

# SPCway Plus Vizualisation Setup guide

**Adapted for SPCway Plus firmware 1.4** 



# **Table of contents**

1.	Quic	k guide - create visualization for iPad/PC	3
2.	Conf	iguration	11
2	.1	Objects	11
2	.1.1	Object parameters	11
2	.1.2	RGB group object	13
2	.1.3	Object visualization parameters	14
2	.1.4	Change the object state	19
2	.1.5	Custom values	19
2	.1.6	Object control bar	20
2	.1.7	Filter objects	21
2	.2	Visualization structure	22
2	.2.1	Levels / Plans	22
2	.2.2	Layouts / Widgets	26
2	.3	Visualization	29
2	.3.1	Plan editor	29
2	.3.2	Object	30
2	.3.3	Link	32
2	.3.4	Text Label	34
2	.3.5	Image	35
2	.3.6	Frame	35
2	.3.7	Gauge	37
2	.3.8	Camera	37
2	.3.9	Graph	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
2	llcor	modevisualization	51
J. 2	1	Custom design Usermode visualization	52
3	. 1		52
4.	Touc	h visualization	53



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

#### Import objects

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

Logic Machine		Neighbours: Select neighbour
Scripting    Objects    Object logs    Schedulers    Trend logs    Vis. structure    Visualizatio	on Vis. graphics Utilities Alerts Logs Error log 😡 Help	
Import ESF. Re Import neighbours Reset / clean-up Factory rese	Date and time Instal updates Backup Res	tore General configuration Vis. configuration System
	Import ESF file 🔀	
	ESF file: Choose File No file chosen  The twill be necessary to set correct data type for some imported objects. Existing objects will not be overwritten. Objects with the same name are considered duplicates and might not get imported  Save Cancel	
1921681.15/cqi-bin/scada/index.cqi#		CPU/J0: 0.03 0.14 0.13, Memory: 7%, K0K/JP [Sync project.data

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.

ripting	Objects	Object logs	Schedulers	Trend logs	Vis. struct	ure	Visualiza	ation	Vis. grap	hics Ut	tilities	Alerts	Logs	Error log	Help				
			. I				1 -										L.		
oject filte	er	×	Group	Object name	IP >	TP	Eve	. Dat	ta type	Current	value	Log	Export T	ags	Updated at	Set	Vis	Cus	-
lame or	r group add	ress:	0/0/2				4	01.	1 bit (b	0					17.07.2014		a		0
			1/0/0				3	a 01.	1 bit (b	0					04.08.2014		4		0
Data tvr	e:		1/0/2					j 01.	. 1 bit (b	0					04.08.2014		a		0
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			1/1/6	Bathroom Music		100		M 01.	001 ewi	off		100			04.08.2014	000			0
			1/1/7	Bathroom Volum	··· 🖸			AP 01.	001 ecale	096					04.08.2014	- UB			0
			1/1/8	Bedroom Music		[27]		il- 01	001 swi	off		(E)			04.08.2014	- COR			0
			1/1/9	Hall Music playe	·· ·	[27]		BL 01	001 ewi	00					04.08.2014		C.A		0
			1/1/10	Kitchen Music n				BF 01.	001 swi	off					04 08 2014	100			0
			1/1/11	Garage Music r		(FT)		ils 01	001 swi	00					21 07 2014				0
			1/1/12	Sauna Music pl		(TT)		ils 01	001 swi	00		100			23 07 2014	(B)			0
			1/1/13	Bedroom Volum	e 🗐	(m)		is 05.	001 scale	0%					23.07.2014	(internet			0
			1/1/14	Hall Volume	<b>E</b>	1		<b>b</b> 05.	001 scale	100%					03.08.2014		2		Ö
			1/1/15	Kitchen Volume				<b>a</b> b 05.	001 scale	18%					23.07.2014				0
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												-					Gra	ear	
			Add nev	/ object 🛛 📀 Au	to update e	nabled	E CI	ear	14 4 4	Page	1 of 4			IP > TP poli	cy: None; TP > I	P policy: '	None Dis	playing o	bjects 1



