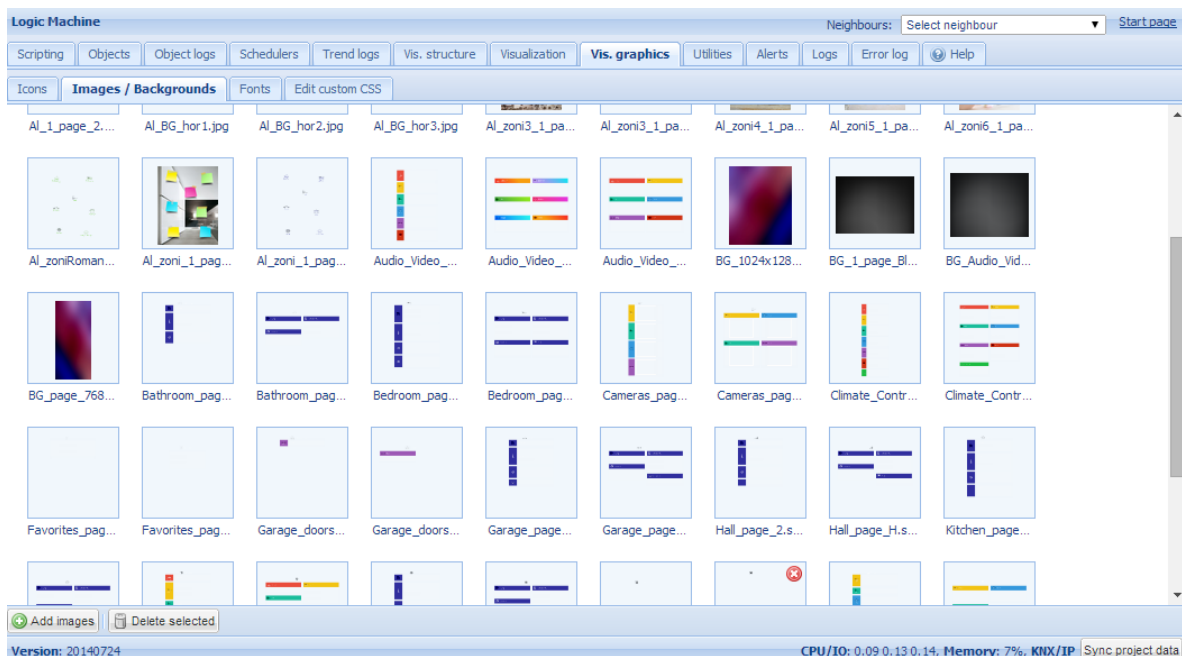
- a) basic background which can be changed by necessity



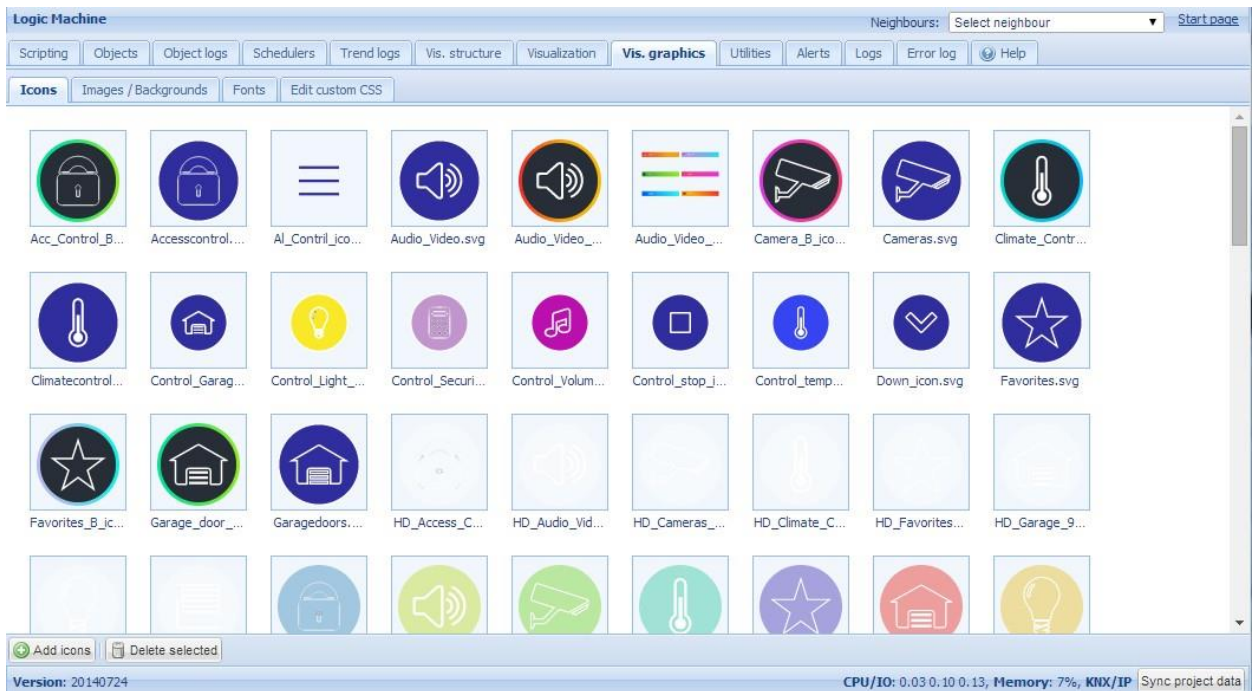
b) foreground which will stay unchanged



Add both files in *Logic Machine* → *Vis. Graphics* → *Images/Backgrounds*

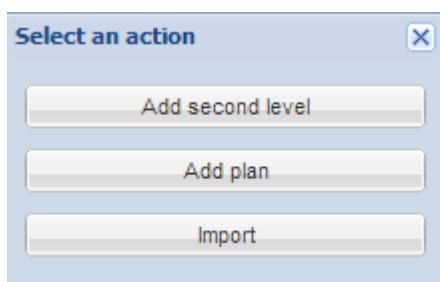


Prepare set of icons (preferably in SVG form) and add them in *Logic Machine* → *Vis. Graphics* → *Icons*. Or you can use icons predefined in LogicMachine by default.



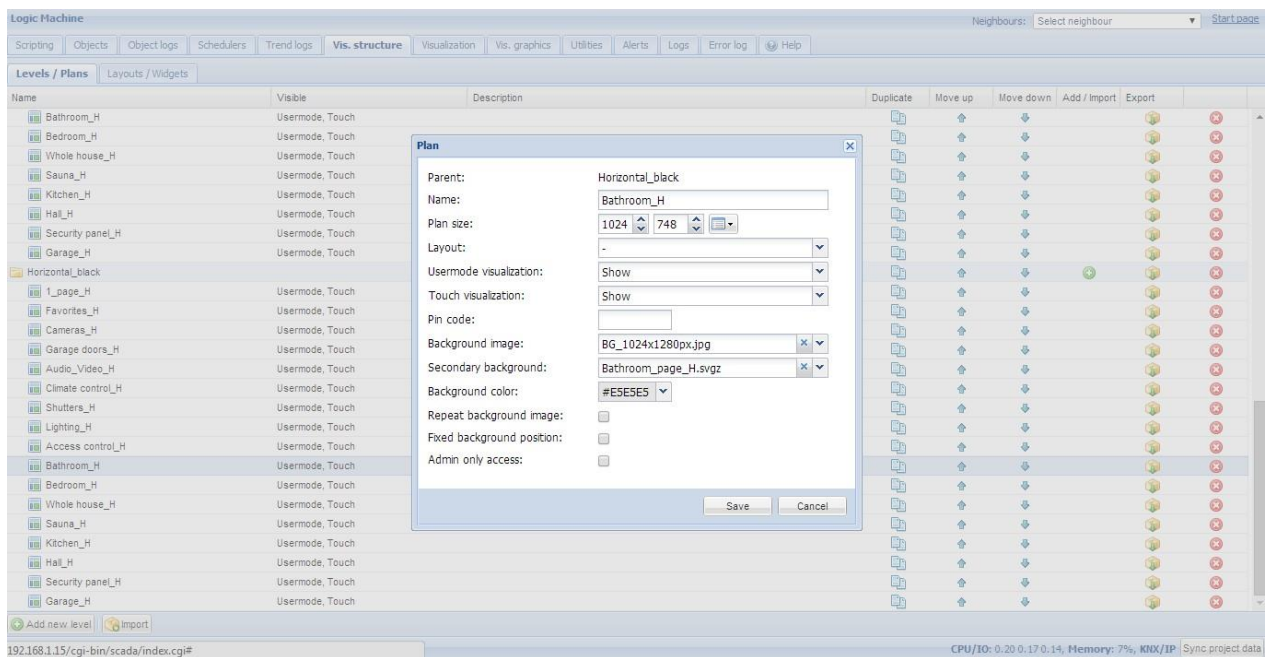
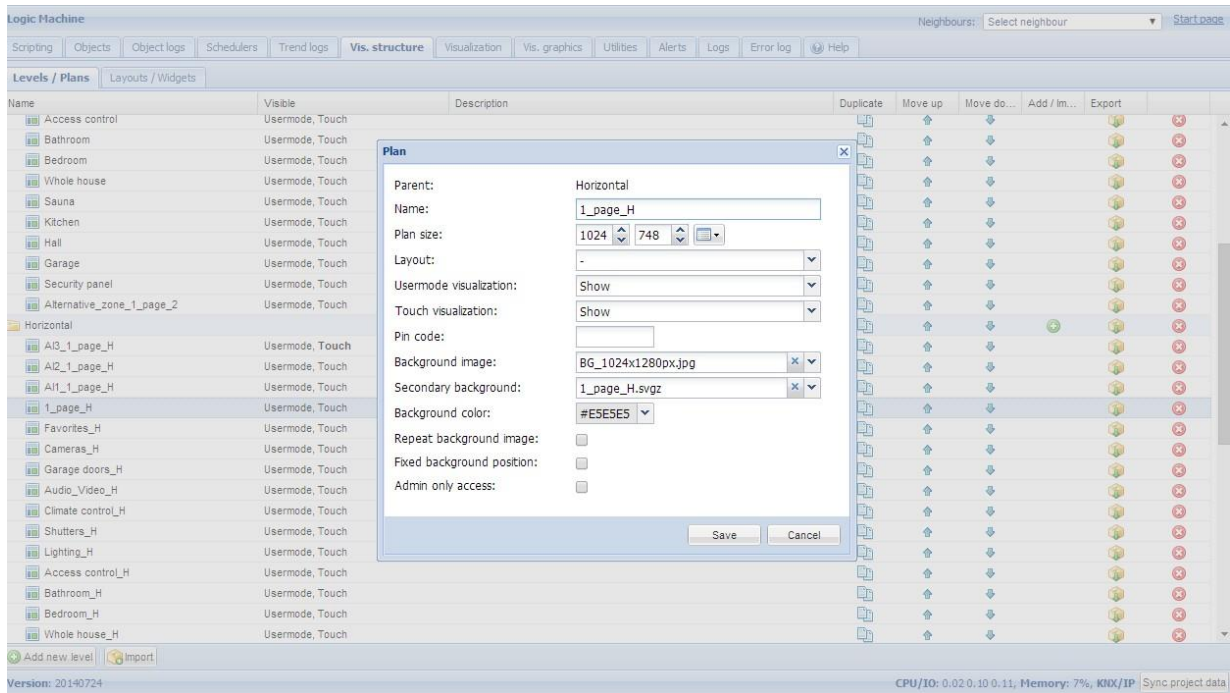
Create “floor” structure and add objects to the map

In *Logic Machine* → *Vis.structure* menu the structure of the visualization is defined and visualization backgrounds are uploaded. Use icon to add floor.



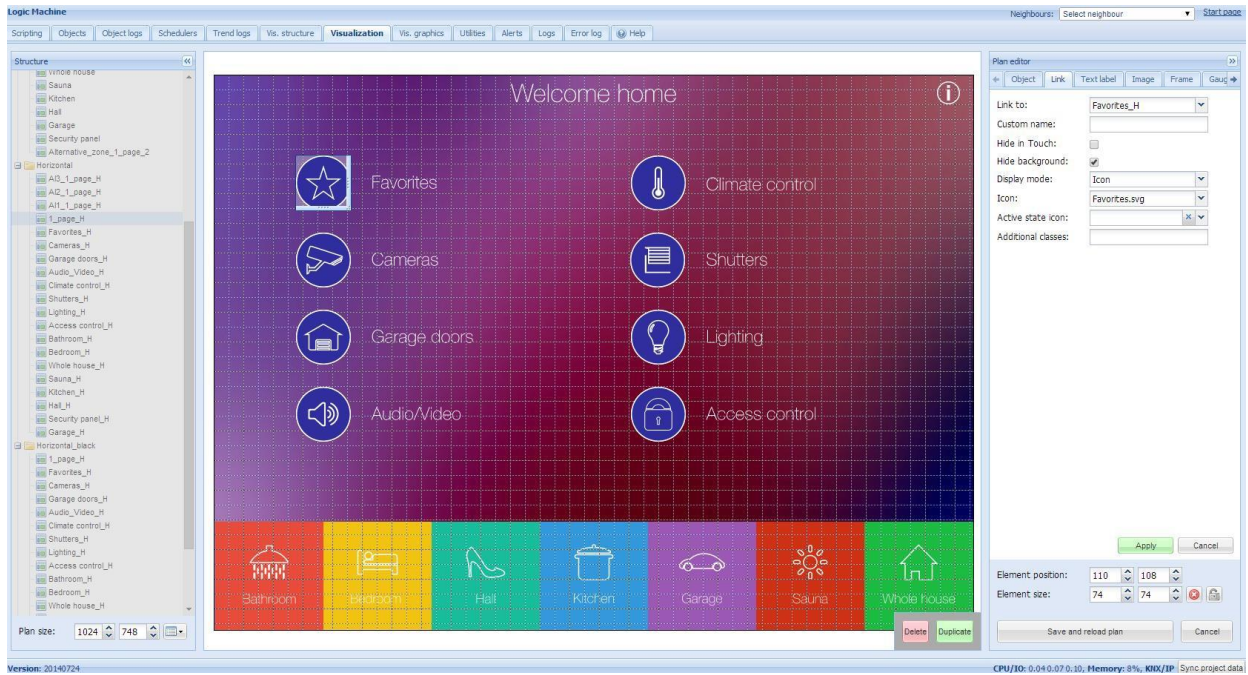
In this example we will create a new floor named “1\_page\_H” and “Bathroom\_H”. First Floor will be a dashboard with link to other rooms and functions. Choose screen resolution for which you are creating this visualization, choose first and second background images from the ones added before.





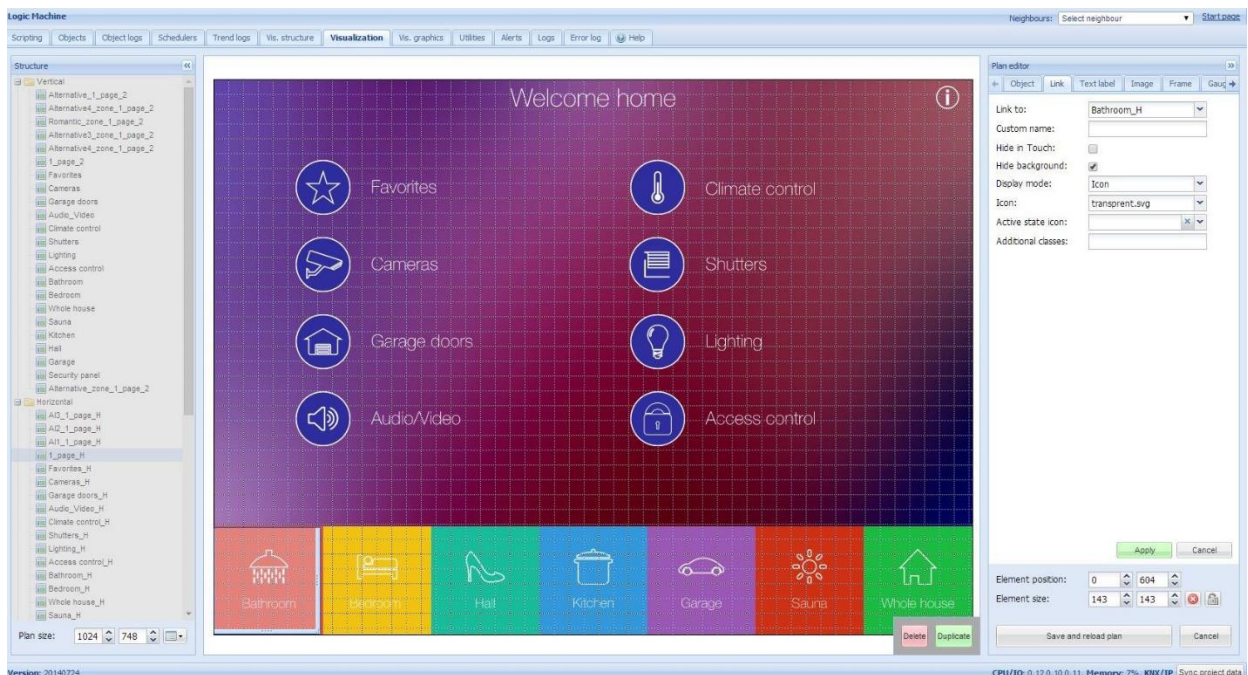
## Add objects to newly created visualization map

After the building and floor structure is defined, it is visualized in *Visualization* tab. Controlled and monitored objects can be added and managed in this section. Both side bars can be minimized by pressing on left/right arrow icon making the map more visible especially on small displays.



Objects can be added to the map by clicking on *Unlock current floor plan for editing* button. In this example we are creating first page of visualization which will link to other Floors with specific object control. Add link by clicking on Link tab, choosing specific icon, scale it and place in desired location.

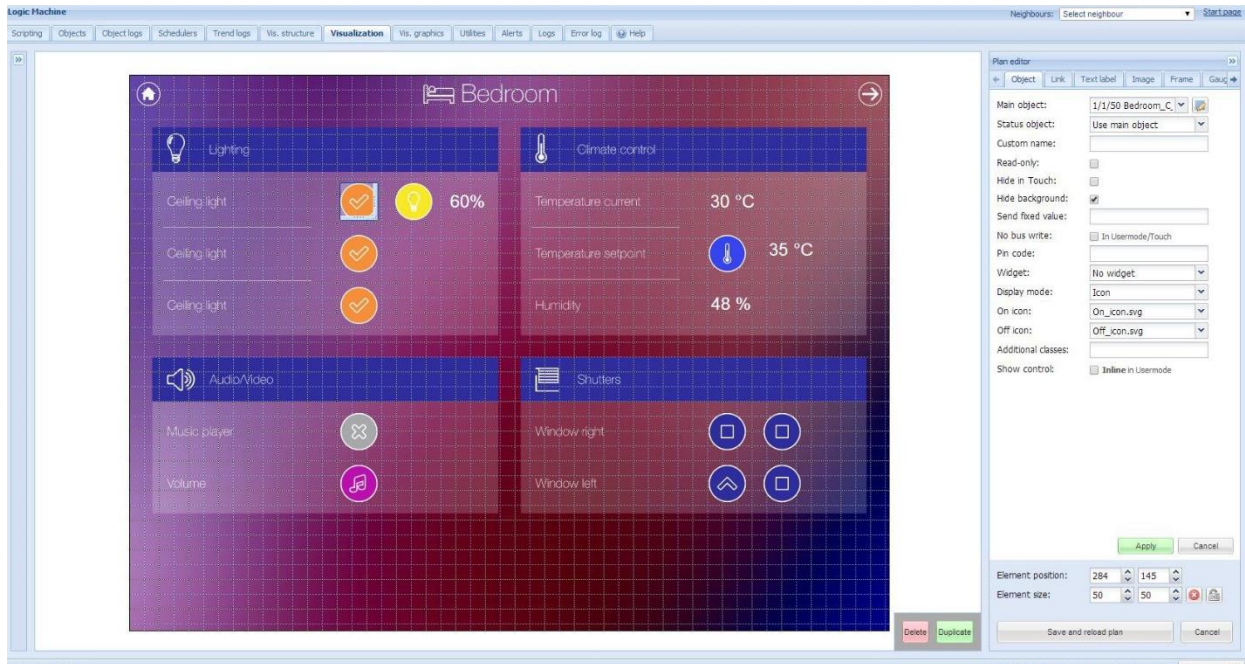
This example's secondary background already contains icons on it, so what is needed, is to add transparent image in *Vis.graphics* and add this image on top of every icon.





When all links are defined, press *Save and reload floor plan* button.

In same way fill the Bedroom plan with object parameters in Object tab.

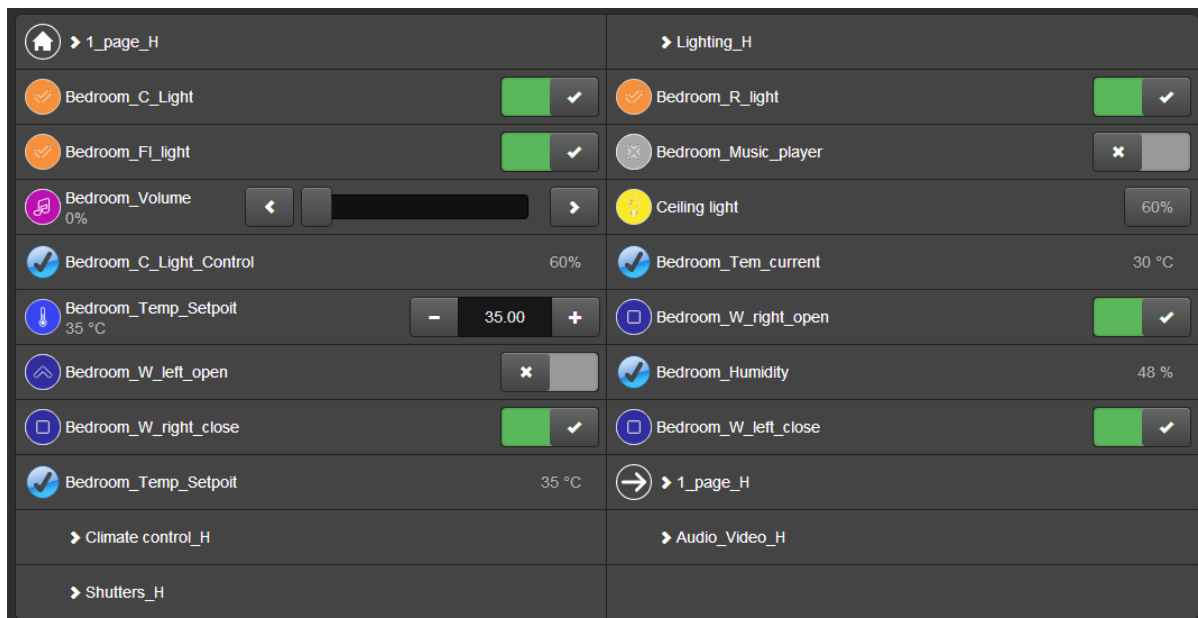


## Launching visualization on touch device (iPad in this case)

- Make sure your iPad is connected wirelessly to the Logic Machine
- In the browser enter Logic Machine's IP (default 192.168.0.10).
- Click on the User *mode visualization*
- Save the application as permanent/shortcut in your iPad



Touch visualization is also automatically created with list of Floor objects.

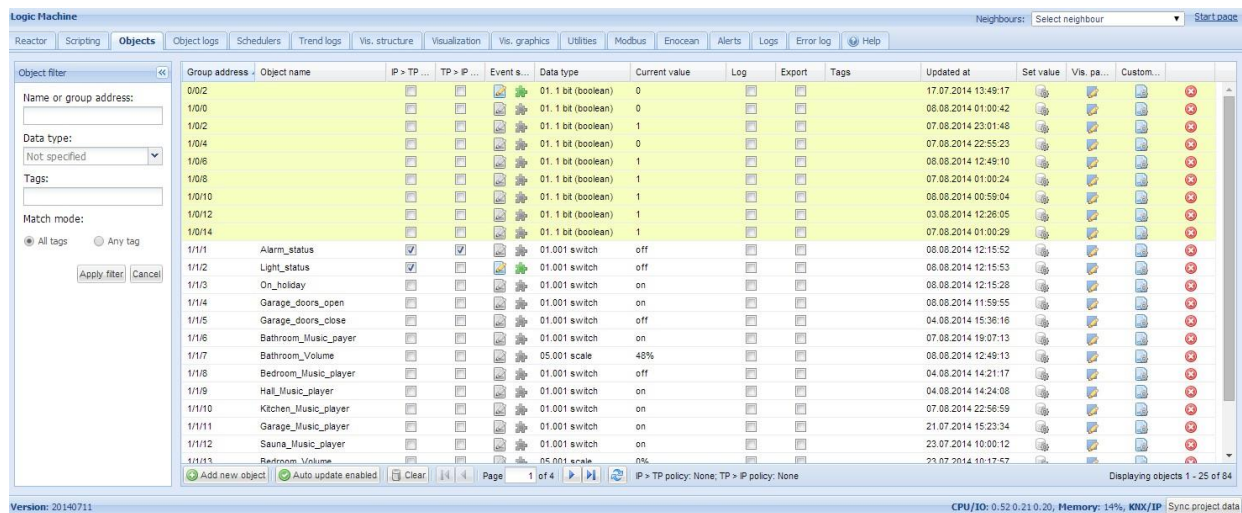


## 2. Configuration

### 2.1 Objects

List of KNX network objects appears in *Objects* menu. The object appears in the list by way of:

- sniffing the bus for telegrams from unknown group addresses (if enabled in *Utilities*)
- adding manually
- importing ESF file (in *Utilities*)



Group address	Object name	IP > TP	TP > IP	Event s...	Data type	Current value	Log	Export	Tags	Updated at	Set value	Vis. pa...	Custom...
0/0/2					01. 1 bit (boolean)	0				17.07.2014 13:49:17			
1/0/0					01. 1 bit (boolean)	0				08.08.2014 01:00:42			
1/0/2					01. 1 bit (boolean)	1				07.08.2014 23:01:48			
1/0/4					01. 1 bit (boolean)	0				07.08.2014 22:55:23			
1/0/6					01. 1 bit (boolean)	1				08.08.2014 12:49:10			
1/0/8					01. 1 bit (boolean)	1				07.08.2014 01:00:24			
1/0/10					01. 1 bit (boolean)	1				08.08.2014 00:59:04			
1/0/12					01. 1 bit (boolean)	1				03.08.2014 12:28:05			
1/0/14					01. 1 bit (boolean)	1				07.08.2014 01:00:29			
1/1/1	Alarm_status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		01.001 switch	off				08.08.2014 12:15:52			
1/1/2	Light_status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		01.001 switch	off				08.08.2014 12:15:53			
1/1/3	On_holiday	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				08.08.2014 12:15:28			
1/1/4	Garage_doors_open	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				08.08.2014 11:59:55			
1/1/5	Garage_doors_close	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	off				04.08.2014 15:36:16			
1/1/6	Bathroom_Music_player	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				07.08.2014 18:07:13			
1/1/7	Bathroom_Volume	<input type="checkbox"/>	<input type="checkbox"/>		05.001 scale	48%				08.08.2014 12:49:13			
1/1/8	Bedroom_Music_player	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	off				04.08.2014 14:21:17			
1/1/9	Hall_Music_player	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				04.08.2014 14:24:08			
1/1/10	Kitchen_Music_player	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				07.08.2014 22:56:59			
1/1/11	Garage_Music_player	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				21.07.2014 15:23:34			
1/1/12	Sauna_Music_player	<input type="checkbox"/>	<input type="checkbox"/>		01.001 switch	on				23.07.2014 10:00:12			
1/1/13	Bedroom_Volume	<input type="checkbox"/>	<input type="checkbox"/>		05.001 scale	0%				23.07.2014 10:17:57			

#### 2.1.1 Object parameters

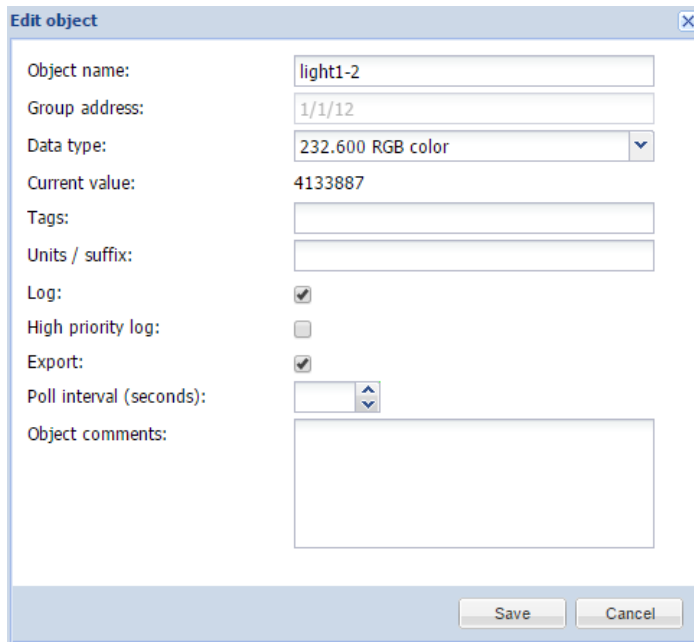
To change the settings for existing or new objects, press on the specific list entry.

- **Object name** – Name for the object
- **Group address** – Group address of this object
- **Data type** – KNX data type for the object. This has to be set once the LM sniffs the new object for proper work.
- **Units / suffix** – units for the object which will appear on the visualization along with the value
- **Log** – enable logging for this object. Logs will appear in *Objects logs* menu.
- **High priority log** – mark the object for high priority logging; when the log database is cleared, first standard logs are cleared, only then high priority
- **Export** – Make object visible by remote XML requests and in BACnet network (if KNX
  - BACnet gateway functionality is used)
- **Poll interval (seconds)** – perform automatic object read after some time interval
- **Tags** – assign this object to some tag which can be later used in writing scripts, for example, *All\_lights\_first\_floor*.
- **Current value** – Current value of the object
- **Object comments** – Comment for the object

There is a possibility to sort the objects by one of the following – Name, Group address, Data type, Current value, Tags, Comments

## 2.1.2 RGB group object

A special *RGB color* data type is added in *Data type* list.



**Edit object**

Object name: light1-2

Group address: 1/1/12

Data type: 232.600 RGB color

Current value: 4133887

Tags:

Units / suffix:

Log:

High priority log:

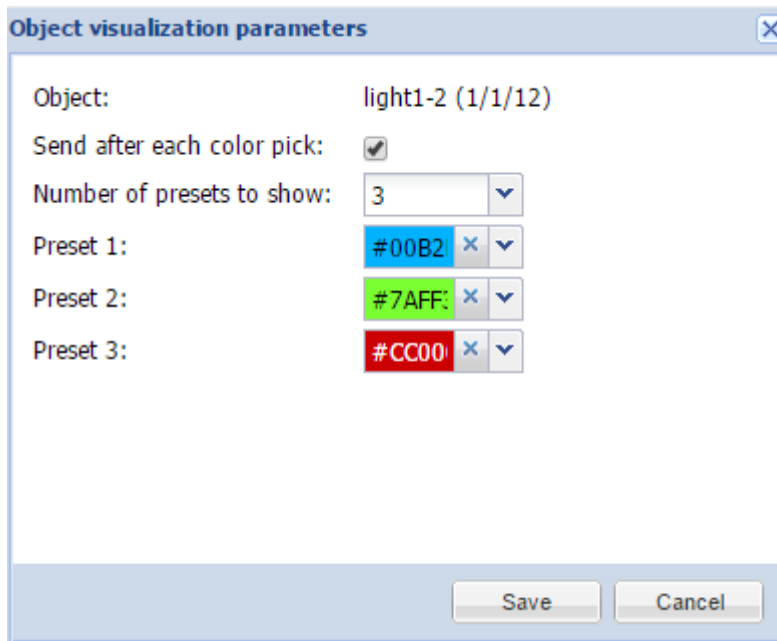
Export:

Poll interval (seconds):

Object comments:

Save Cancel

In *Visualization Parameters* you can do the following settings for the object:



**Object visualization parameters**

Object: light1-2 (1/1/12)

Send after each color pick:

Number of presets to show: 3

Preset 1: #00B2

Preset 2: #7AFF

Preset 3: #CC00

Save Cancel

**Send after each color pick** – specifies either to send the telegram automatically into KNX bus once the color is selected in color picker.