#### 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

		VVe	elcome hoi	me		
	Pavorites	5		Glimate	control	
	Cameras	5		Snutter	S	
	Garage (	doors		Lighting	,	
	Audio/Vi	deo		Access	scontrol	
	<u>الم</u>	R				$\widehat{\mathbf{k}}$
Bathroom	Bedroom			Garage	Sauna	Whole house

Add both files in *Logic Machine*  $\rightarrow$  *Vis. Graphics*  $\rightarrow$  *Images/Backgrounds* 

Logic Ma	chine								Ne	eighbours: Se	elect neighbour	▼ <u>Start page</u>
Scripting	Objects	Object logs	Schedulers	Trend lo	gs Vis. structure	Visualization	Vis. graphics	Utilities	Alerts Logs	Error log	🚱 Help	
Icons	Images /	Backgrounds	Fonts E	dit custom C	SS							
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									-	4		
										Server Server		
						-					•	
Favorite	es_pag	Favorites_pag	Garage_	doors	Garage_doors	Garage_page	Garage_page	Hall_pa	ge_2.s H	all_page_H.s	Kitchen_page	
-	8 - P 1					a and			8	-		-
O Add im	ages 🛛 👸	Delete selected			-							
Version: 2	20140724								CPU/I	<b>0</b> : 0.09 0.13 0	. 14, Memory: 7%, K	NX/IP Sync project data



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



## Create "floor" structure and add objects to the map

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

Select an action						
Add second level						
Add plan						
Import						

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.



Logic Machine					Neighb	ours: Select	neighbour	•	Start pag
Scripting Objects Object logs Sch	edulers Trend logs Vis	structure Visualization Vis. gra	aphics Utilities Alerts Logs Error log	Help					
Levels / Plans Layouts / Widgets									
lame	Visible	Description		Duplicate	Move up	Move do	Add / Im Export		
Access control	Usermode, Touch			μŋ	Ŷ	\$	4	į.	(3)
Bathroom	Usermode, Touch	Rise			•	4	4	1	0
Bedroom	Usermode, Touch	Fiai		- Pa	<b>^</b>	\$	6	h	0
whole house	Usermode, Touch	Parent:	Horizontal	En	•	4	1	1	0
📷 Sauna	Usermode, Touch	Name:	1 page H	En	•	4	4	1	0
Kitchen	Usermode, Touch	Bha share		1	٠	4	6		0
Hall	Usermode, Touch	Plan size:	1024 🗸 748 🗸 🗔 🗸	En	٠	4	9	1	0
Garage	Usermode, Touch	Layout:	- *	En	٠		6	1	0
Security panel	Usermode, Touch	Usermode visualization:	Show 🗸	En	<b>^</b>		6		8
Alternative_zone_1_page_2	Usermode, Touch	Touch visualization:	Show	En	٠	4	1	1	0
Horizontal			Show	En	4	\$	0 (	1	0
Al3_1_page_H	Usermode, Touch	Pin code:		En	•	4	6	1	0
Al2_1_page_H	Usermode, Touch	Background image:	BG_1024x1280px.jpg × ▼	En	÷	4	6		0
Al1_1_page_H	Usermode, Touch	Secondary background:	1_page_H.svgz × v	Dh	•	-	6		0
1_page_H	Usermode, Touch	Background color:	+E5E5E5 ×	En	٠	4	0		8
Favorites_H	Usermode, Touch	background color.	#ESESES *	En	•	4	G	1	0
Cameras_H	Usermode, Touch	Repeat background image:		En	•	-	G		8
Garage doors_H	Usermode, Touch	Fixed background position:		En	•	4	6		0
Audio Video H	Usermode, Touch	Admin only access:		En	4	8	1		0
Climate control_H	Usermode, Touch			En	•	4	0		0
Shutters_H	Usermode, Touch		Save		\$		6		0
Lighting H	Usermode, Touch		Cancer		•		6		0
Access control H	Usermode, Touch	K.		En		*	1		0
Bathroom H	Usermode, Touch				-		6		0
Bedroom H	Usermode, Touch			En	*		19		0
Whole house_H	Usermode, Touch				•	4	G		0
Add new level									
					coulto a		1.1 mm	IND Sugar	project de