**Number of presets to show** – count of predefined presets in color picker in Visualization


**Preset 1..6** – preset color



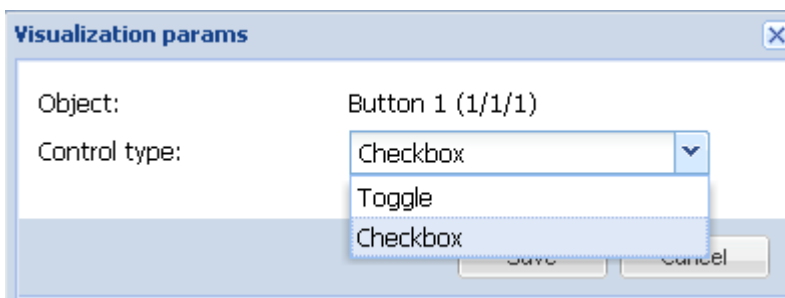
When you add the object with RGB color data type in the Visualization, the color picker with predefined colors appears.





### Object visualization parameters

By pressing on the  button of the corresponding object you can set specific visualization parameters for this type of object.

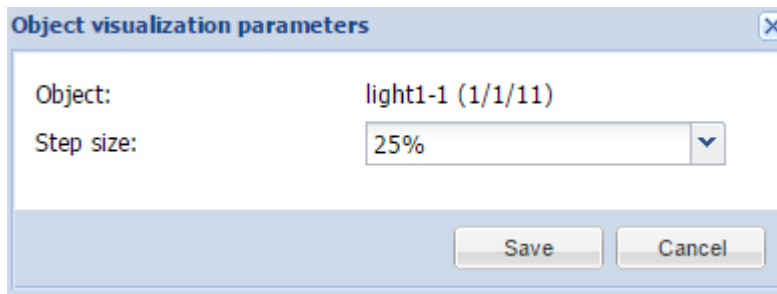
### 1 bit



**Control type** – type of the visual control element which will appear in Touch Visualization

- Toggle 
- Checkbox 

4 bit (3 bit controlled)

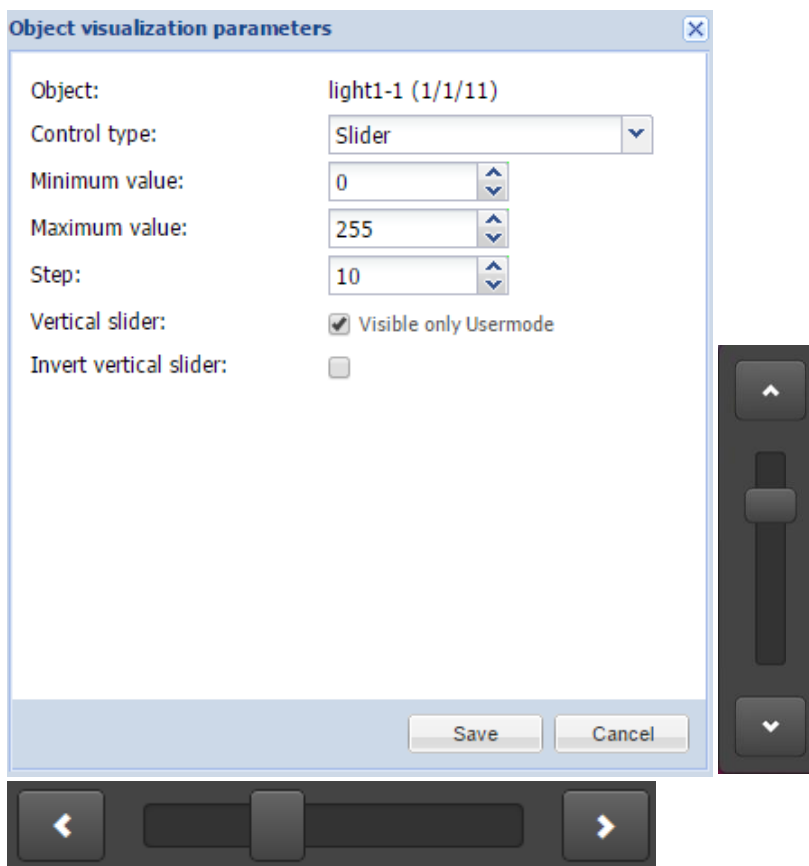


**Step size** – step size for object change, example for blinds control

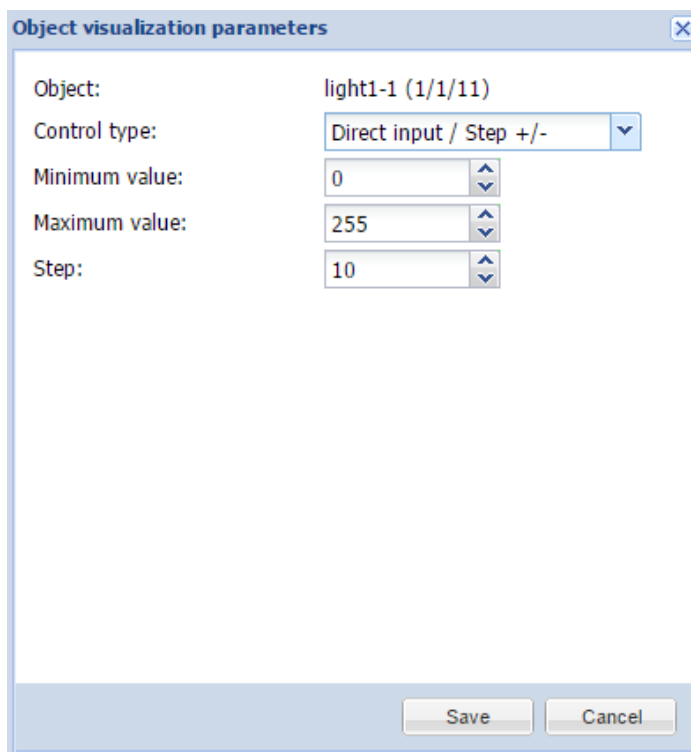
1byte and 4byte float

Control type – type of the visual control element

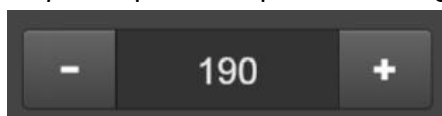
- Slider



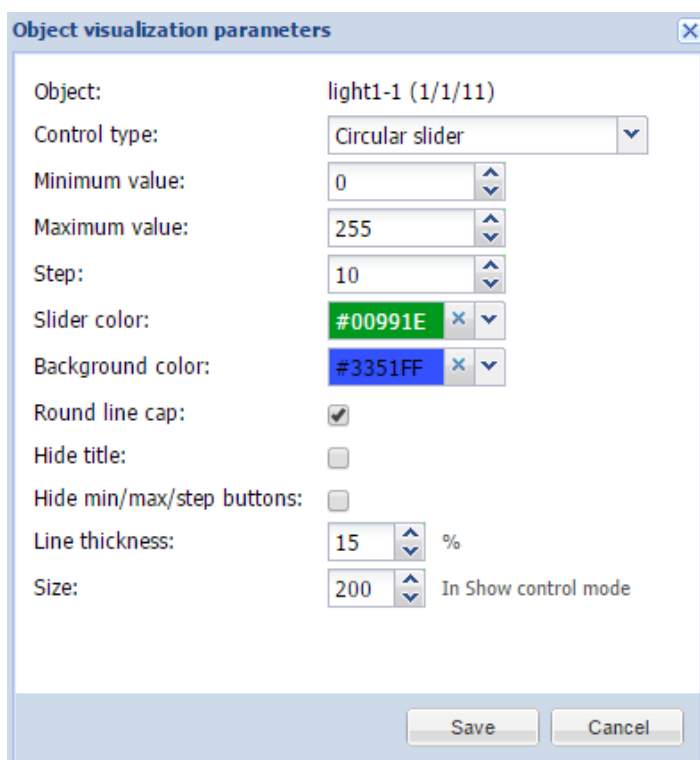
- *Minimum value* – minimum value on the slider
  - *Maximum value* – maximum value on the slider
  - *Step* – step for one slider movement
  - *Vertical slider* – special option for Usermode visualization
  - *Invert vertical slider* – invert vertical slider so the maximum is on top
- Direct input / Step +/-



- *Minimum value* – minimum value on the control bar
- *Maximum value* – maximum value on the control bar
- *Step* – step for one position change



- Circular slider
  - *Minimum value* – minimum value on the control bar
  - *Maximum value* – maximum value on the control bar
  - *Step* – step for one position change
  - *Slider color* – color of slider
  - *Background color* – background color of the slider
  - *Round line cap* – make round ends of slider
  - *Hide title* – hide title
  - *Hide min/max/step buttons* – hide min, max and step buttons
  - *Line thickness* – specify the thickness of slider line
  - *Size* – Size in px of the control



- Custom value select – select from list of custom values. Custom values should be defined
  - *Show icons in Usermode* – show icons instead of values for the object in visualization. Icons should be defined in visualization constructor as *Additional Icons*

**Object visualization parameters** [X]

Object: light1-1 (1/1/11)


Control type: Custom value select [v]

Show icons in Usermode:

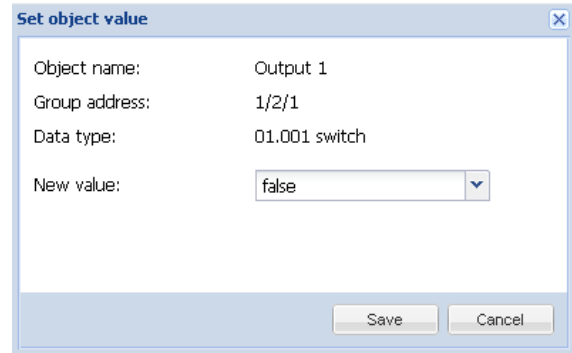
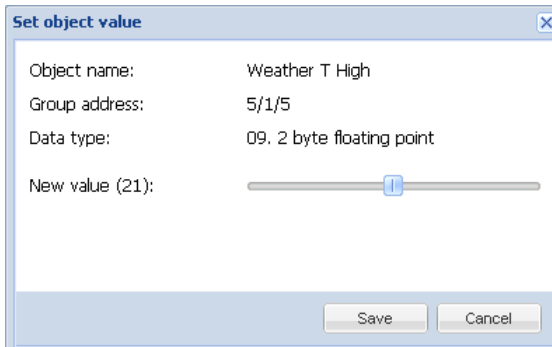
Save Cancel




### 2.1.3 Change the object state

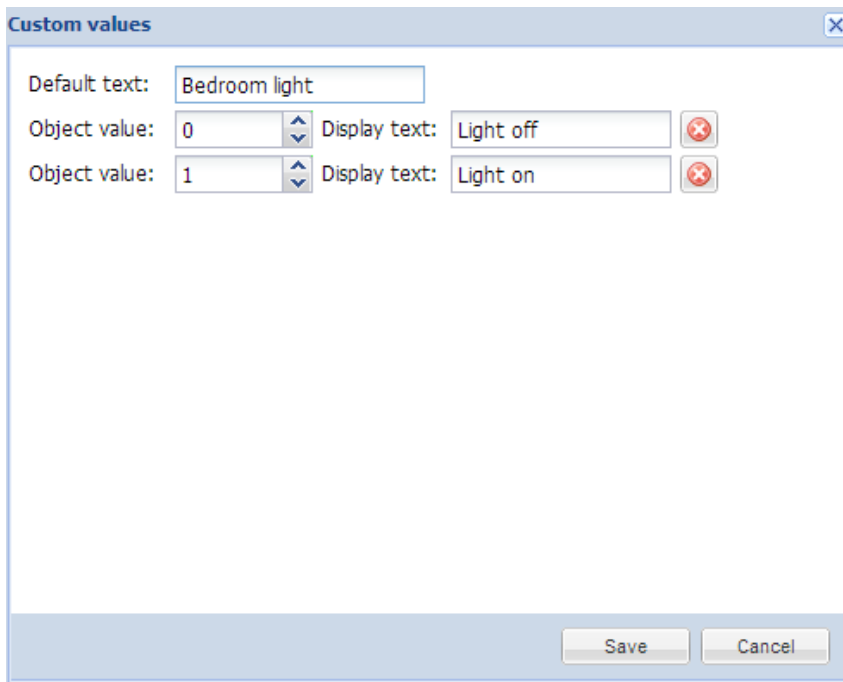
In the object list, by pressing on the  button, you can change the state of the object.

The appearance of the *New value* depends on what visualization parameters are set for specific object.

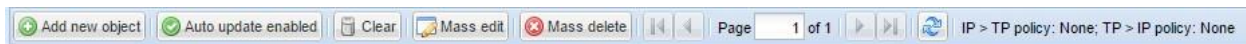


### 2.1.4 Custom values

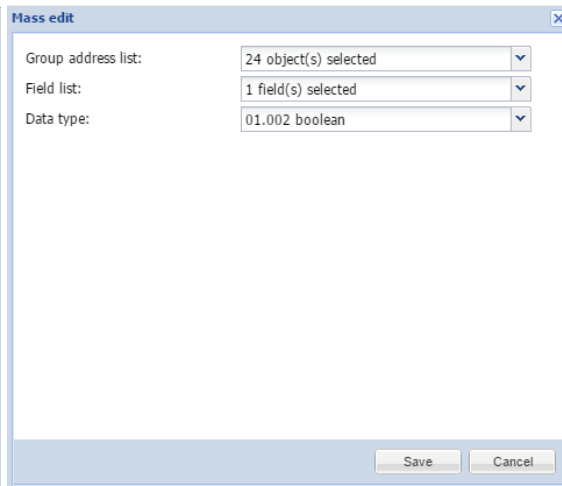
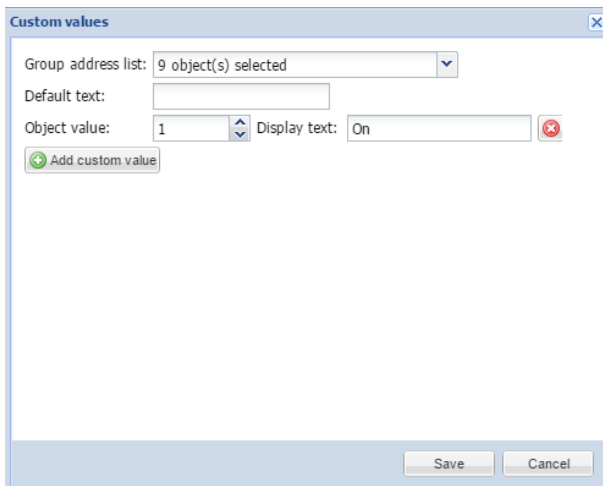
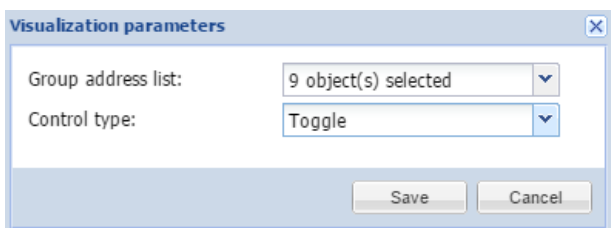
If special value naming is necessary, use this icon  to set it up (only for Boolean and Integer data types)



## 2.1.5 Object control bar



- **Add new object** – Manually add new object to the list
- **Auto update enabled** – Specifies either the object list is updated automatically or not
- **Clear** – Clear the list of group addresses
- **Next/Previous page** – move to next or previous page
- **Refresh** – refresh the object list
- **Mass edit** – mass edit objects by a specific criteria – object properties, visualization parameters or custom values.



- **Mass delete** – delete mass object either by current Mass Edit filters or all unnamed objects

There is also the following bar on the bottom of the configuration screen:



- **CPU/IO** –Load average. The load average represents the average system load over a period of time. It conventionally appears in the form of three numbers which represent the system load during the last one-, five-, and fifteen-minute periods. The lower number the better.

*Note!* Inspect your running tasks if the load exceeds the level 0.70! More on UNIX style load calculation can be found here:

[http://en.wikipedia.org/wiki/Load\\_\(computing\)#Unix-style\\_load\\_calculation](http://en.wikipedia.org/wiki/Load_(computing)#Unix-style_load_calculation)

- **Memory** – memory usage in %
- **KNX/IP / KNX/TP** – type of connection to KNX bus. If KNX/TP is set and it is not available, there will be error notification
- **Sync project data** – save all project data to internal flash by pressing this button. Otherwise the data is saved once in 30 minutes from RAM to Flash, or when Reboot or Shutdown commands are sent
- **KNX statistics graphs** – shows average KNX bus load

## 2.1.6 Filter objects

On the left side of the object list there is filtering possible. To perform the filtering type the name, group address, tag or specify the data type of the object and press on *Filter* button.

The screenshot shows the Logic Machine software interface. On the left, the 'Object filter' panel is active, showing a search for 'bedroom'. The main area displays a table of objects with columns for Group, Object name, IP, TP, Data type, Current value, Log, Export, Tags, and Updated at. The table lists various bedroom-related objects like 'Bedroom\_Music...', 'Bedroom\_Volume', 'Bedroom\_Tem...', etc.

Group	Object name	IP	TP	Data type	Current value	Log	Export	Tags	Updated at
1/1/8	Bedroom_Music...			01.001 swi...	off				04.08.2014...
1/1/13	Bedroom_Volume			05.001 scale	0%				23.07.2014...
1/1/21	Bedroom_Tem_...			09.001 Te...	30 °C				10.07.2014...
1/1/22	Bedroom_Temp...			09.001 Te...	35 °C				25.07.2014...
1/1/23	Bedroom_Humidity			05.001 scale	48 %				10.07.2014...
1/1/38	Bedroom_W_rig...			01.001 swi...	on				22.07.2014...
1/1/39	Bedroom_W_rig...			01.001 swi...	on				23.07.2014...
1/1/40	Bedroom_W_left...			01.001 swi...	off				22.07.2014...
1/1/41	Bedroom_W_left...			01.001 swi...	on				23.07.2014...
1/1/50	Bedroom_C_Light			01.001 swi...	on				23.07.2014...
1/1/51	Bedroom_C_Lig...			05.001 scale	60%				24.07.2014...
1/1/52	Bedroom_R_light			01.001 swi...	on				23.07.2014...
1/1/53	Bedroom_FL_light			01.001 swi...	on				23.07.2014...

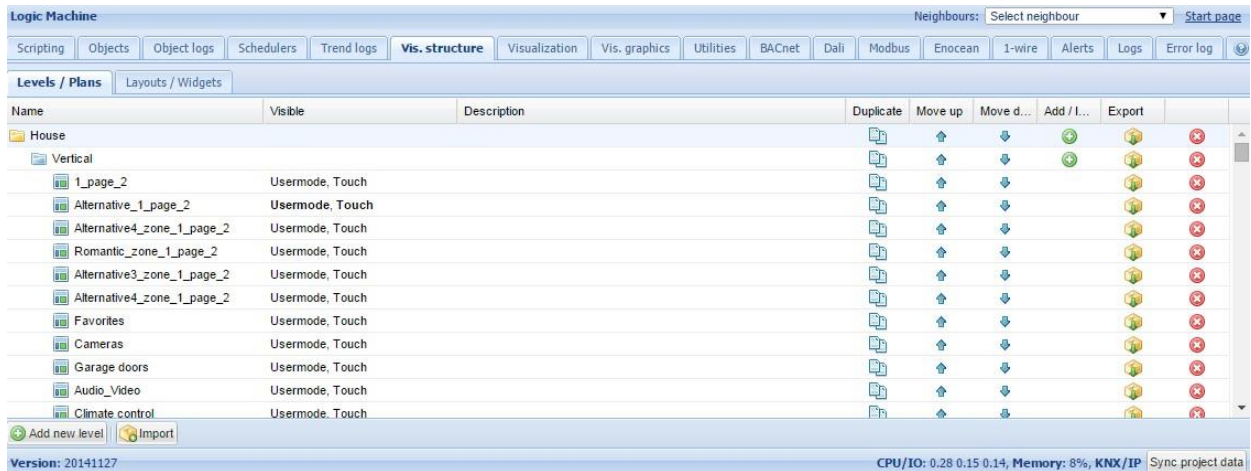
### Match mode:

*All tags* – represents AND function when all tags should match

*Any tag* – represents OR function when any one of listed should match

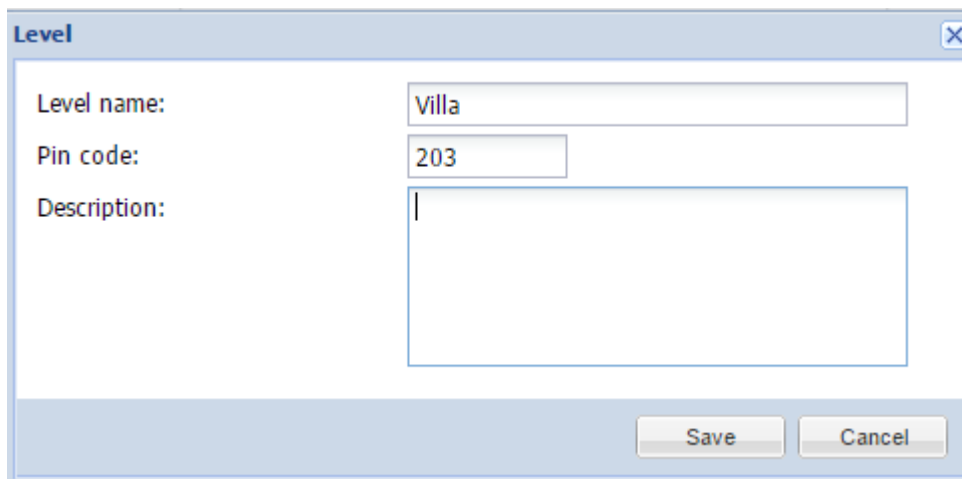
## 2.2 Visualization structure

In *Vis.structure* menu the structure of the visualization is defined and visualization backgrounds are uploaded.



### 2.2.1 Levels / Plans

By default there is *Main* level added. To add a new level/building, press “*Add new level*” button. Please note that you can limit access to this specific level by adding PIN code.



**Level**

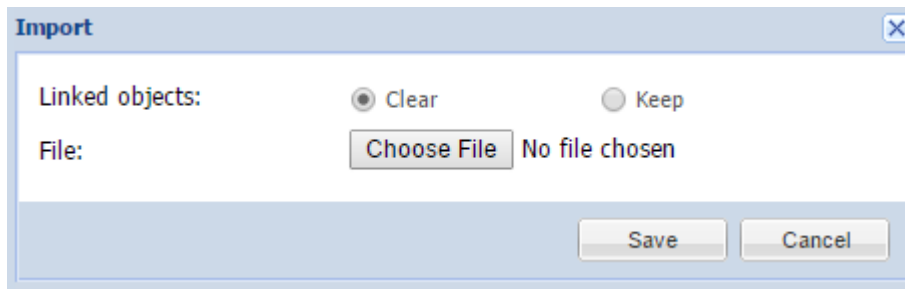
Level name: Villa



Pin code: 203

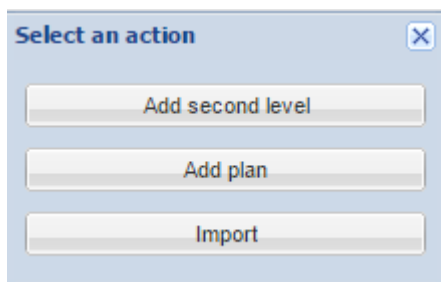
Description:

Save Cancel

You can also add a new level by importing it from the file (which is exported on other LM for example). Press *Import* button for this purpose. Object linkage can be either cleared or imported as-is.



Once a new level is added, you can add second level or upload floor pictures related to this particular building. To add a new entry, click on the green icon , to delete a specific entry press on the red icon .



When adding new plan, the following parameters should be defined:

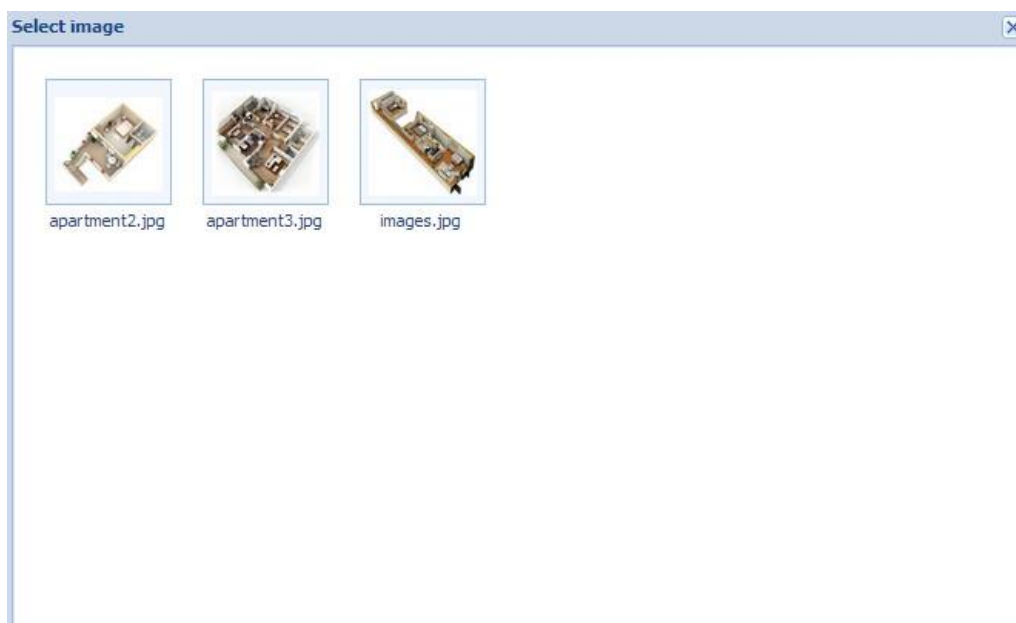






- **Parent** – name of parent level
- **Name** – name for the plan
- **Plan size** – plan size in pixels. There are predefined resolutions available when clicking on the icon on the right side of this parameter:

iPad landscape, fullscreen (XGA) 1024 x 748  
 iPad landscape, browser (XGA) 1024 x 672  
 iPad portrait, fullscreen (XGA) 768 x 1004  
 iPad portrait, browser (XGA) 768 x 928  
 Tablet landscape (WSVGA) 1024 x 600  
 Tablet portrait (WSVGA) 600 x 1024  
 Laptop / Tablet landscape (WXGA) 1280 x 800  
 Laptop / Tablet portrait (WXGA) 800 x 1280  
 Laptop / Tablet landscape (HD) 1360 x 768  
 Laptop / Tablet portrait (HD) 768 x 1360  
 Big screen (Full HD) 1920 x 1080

- **Layout** – layout for this specific plan. All object from Layout will be duplicated on this particular plan including background color and plan image if they are not defined separately for this specific plan
- **Usermode visualization [Show, Show and make default, Hide]** – visibility for this particular plan in Usermode visualization
- **Touch visualization [Show, Show and make default, Hide]**– visibility for this particular plan in Touch visualization
- **PIN code** – specify PIN code to access the plan
- **Primary background image** – choose primary background image from the list added in *Vis.graphics* → *Images/Backgrounds*
- **Secondary background image** – choose secondary background image from the list added in *Vis.graphics* → *Images/Backgrounds*
- **Background color** – choose background color of the plan
- **Touch background color** – define a color for touch visualization
- **Repeat background image** – either to show the image once or repeat it and fill the whole plan
- **Fixed primary background** – specify if first background image should be fixed. By enabling this, you can enable Parallax effect for your visualization
- **Admin only access** – enable admin only access for this floor

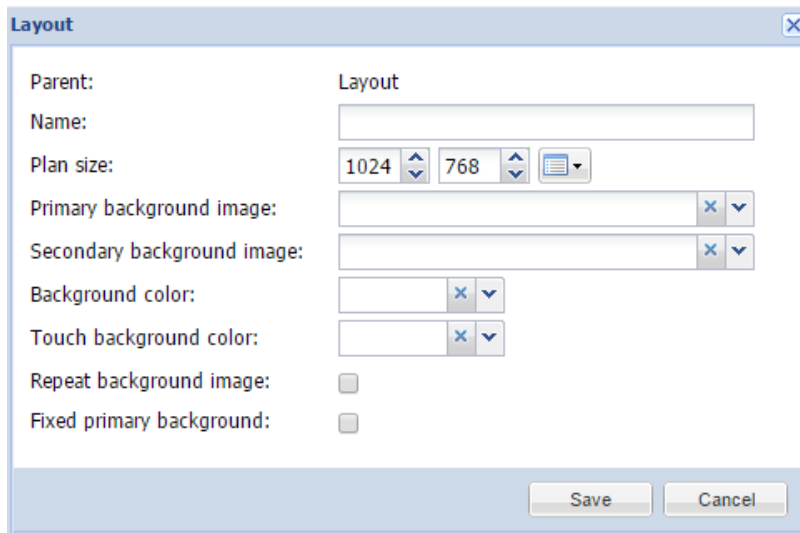
When clicking on Background image, the following window appears with background images which has to be added in *Vis.graphics* → *Images/Backgrounds* in advance:



You can duplicate the plan with all its objects and settings by pressing on  icon. Levels can be sorted by pressing  and  icons. You can export the plan structure by clicking in this icon .

## 2.2.2 Layouts / Widgets

Layouts are used as templates for further use when adding *Levels* in *Levels/Plans* tab.



Layouts will not be visible from the Usermode/Touch visualizations. When you add any background, objects to layouts level in *Visualization*, they will automatically appear on all linked Levels.