Logic Machine					Ne	eighbours: Selec	t neighbour	Start page
Scripting Objects Object logs Sched	dulers Trend logs Vis. structu	re Visualization Vis. graphics U	tilities Alerts Logs Error log 😡 Help					
Levels / Plans Layouts / Widgets								
Name	Visible	Description		Duplicate	Move up	Move down	Add / Import Export	
Bathroom_H	Usermode, Touch			C)	٠	4	<b>(</b>	0
Bedroom_H	Usermode, Touch	Plan		-	•	4	<b>(</b>	3
Whole house_H	Usermode, Touch	Fian		- D	•	4	( <b>a</b> )	0
Sauna_H	Usermode, Touch	Parent:	Horizontal_black	Ch .	<b>^</b>	4	<b>(</b>	3
Kitchen_H	Usermode, Touch	Name:	Bathroom H	Ep	•	4	<b>(</b>	0
Hal_H	Usermode, Touch	Dian sizer	1024 4 740 4 -		•	4	<b>(</b>	0
Security panel_H	Usermode, Touch	Pidit size.	1024 V 748 V		4	4	<b>(</b>	3
Garage_H	Usermode, Touch	Layout:	- *	Ep.	٠	4	<b>(</b>	3
Horizontal_black		Usermode visualization:	Show 👻		¢	4	0 0	0
1_page_H	Usermode, Touch	Touch visualization:	Show	Ep.	•	4	<b>G</b>	3
Favorites_H	Usermode, Touch	Pip code:		Ep.	٠	4	<b>(</b>	0
Cameras_H	Usermode, Touch	Fill Code.		Cp.	<b>A</b>		( <b>p</b> )	3
Garage doors_H	Usermode, Touch	Background image:	BG_1024x1280px.jpg × ×		•	4	<b>(</b>	0
Audio_Video_H	Usermode, Touch	Secondary background:	Bathroom_page_H.svgz × 🗙		•	4	<b>(</b>	8
Climate control_H	Usermode, Touch	Background color:	#E5E5E5 ¥		4	4	<b>(</b>	3
Shutters_H	Usermode, Touch	Repeat background image:		Ep.	•	4	<b>(</b>	3
Lighting_H	Usermode, Touch	Find hadrened antition		C)	٠	4	<b>(</b>	0
Access control_H	Usermode, Touch	Fixed background posicion:		Ep.	•	4	<b>(</b>	3
Bathroom_H	Usermode, Touch	Admin only access:			٠	4	<b>(</b>	3
Bedroom_H	Usermode, Touch			Ch.	<b>^</b>	4	<b>(</b>	3
Whole house_H	Usermode, Touch		Save Cancel		•	4	<b>(</b>	3
Sauna_H	Usermode, Touch			- D	•	4	<b>(</b>	0
Kitchen_H	Usermode, Touch				•		<b>(</b>	3
Hal_H	Usermode, Touch			C)	٠	4	<b>(</b>	3
Security panel_H	Usermode, Touch			C)	٠	4	(j)	0
Garage_H	Usermode, Touch			C)	\$	4	<b>I</b>	3
🔘 Add new level 🛛 🛞 Import								
192.168.1.15/cgi-bin/scada/index.cgi#					CPU/I	0: 0.20 0.17 0.14	, Memory: 7%, KNX/IP	Sync project data

#### 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.



Logic Machine		Neighbours: Select	t neighbour 🔹 Start page
Scripting Objects Object logs Schedulers	Trend logs Vis. structure Visualization Vis. graphics Utilities Alerts Logs Error log 😡 Help		
Structure (4)		Plan editor + Object Link 7	≫ Text label Image Frame Gaug →
Garage	Welcome nome	Link to: Custom name:	Favorites_H
Alternative_zone_1_page_2 Horizontal Al3_1_page_H	Favorites Climate control	Hide in Touch: Hide background: Display mode:	✓ Icon
AC_1_page_H All_1_page_H Eavortes H		Icon: Active state icon:	Favorites.svg ¥
Cameras_H Garage doors_H Mudio_Video_H Climate control_H Stutters_H	Cameras Enuters	Additional classes:	
Lighting_H Access control_H Bathroom_H Bedroom_H Whole house_H	Gerage cloors		
Eg Sauna_H Kitchen_H Eg Hal_H Security pane_H Garage_H	Audio/Video		
Garage done, H     Garage done, H			
Climate control_H Shutters_H Lighting_H Access control_H Bathroom_H		Element position:	Apply Cancel
Bedroom_H	Bahroon Belonoan Hel Kitchen Garage Sauna Whole Kouse	Element size:	74 🗘 74 🗘 🔕 📾
Plan size: 1024 🗘 748 🗘 💷	Device	Save and	reload plan Cancel
Version: 20140724		CPU/IO: 0.040.070.10	Memory: 8%, KNX/IP Sync project data