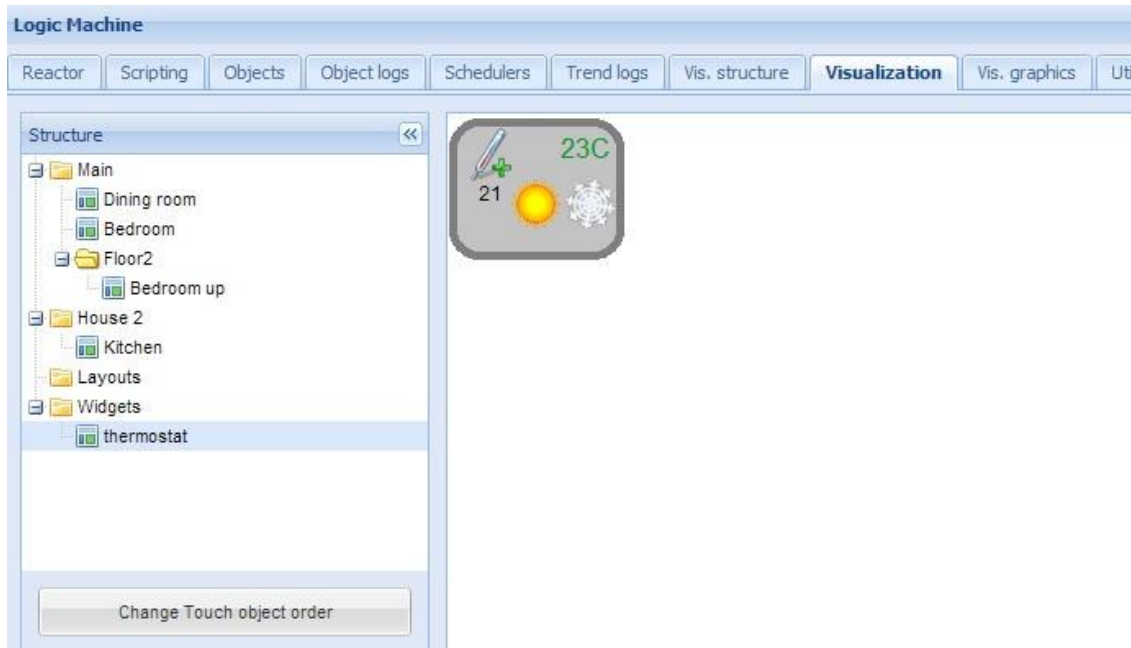
- **Parent** – name of parent layout
- **Name** – name for the layout
- **Plan size** – plan size in pixels. There are predefined resolutions available when clicking on the icon on the right size of this parameter
- **Primary background image** – choose primary background image from the list added in *Vis.graphics* → *Images/Backgrounds*
- **Secondary background image** – choose secondary background image from the list added in *Vis.graphics* → *Images/Backgrounds*
- **Background color** – choose background color of the plan
- **Touch background color** – define a color for touch visualization
- **Repeat background image** – either to show the image once or repeat it and fill the whole plan
- **Fixed primary background** – specify if first background image should be fixed. By enabling this, you can enable Parallax effect for your visualization

Widgets are used to combine several objects under one object in visualization.

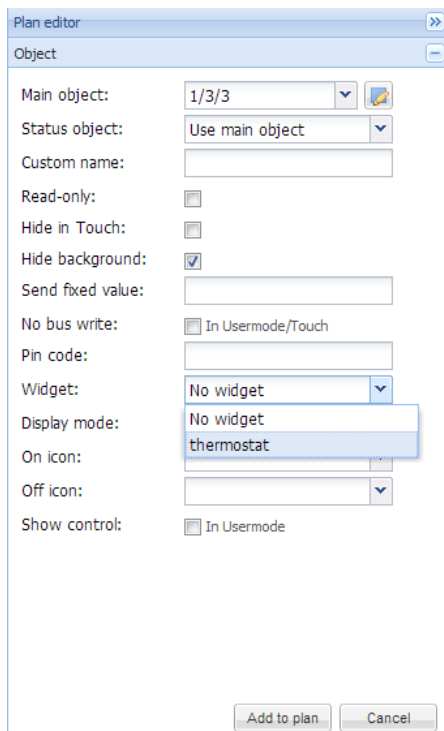
Background image for the widget should be added in *Vis.graphics* → *Images/Backgrounds* in advance.

- **Parent** – name of parent widget
- **Name** – name for the widget
- **Plan size** – plan size in pixels. There are predefined resolutions available when clicking on the icon on the right side of this parameter
- **Widget position** – default position of the widget on the screen
- **Primary background image** – choose primary background image from the list added in *Vis.graphics* → *Images/Backgrounds*
- **Background color** – choose background color of the widget
- **Touch background color** – define a color for touch visualization
- **Repeat background image** – either to show the image once or repeat it and fill the whole plan
- **Fixed primary background** – specify if first background image should be fixed. By enabling this, you can enable Parallax effect for your visualization

When you have defined the widget in *Layouts/Widgets* tab, you can add objects to it in *Visualization* tab.



When you have added necessary objects to the widget, you can choose it when adding objects for main Levels e.g. Bedroom in Main level.




Once added, you can try out the widget in *Usermode visualization* by clicking on added object (temperature sensor icon on the left), the widget appears on click.

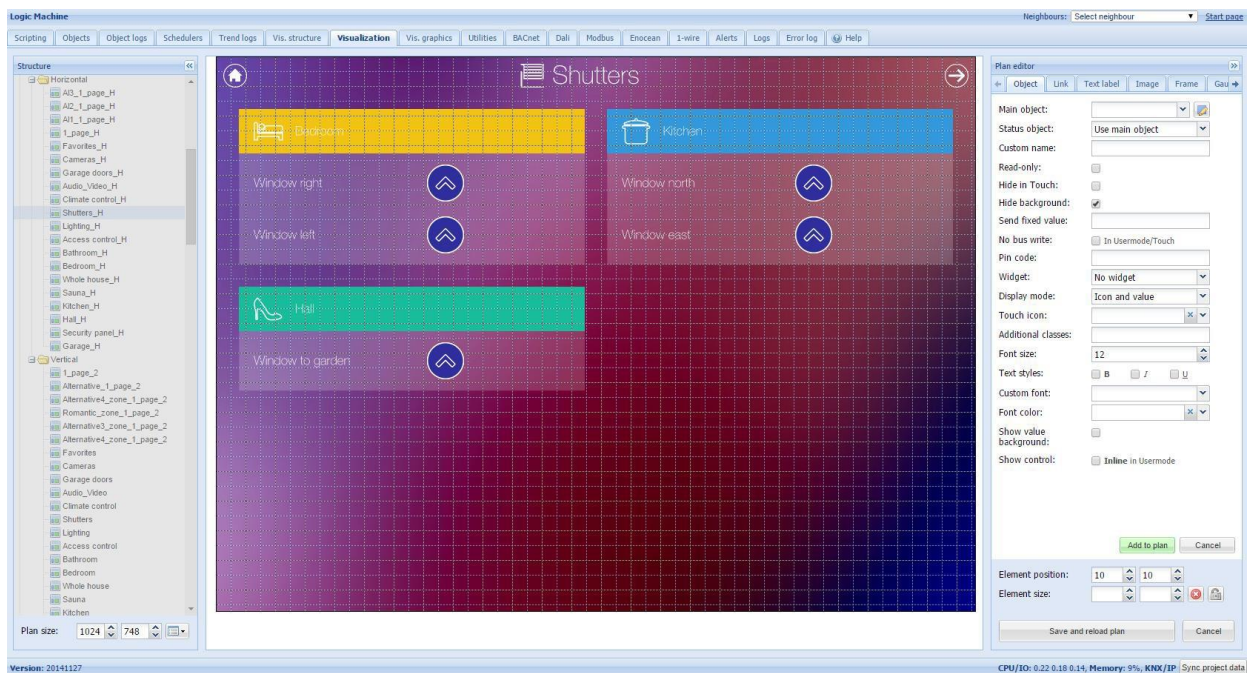




## 2.3 Visualization

After the building and floor structure is defined in *Vis.structure* tab, it is visualized in *Visualization* tab. Controlled and monitored objects can be added and managed in this section.

Both side bars can be minimized by pressing on  icon making the map more visible especially on small displays.



### 2.3.1 Plan editor

*Plan editor* is located on the right side of the visualization map. By clicking on *Unlock current plan for editing* button, the following main menus appear for configuration:

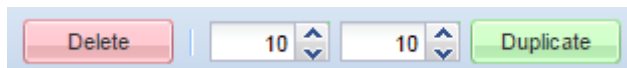
- **Object** – new object to be added to the map
- **Link** – linking several floors with special icons
- **Text Label** – text label to put on visualization

- **Image** – Add specific image on the visualization
- **Frame** – add frame object to the visualization
- **Gauge** – Metering gauge
- **Camera** – IP web camera integration into visualization
- **Graph** – Real-time graph to monitor value of scale-type objects

While in editing mode, on the left side you can change plan resolution on the fly.



When some object is selected and in the editing mode, there appears Delete / Duplicate buttons so you can either delete or copy the object.



### 2.3.2 Object

- **Main object** – list of existing group addresses on KNX/EIB bus, the ones available for configuration in *Objects* tab
- **Status object** – list of status objects on KNX/EIB bus
- **Custom name** – Name for the object
- **Read-only** – the object is read-only, no write permission
- **Hide in touch** – do not show this object in *Touch Visualization*
- **Hide background** – Hide icon background
- **Send fixed value** – Allows to send specific value to the bus each time the object is pressed
- **No bus write** – do not send telegram into the bus once clicked on this object in Usermode/Touch visualizations
- **PIN code** – PIN code which will be asked to provide when click on this object to perform group write
- **Widget** – specify widget which will be launched when click on this object
- **Display mode [icon and value; icon; value]** – how to display the object
- **Touch icon** – icon for Touch visualization
- **On icon** – On state icon for binary-type objects. Icons library is located in *Vis.graphics*
  - ➔ *Icons tab*
- **Off icon** – Off state icon for binary-type objects. Icons library is located in *Vis.graphics*
  - ➔ *Icons tab*

- **Additional classes** – additional CSS classes for the element
- **Show control** – scale-type object defining either to show the control visualization without icon; specific setting in Usermode



Plan editor

Object Link Text label Image Frame Gau

Main object: [dropdown] [icon]

Status object: Use main object [dropdown]

Custom name: [text input]

Read-only:

Hide in Touch:

Hide background:

Send fixed value: [text input]

No bus write:  In Usermode/Touch

Pin code: [text input]

Widget: No widget [dropdown]

Display mode: Icon and value [dropdown]

Touch icon: [dropdown] [x] [dropdown]

Additional classes: [text input]

Font size: 12 [spinners]

Text styles:  B  I  U

Custom font: [dropdown]

Font color: [dropdown] [x] [dropdown]

Show value background:

Show control:  **Inline** in Usermode

[Add to plan] [Cancel]

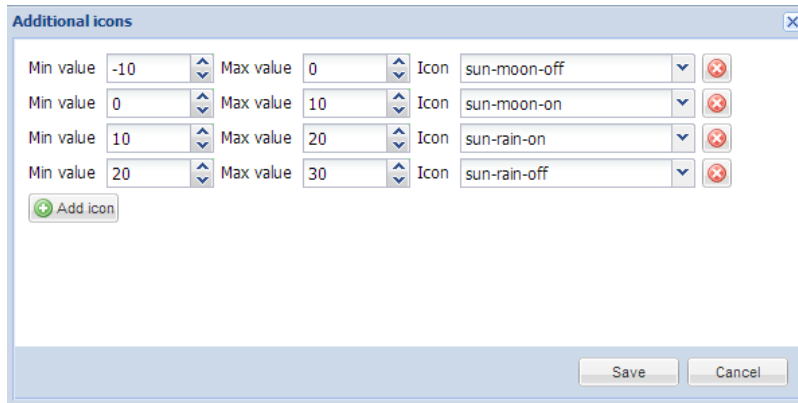
Element position: [spinners] [spinners]



Element size: [spinners] [spinners] [x] [icon]

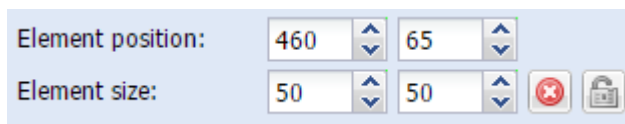
[Save and reload plan] [Cancel]

For scale-type objects additional button appears while specifying parameters – *Additional icons*.

It's possible to define different icons for different object values in the window.



On the bottom of setting you can see element position and size parameters, which you can freely change. By pressing  you will reset size. By pressing  you can lock aspect ratio.



Once the object parameters are defined, press *Add to plan* button and newly created object will appear. You can move the object to the location it will be located. Note that while being in editing mode, the object will not work. When all necessary objects are added, press *Save and reload plan* button so the objects starts functioning.

You can edit each added object when clicking on it while in Editing mode.

### 2.3.3 Link

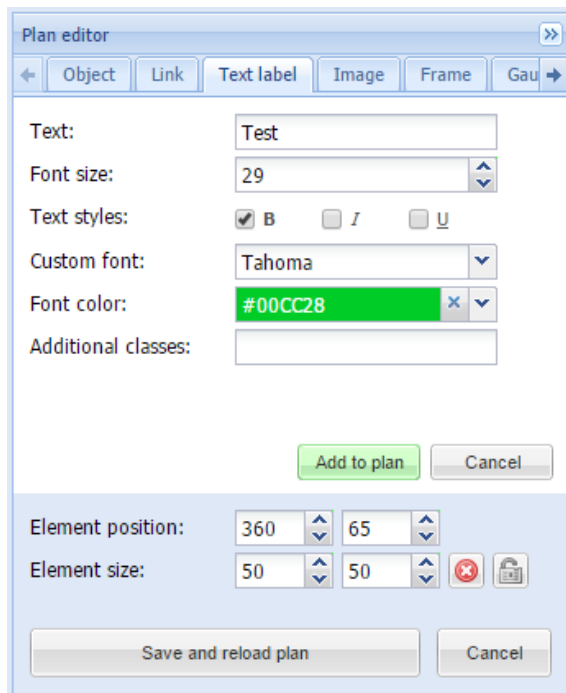
In order to make visualization more convenient, there are floor links integrated. You can add icons or text on the map, which links to other floors.

- **Link to** – Linked plan name or link to Schedulers / Trends or External Link (use the link in form <http://www.openrb.com>)
- **Custom name** – name for the link
- **Hide in touch** – do not show this object in *Touch Visualization*
- **Hide background**– Hide icon background
- **Display mode [Icon; Value]** – either to show icon or its value
- **Icon** – Icon which will be showed in visualization (if chosen, no further parameters are available).
- **Active state icon** – active state icon if the link is to current plan (in case you have several smaller plans on one visualization and want to display the current one)
- **Additional classes** – additional CSS classes for the element

Once the floor link parameters are defined, press *Add to plan* button and newly created object will appear. You can move the object to the location it will be located. Note that while being in editing mode, the object will not work. Press on *Save and reload plan* button so the objects starts functioning.

### 2.3.4 Text Label

Text labels can be added and moved across the visualization map.