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.

				+ Object Link	Text label Image Frame Ga
	) E	Bedroom	$\odot$	Main object:	1/1/50 Bedroom_C 💌 😡
Q Lighting				Status object: Custom name: Read-only:	Use main object 👻
Ceiling light	60	% Temperature current	30 °C	Hide in Touch: Hide background: Send fixed value:	8
Ceiling light			35 °C	No bus write: Pin code: Widget:	In Usermode/Touch
Ceiling light			48 %	Display mode: On icon:	Icon V On_icon.svg V
Mabuka ((C)		Chutters		Additional classes: Show control:	Off_icon.svg
Music player		Window right			
Volume		Window left			
					Apply Cano
				Element position: Element size:	284   145 50   50   20

#### 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



	) Bed	room	(
Lighting		Climate control	
Ceiling light	60%	Temperature current	30 °C
Ceiling light		Temperature setpoint	35 °C
Ceiling light		Humidity	48 %
		Shuttere	
			$\sim$
	(22)	Window right	
	(Ja	Window left	

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

♠ > 1_page_H	➤ Lighting_H
Bedroom_C_Light	Bedroom_R_light
Bedroom_Fl_light	Bedroom_Music_player
Bedroom_Volume	Ceiling light 60%
Bedroom_C_Light_Control 60%	Bedroom_Tem_current 30 °C
Bedroom_Temp_Setpoit - 35.00 +	Bedroom_W_right_open
Bedroom_W_left_open	Bedroom_Humidity 48 %
Bedroom_W_right_close	Bedroom_W_left_close
Bedroom_Temp_Setpoit 35 °C	→ > 1_page_H
➤ Climate control_H	> Audio_Video_H
Shutters_H	