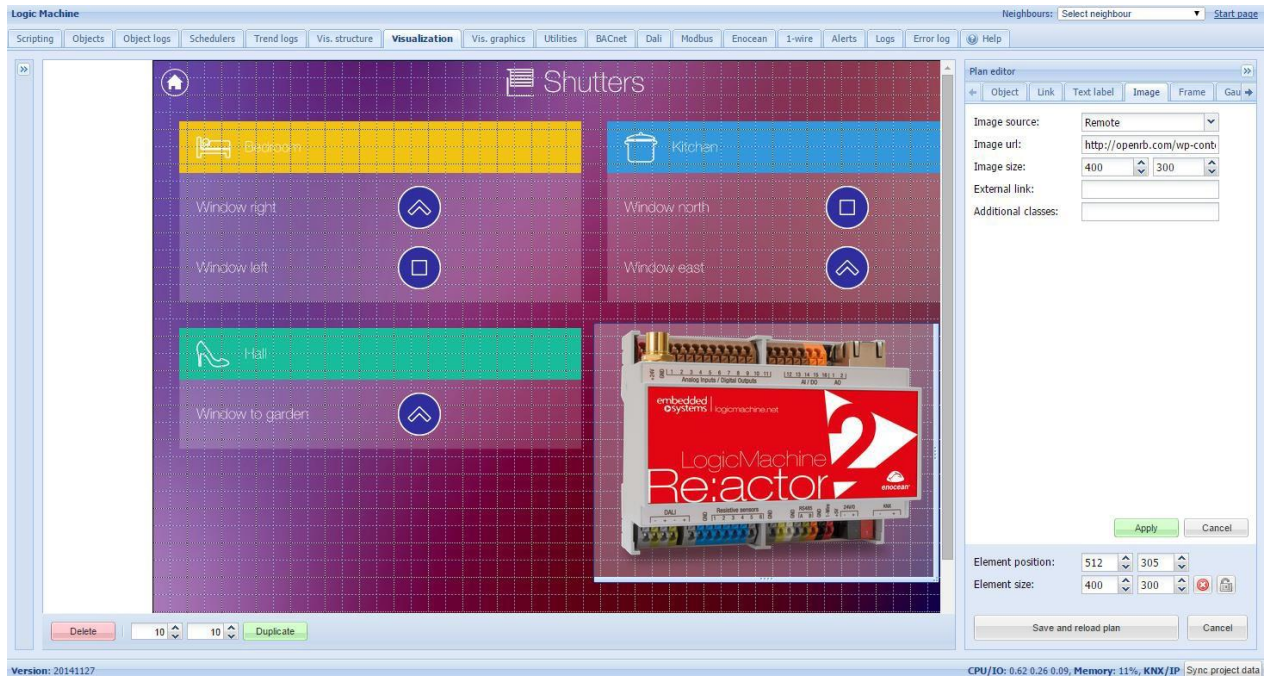
- **Text** – label text
- **Font size** – label font size
- **Text style** – style of the text – bold, italic, underscored
- **Custom font** – font name
- **Font color**– label font color
- **Additional classes** – additional CSS classes for the element

Once the label parameters are defined, press *Add to plan* button and newly created object will appear on the map. You can move the object to the location it will be located. Press on *Save and reload plan* button so the objects starts functioning.



## 2.3.5 Image

Image section allows adding images from the internet into the visualization map. Useful for example, to grab dynamic weather cast images.



- **Image source [Local; Remote]** – image source location
- **Source url / Select image** – Source URL of the image or image from local database
- **Image size** – width and height of the image
- **External link** – external link URL when pressing on the image
- **Additional classes** – additional CSS classes for the element

Once the image parameters are defined, press *Add to plan* button and newly created object will appear on the map. You can move the object to the location it will be located. Press on *Save and reload plan* button so the objects starts functioning.

## 2.3.6 Frame

With Frame functionality you can integrate 3<sup>rd</sup> party applications, we resources or local Trends/Schedulers into one common visualization.

- **Source [Url, Schedulers; Trend logs]** – frame source
- **Url** – Source URL of the page to integrate
- **Frame size** – width and height of the frame
- **Custom name** – custom name of the frame object

- **External link** – external link URL when pressing on the image
- **Hide in Touch** – defines either to hide frame in Touch visualization
- **Additional classes** – additional CSS classes for the element

Plan editor

Object Link Text label Image **Frame** Gau

Source: Schedulers

Frame size: 480 320

Custom name:

Hide in Touch:

Additional classes:

Add to plan Cancel

Element position: 10 10

Element size:

Save and reload plan Cancel

Plan editor

Object Link Text label Image **Frame** Gau

Source: Url

Url:

Frame size: 480 320

Custom name:

Hide in Touch:

Additional classes:

Add to plan Cancel

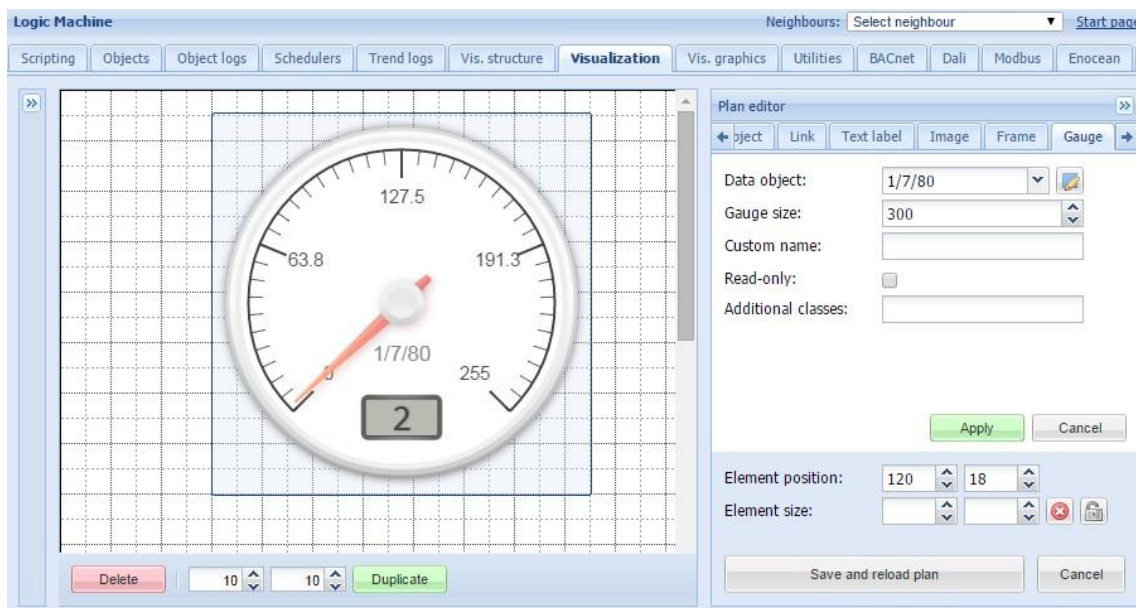
Element position: 10 10

Element size:

Unlock current plan for editing Cancel

## 2.3.7 Gauge

Gauge allows visualizing and changing object value in the gauge.

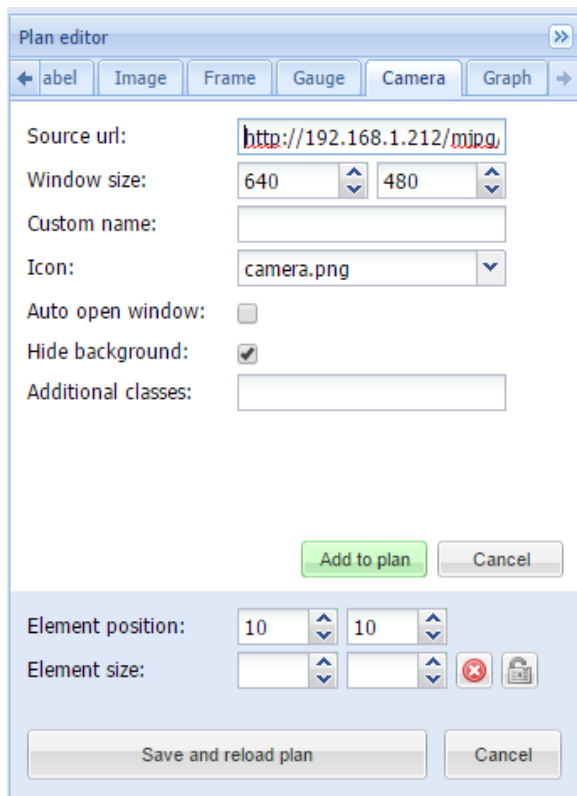


- **Data object** – KNX group address
- **Gauge size** – size of the gauge
- **Custom name** – custom name for the object
- **Read only** – make the gauge read only
- **Additional classes** – additional CSS classes for the element

Once the gauge parameters are defined, press *Add to plan* button and newly created object will appear on the map. You can move the object to the location it will be located. Press on *Save and reload plan* button so the objects starts functioning.

## 2.3.8 Camera

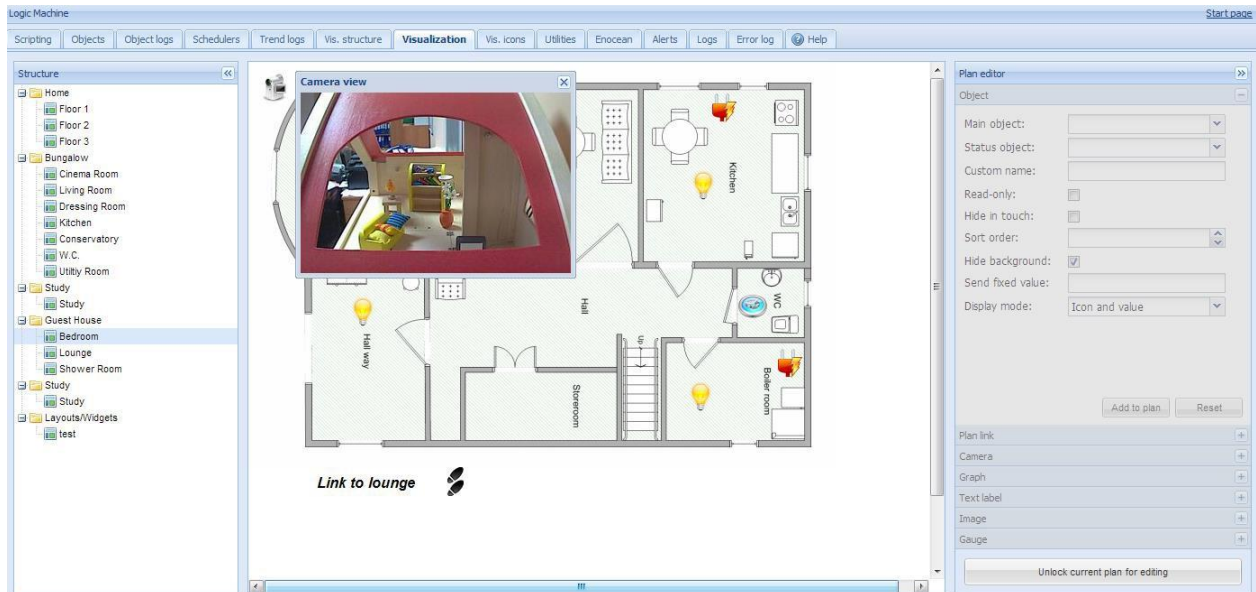
LogicMachine supports third party IP web camera integration into its visualization.



- **Source url** – source address of the video stream
- **Window size** – size of the window of camera picture
- **Custom name** – name for the object
- **Icon** – icon for the object
- **Auto open window** – automatically open video window, otherwise it is launched by click on the icon
- **Hide background** – hide icon background
- **Additional classes** – additional CSS classes for the element

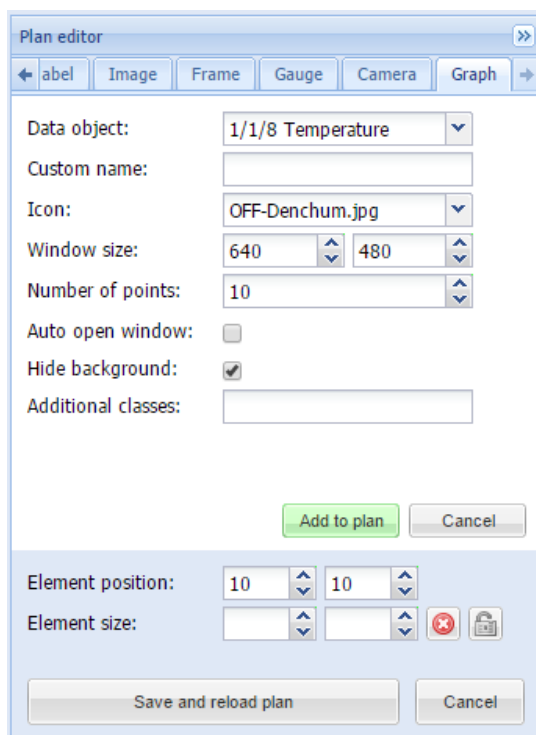
**Note!** If IP camera requires user name and password, enter the url in form ***http://USER:PASSWORD@IP***

Once the camera parameters are defined, press *Add to plan* button and newly created object will appear in look of video camera. You can move the object to the location it will be located. Note that while being in editing mode, the object will not work. Press on *Save and reload plan* button so the objects starts functioning. By pressing on video camera, a new sub-window appears with a picture from your IP web camera. The window can be freely moved to other location so not to cover other visualization objects.



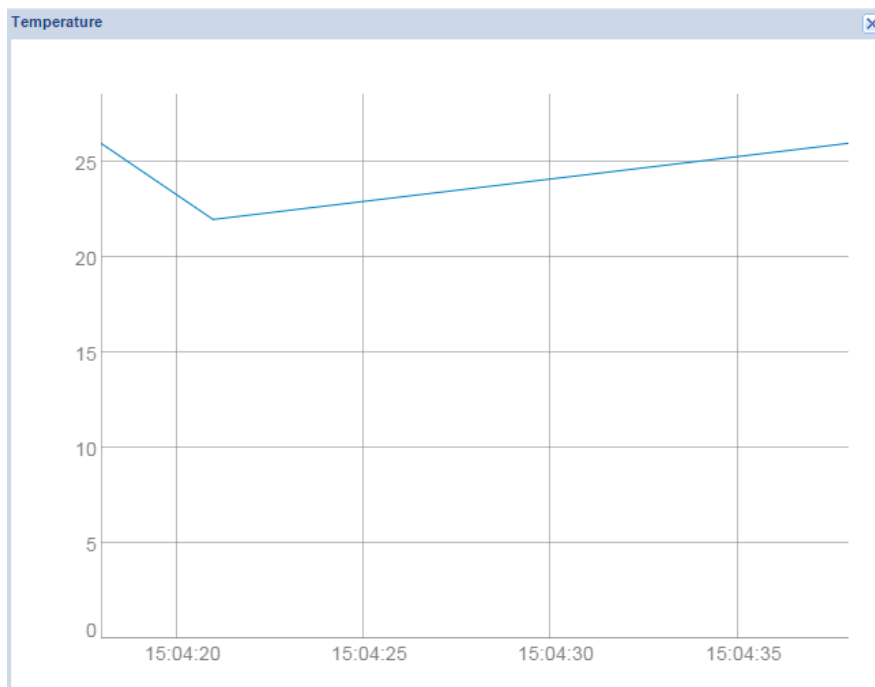
## 2.3.9 Graph

Real-time graphs can be integrated into visualization system to monitor the current and old value of scale-type objects. Make sure logging is enabled for the object in *Object* tab which values is planned to be shown in the graph.



- **Data object** – group address of the object
- **Custom name** – name of the object
- **Icon**– icon to launch the graph
- **Windows size** – size of the graph window
- **Number of points** – number of data points to show in the graph
- **Auto open window** – graph window is automatically opened
- **Hide background** – hide icon background
- **Additional classes** – additional CSS classes for the element

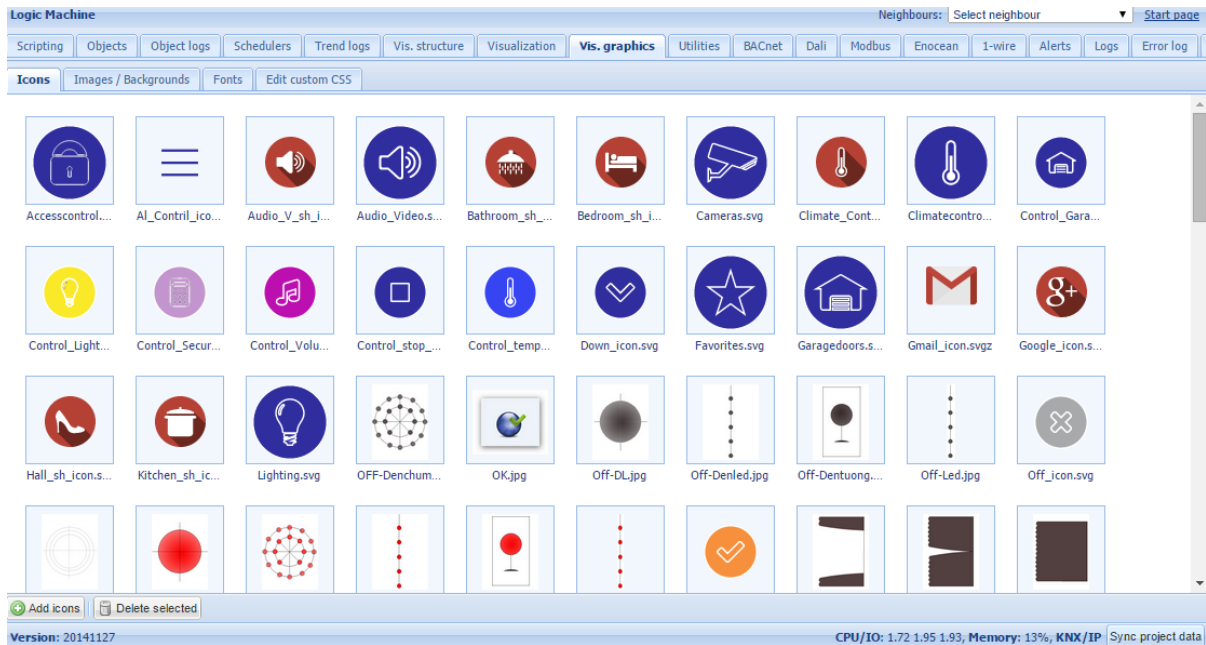
Once the graph parameters are defined, press *Add to plan* button and newly created object will appear. You can move the object to the location it will be located. Note that while being in editing mode, the object will not work. Press on *Save and reload plan* button so the objects starts functioning.



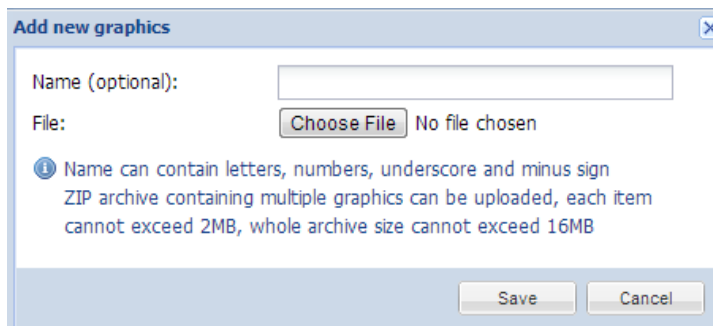


## 2.4 Vis.graphics

The list of predefined icons, list of images and backgrounds is available in *Vis.graphics* tab.



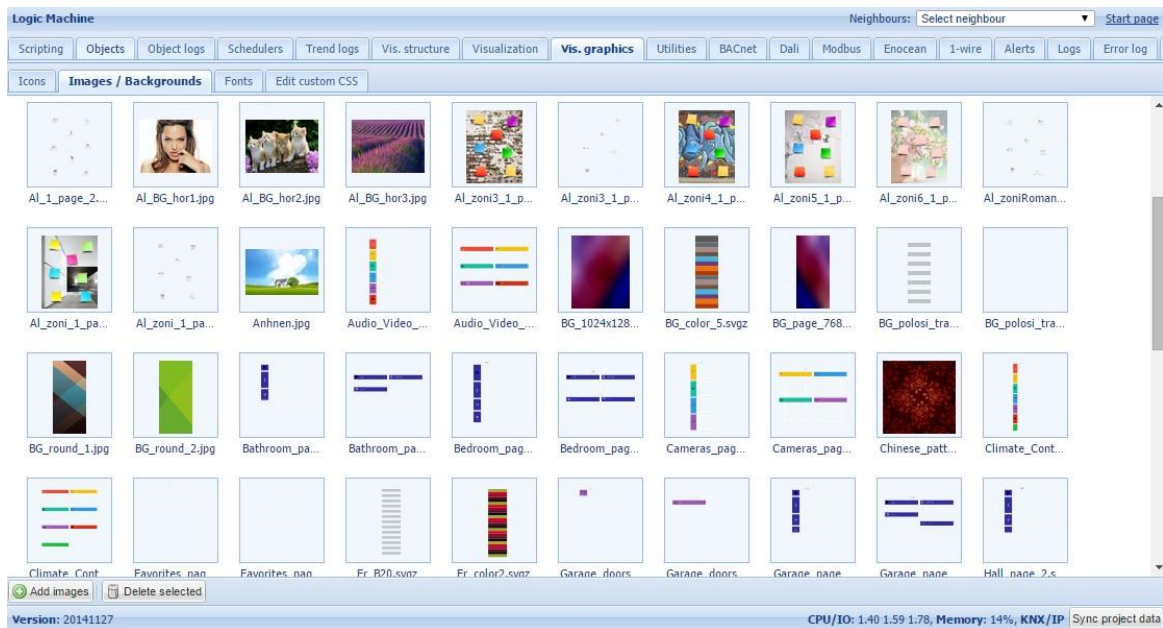
Press on *Add icons* button to add a new entry. The system accepts any size icons. GIF is also supported.



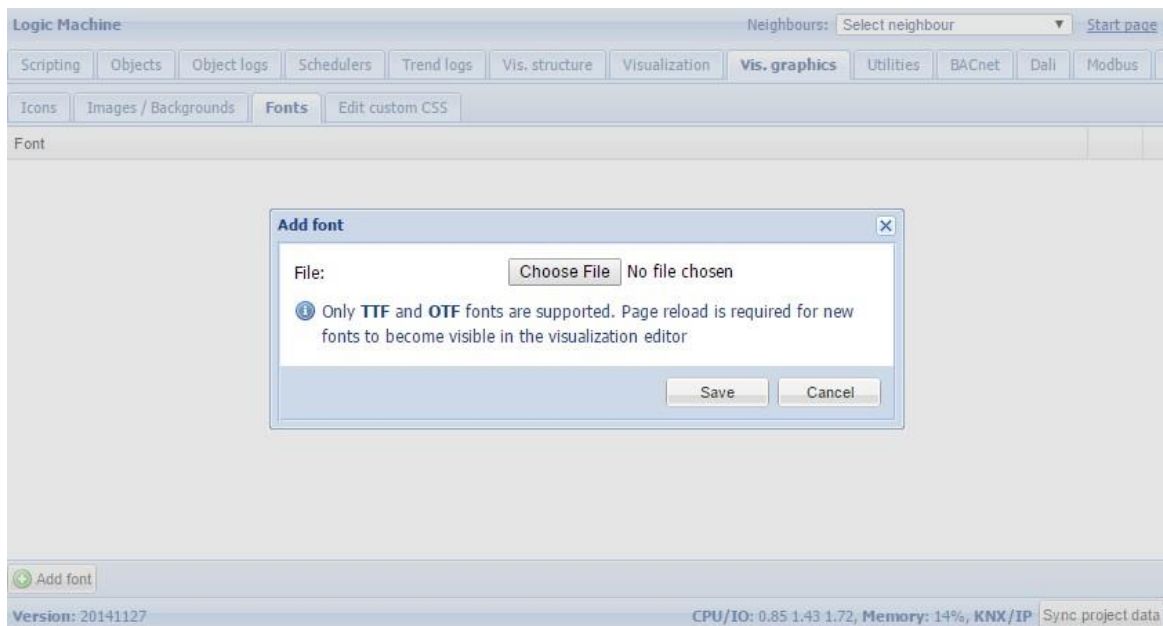
- **Name (optional)** – the name of the icon
- **File** – Icon file location

*Images/Backgrounds* tab is used to upload image files for visualization purposes





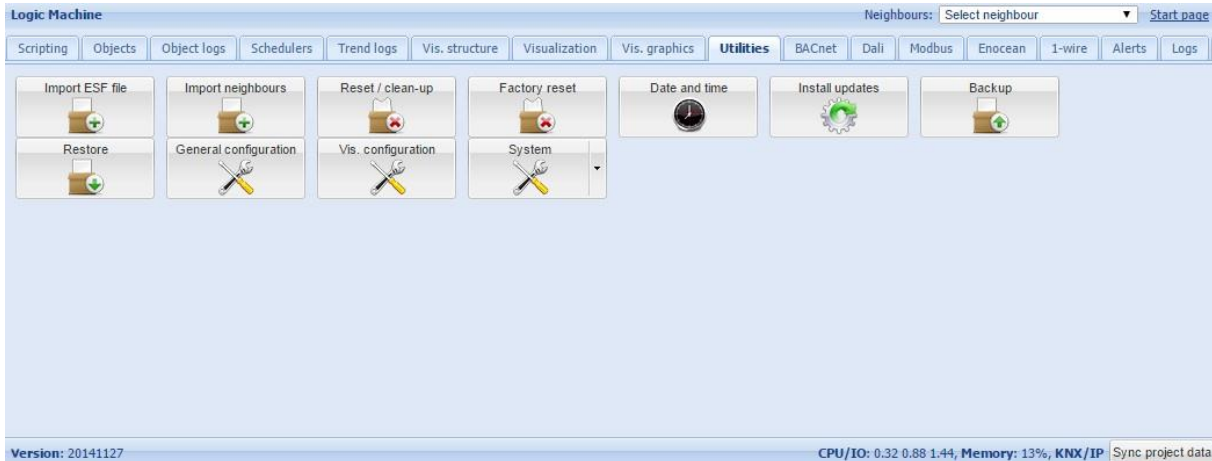
In *Fonts* tab you can add custom fonts



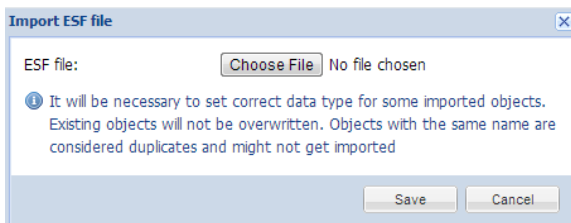
In *Custom CSS* tab you can add your CSS style for the visualization which you can use when adding elements into visualization, so any elements of Look and Feel is customizable with this solution.

## 2.5 Utilities

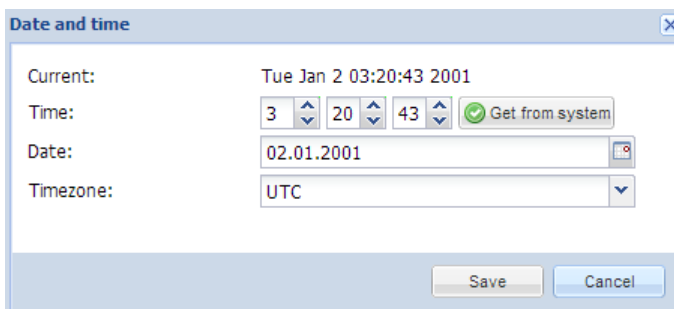
There are following utilities in the tab available:



**Import ESF file**– imports ETS object file. It will be necessary to set correct data types for some imported objects. Existing objects will not be overwritten. Objects with the same name are considered duplicates and might not be imported.

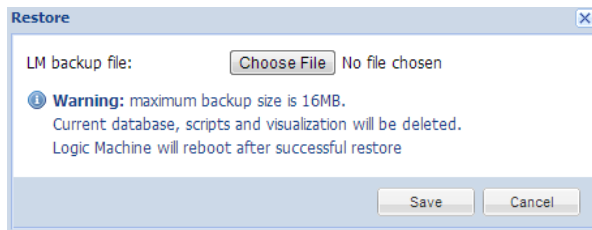


**Date and time** – data and time settings

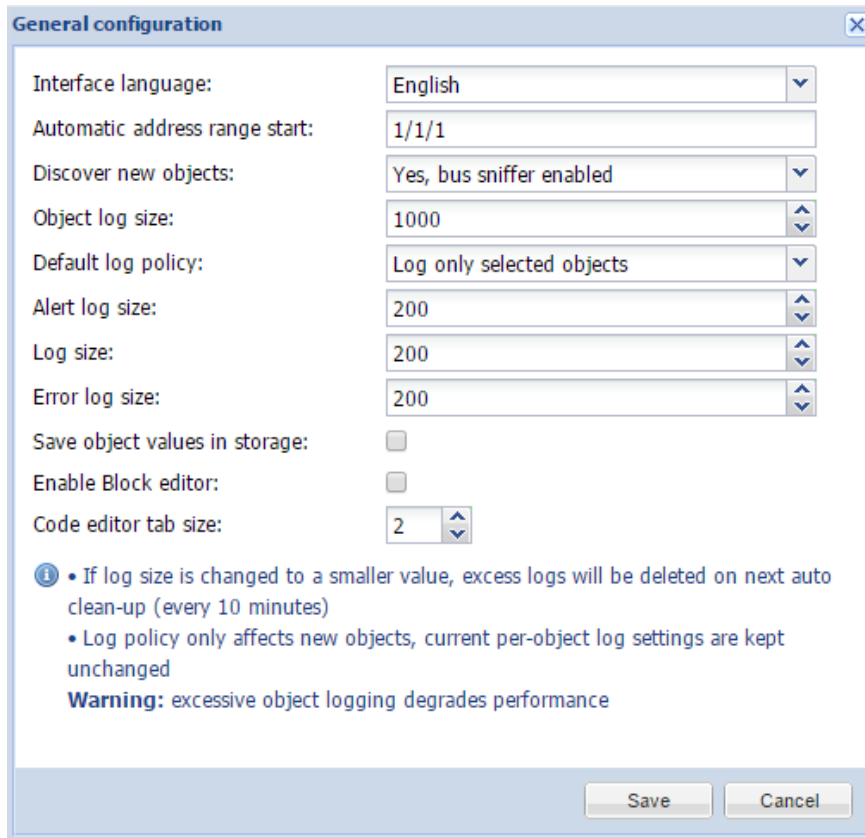


**Backup** – backup all objects, logs, scripts, visualization.

**Restore**– restore configuration from backup



## General Configuration – system general settings



- **Interface language** – interface language
- **Automatic address range start** – start group address when using automatic addressing in scripts, IO settings and other
- **Discover new objects**– either KNX object sniffer is enabled. If yes, once triggered all new objects will appear automatically in the Objects list
- **Object log size** – max count of object logs
- **Default log policy**– either to log status change for all objects or only for checked objects
- **Alert log size** – max count of alerts logged
- **Log size** – max count of logs
- **Error log size** – max count of errors logged
- **Enable block editor** – either to enable scripting block editor

- **Save object values in storage** – save object values in REDIS database to access from apps
- **Code editor tab size** – specify tab size to be used in the scripting editor

**Note!** If log size is changed to a smaller value, excess logs will be deleted on next auto clean-up (every 10 minutes)

**Note!** Log policy only affects new objects, current per-object log settings are kept unchanged

**Warning!** Excessive object logging degrades LogicMachine performance. Please follow this example to store logs on local FTP or automatically export to external FTP server:

<http://openrb.com/example-export-last-hour-csv-object-log-file-to-external-ftp-server-from-lm2/>

**Vis. Configuration** – visualization specific settings

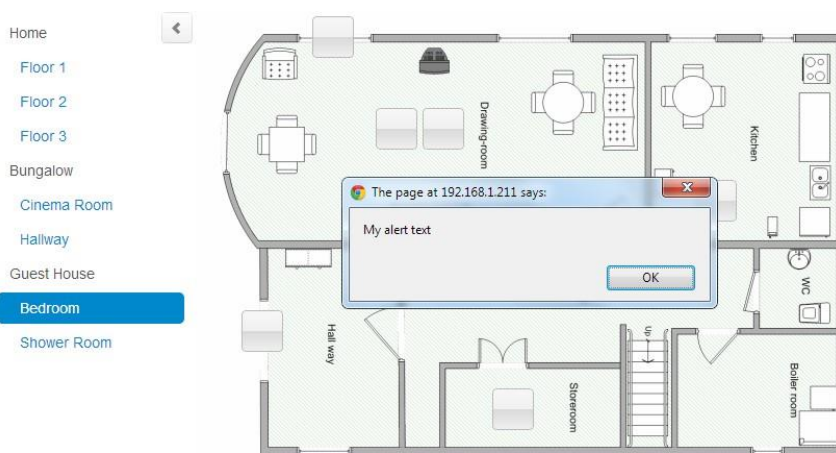
The screenshot shows a 'Vis. configuration' dialog box with the following settings:

- Usermode sidebar: Show as overlay (auto-hide) [dropdown]
- Usermode view: Center plans, enable auto-sizing [dropdown]
- Usermode page transition: No transition [dropdown]
- Usermode auto-size upscaling:
- Usermode background color: [color picker]
- Usermode background image: [image picker]
- Custom font: [font picker]
- Use dark theme:
- Enable swipe gesture:
- Disable object click animation:
- Dim inactive visualization after: [spinner] minutes
- Dimming level: 80 [spinner] %
- Show alerts in Usermode:

Buttons: Save, Cancel

- **Usermode sidebar** [*Show docked, Show as overlay (auto-hide), Hide (fullscreen mode)*] – visibility of sidebar when in Usermode Visualization
- **Usermode view** [*Align plans to top left, no size limit; Center plans, limit size; Center plans, enable auto-sizing; Center horizontally, auto-size width*] – defines the look of Usermode visualization

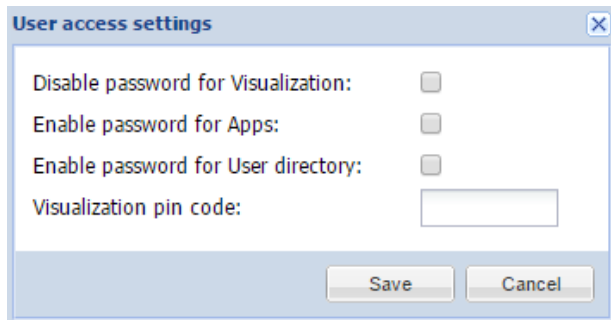
- **Usermode page transition [Flip X; Flip Y; Shrink; Expand; Slide up; Slide down, Slide left; Slide right; Slide up big; Slide down big; Slide left big; Slide right big]** – transition when changing plans in visualization
- **Usermode auto-size upscaling** – enable this to scale the visualization automatically on each display device. Please note to use SVG format images and icons so the quality is not affected by upscaling
- **Usermode background color** – background color in usermode visualization
- **Usermode background image** – specific image for usermode visualization
- **Custom font** – select custom font to use in visualization
- **Use dark theme** – check to enable dark theme in both usermode and touch visualizations
- **Enable swipe gesture** – check to enable swipe gesture to move across plans from your touch device
- **Disable object click animation** – disable object click animation
- **Dim inactive visualization after** – define time in minutes after which the screen will be dimmed where visualization is opened
- **Dim level** – dim level for the display
- **Show alerts in Usermode** – once new Alerts is triggered it will pop-up in User mode visualization



## 2.6 User access

User access management is located in *User access* tab.

### User access settings

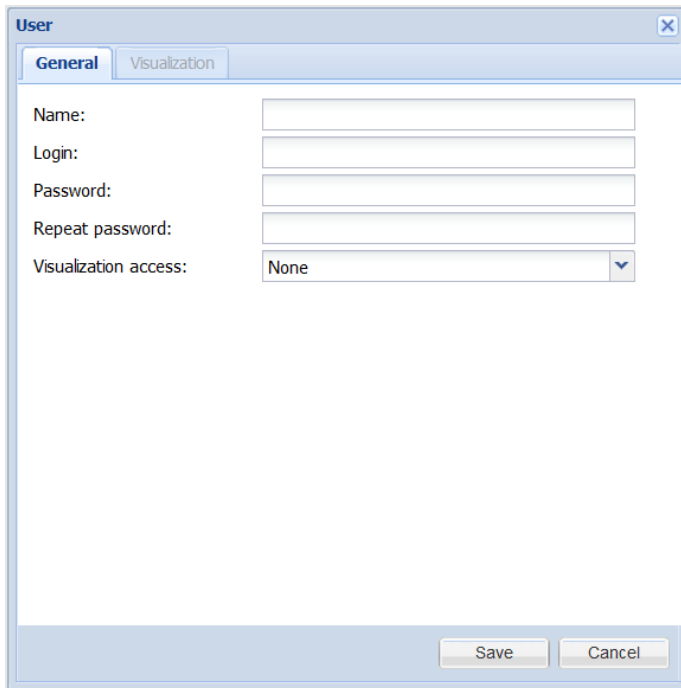


- **Disable password for Visualization** – disable password access for visualization
- **Enable password for Apps** – enable password to enter the initial Apps screen of LogicMachine (when entering <http://IP> in the web-browser)
- **Enable password for User directory** – enable password access for User directory
- **Visualization PIN code** – global PIN code visualization

### User directory

You can upload files which are accessible through the main web server via FTP. In *System config* --> *Services* --> *FTP server* you have to enable the FTP server and set password for apps user. Then you can upload files into user directory which can then be accessed at <http://IP/user>. Password authentication for this directory can be enabled/disabled in *Logic Machine* --> *User access* --> *User access settings*.

## Adding users



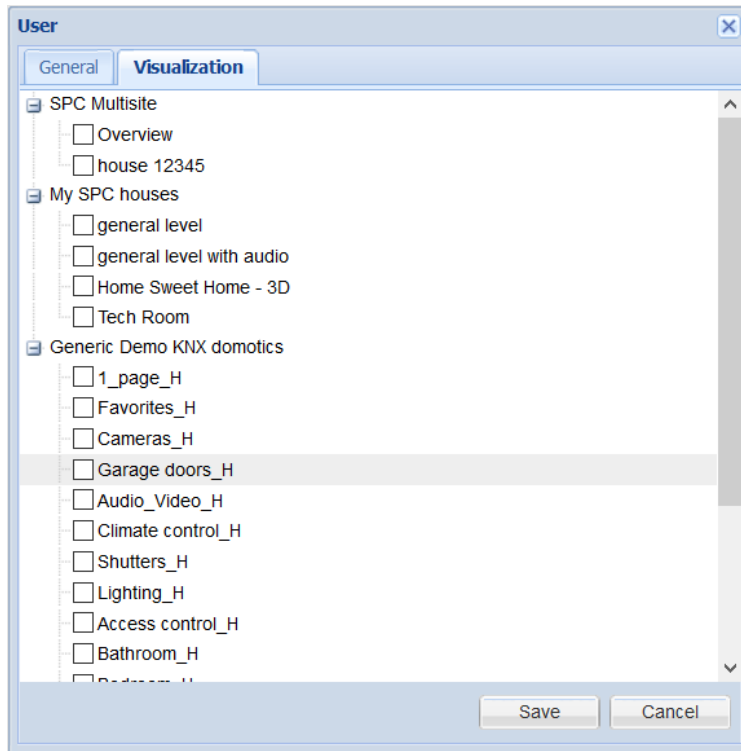
The screenshot shows a 'User' dialog box with the following fields:

- Name:
- Login:
- Password:
- Repeat password:
- Visualization access:

Buttons: Save, Cancel

- **Name** – name of the user
- **Login** – login name
- **Password** – password
- **Repeat password** – repeat password
- **Visualization access [None, Partial, Full]** – type of Visualization access
  - None* – access is limited
  - Partial* – access is granted for specific visualization floors
  - Full* – full access





### Access logs

Shows a list of access logs

## 2.7 Alerts

In *Alert* tab a list of alert messages defined with **alert** function in scripts is located. The messages are stored on the compact flash. Information on system start and KNX connection status messages are also automatically displayed in this window.

Alert time	Message
01.01.1970 10:20:42	read error
01.01.1970 10:20:22	read error
01.01.1970 10:20:02	read error
01.01.1970 10:12:58	read error

Page 1 of 93      Displaying alerts 1 - 25 of 2317

On the communication panel you can jump by pages and reload the page.



## 2.8 Error log

Error messages from scripts are displayed in *Error log* tab.

Logic Machine Start page

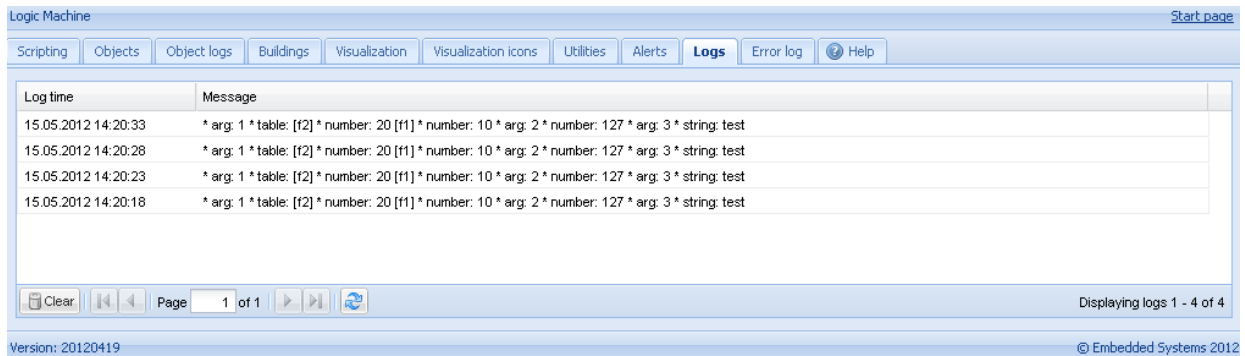
Scripting   Objects   Object logs   Schedulers   Trend logs   Vis. structure   Visualization   Vis. icons   Utilities   Enocan   Alerts   Logs   **Error log**   Help

Error time	Script name	Error description
22.02.2013 09:29:51	init-script	Line 6: attempt to index global 'temperature' (a nil value)
21.02.2013 08:08:46	weather_data_Yahoo	Line 20: attempt to index field 'current' (a nil value)
16.02.2013 07:12:08	weather_data_Yahoo	Line 20: attempt to index field 'current' (a nil value)
15.02.2013 23:51:55	weather_data_Yahoo	Line 20: attempt to index field 'current' (a nil value)
12.02.2013 15:23:39	init-script	Line 6: attempt to index global 'temperature' (a nil value)
11.02.2013 18:48:30	init-script	Line 6: attempt to index global 'temperature' (a nil value)
11.02.2013 17:47:40	init-script	Line 6: attempt to index global 'temperature' (a nil value)
08.02.2013 20:00:02	event-Volume down	cannot open //lib/genohm-scada/scripting/57.lua: No such file or directory
08.02.2013 19:53:14	init-script	Line 6: attempt to index global 'temperature' (a nil value)

Clear   Page 1 of 8      Displaying errors 1 - 25 of 200

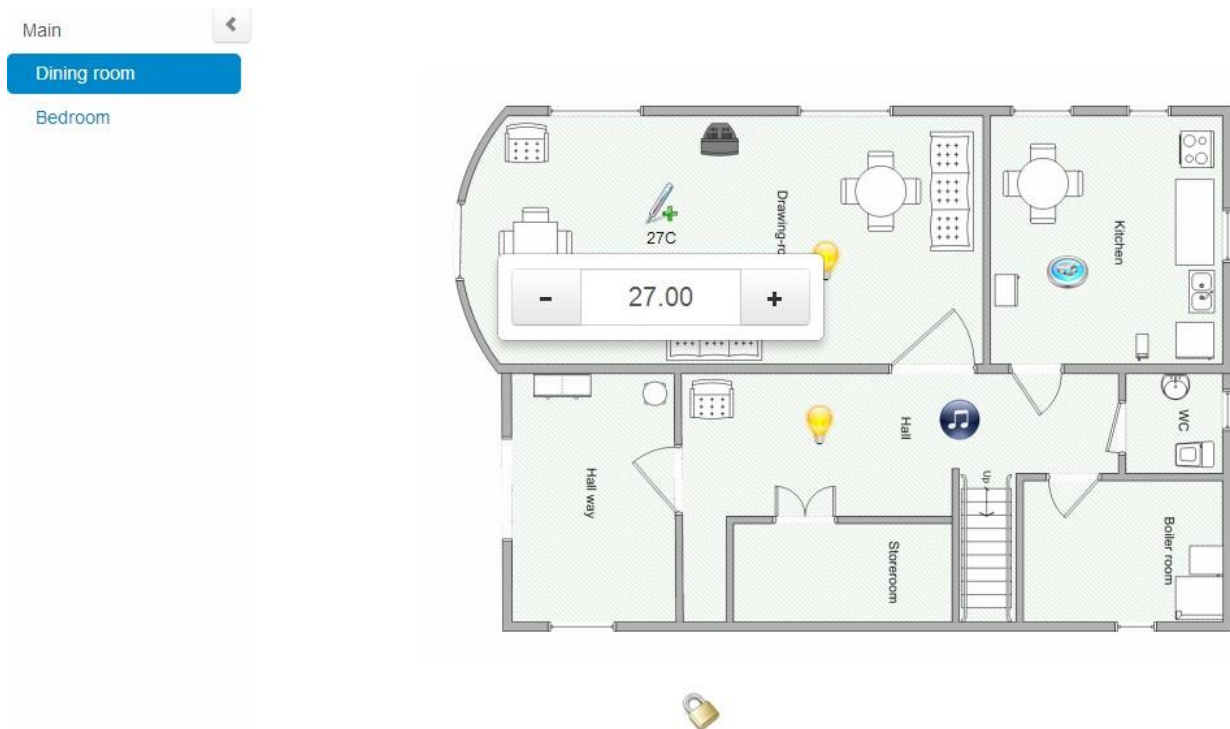
## 2.9 Logs

Logs can be used for scripting code debugging. The log messages appear defined by *log* function.



## 3. User mode visualization

*User mode visualization* contains created visualization maps. A password and users to access specific visualization maps can be created in *Logic Machine* --> *User access*



### 3.1 Custom design Usermode visualization

Through Custom CSS styles it is possible to create different type of visualization maps. Custom CSS can be done in *Vis. Graphics* → *Edit custom CSS* tab. For more information of CSS examples please see our user forum:

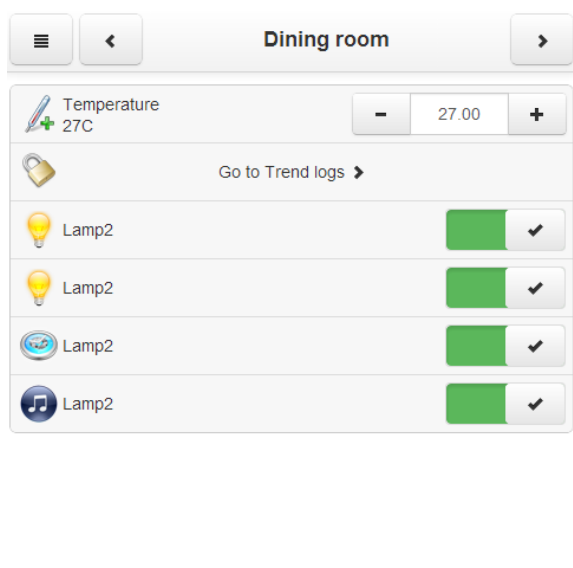
<http://forum.logicmachine.net/>



## 4. Touch visualization

Touch visualization is designed for iPhone/iPod/iPad/Android touch screen devices. All objects which are added in *Logic Machine* configuration by default are visible in touch visualization (if there is no *Hide in touch* option enabled).

The main window is Building view where you can choose which Floor from which Building to control. Once you choose the floor, all objects which are assigned to it, are listed and can be controlled.



### Launching visualization on touch device (iPad in this case)

- Make sure your iPad is connected wirelessly to the LogicMachine (either through separate access point or directly to Logic Machine's USB WiFi adapter).
- In the browser enter Logic Machine's IP (default 192.168.0.10).
- Click on the Touch Visualization icon.
- Save the application as permanent/shortcut in your iPad