# 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*)

Trochine															Neighbou	rs: Select	neighbour		▼ Start
tor Scripting	Objects	Object logs	Schedulers	Trend logs	Vis. structure	Visualization	n    Vis.	graphi	ics Utilities	Modbus	Enocean	Alerts	Logs E	rror log 🛛 🚱 Help					
ect filter	~	Group add	Iress Object	name	IP > TP	TP > IP	Event	s	Data type	Cur	rent value	Log	Expo	rt Tags	Updated at	Set value	Vis. pa	Custom	
mo or group add	tracer	0/0/2					2	*	01. 1 bit (boolear	i) 0				1	17.07.2014 13:49:17	(G)			3
ne or group add	1635.	1/0/0						*	01. 1 bit (boolear	) 0			E	]	08.08.2014 01:00:42				0
		1/0/2						*	01. 1 bit (boolean	) 1				3	07.08.2014 23:01:48				0
a type:		1/0/4						*	01. 1 bit (boolear	i) 0			E	3	07.08.2014 22:55:23	G			0
t specified	*	1/0/6				177		*	01. 1 bit (boolean	) 1			F		08.08.2014 12:49:10				0
IS:		1/0/8						*	01. 1 bit (boolean	) 1				1	07.08.2014 01:00:24				0
		1/0/10						she i	01. 1 bit (boolean	0 1			(	1	08.08.2014 00:59:04	R			0
ch mada:		1/0/12						*	01. 1 bit (boolean	) 1			1	1	03.08.2014 12:26:05				0
ch mode.		1/0/14			<b></b>			1	01. 1 bit (boolear	) 1			F	1	07.08.2014 01:00:29	R			Ö
ll tags 🛛 🔘 A	Any tag	1/1/1	Alarm	status		V		*	01.001 switch	off					08.08.2014 12:15:52				0
		1/1/2	Light_s	status		100		-	01.001 switch	off			1	1	08.08.2014 12:15:53	Res			0
Apply to	iter Cancel	1/1/3	On_ho	liday	0	(C)		*	01.001 switch	on		173	E	1	08.08.2014 12:15:28	Res			G
		1/1/4	Garage	e_doors_open	1	100		1	01.001 switch	on			1		08.08.2014 11:59:55	R			0
		1/1/5	Garage	e doors close		100		site 1	01.001 switch	off			E	1	04.08.2014 15:36:16				0
		1/1/6	Bathro	om Music paye	er 🕅	100		34.	01.001 switch	on		E71	1	1	07.08.2014 19:07:13	(R)			G
		1/1/7	Bathro	om Volume		(m)		sia i	05.001 scale	485	6		1	1	08.08.2014 12:49:13				0
		1/1/8	Bedroo	- om Music plave	er 🕅			tile i	01.001 switch	off			1	1	04.08.2014 14:21:17	(R)			a
		1/1/9	Hall M	usic player	(77)	1971		site i	01.001 switch	on		E	17	1	04.08.2014 14:24:08				a
		1/1/10	Kitcher	n Music player		(m)		sia i	01.001 switch	on			(1	1	07.08.2014 22:56:59	(Res.			0
		1/1/11	Garao	e Music player		(m)		site i	01.001 switch	00			1	1	21.07.2014 15:23:34	- Sup			ő
		1/1/12	Sauna	Music player		100		- 100 C	01 001 switch	00			10	9	23 07 2014 10:00:12	- 49 Ga			0
		1/1/13	Bedroo	om Volume		(FT)		da.	05 001 scale	0%			6	1	23.07.2014 10:17:57		100		0
		Add ne	w object	Auto update e	nabled 🛛 🖯 Clear		Page	1 0	of 4 🕨 🚺	2 P>	TP policy: No	ne; TP > IP po	licy: None				1	Displaying obje	ects 1 - 2

#### 2.1.1 Object parameters

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



Edit object	3
Object name:	Temp room
Group address:	1/3/1
Data type:	09.001 Temperature
Current value:	0
Tags:	
Units / suffix:	C
Log:	
High priority log:	
Export:	
Poll interval (seconds):	\$
Object comments:	
	Save Cancel

- > **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 s	pecial	RGB c	olor dat	a type i	s added	in Data	tvpe list.
	o e e la l		0.01 0.01	~ .,pc .	0 44464		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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:	

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

Object visualization paramete	rs X
Object:	light1-2 (1/1/12)
Send after each color pick:	
Number of presets to show:	3 💌
Preset 1:	#00B2I × ×
Preset 2:	#7AFF: × ×
Preset 3:	#CC00 × v
	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.

#### <u>1 bit</u>

Visualization params		×
Object:	Button 1 (1/1/1)	
Control type:	Checkbox 💙	
	Toggle	
	Checkbox	
	Surc Curicel	J

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

**Touch Visualization** 





#### 4 bit (3 bit controlled)

Object visualization par	rameters	×
Object:	light1-1 (1/1/11)	
Step size:	25%	
	Save Cancel	

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

#### 1byte and 4byte float

Control type - type of the visual control element

<ul> <li>Slider</li> </ul>			
Object visualization parame	ters	×	
Object:	light1-1 (1/1/11)		
Control type:	Slider	*	
Minimum value:	0		
Maximum value:	255		
Step:	10		
Vertical slider:	Visible only Usermode		
Invert vertical slider:			
	Save	Cancel	•
•		>	



- *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 +/-

Object visualization paramete	rs		×
Object:	light1-1 (1/1/	11)	
Control type:	Direct input /	Step +/- 💙	
Minimum value:	0	<b>~</b>	
Maximum value:	255	<b>\$</b>	
Step:	10	<b>~</b>	
	9	ave Cancel	
		ave Cancer	

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





- Circular slider
  - o Minimum value minimum value on the control bar
  - o Maximum value maximum value on the control bar
  - Step step for one position change
  - Slider color color of slider
  - o 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

Object visualization paramete	rs 🛛
Object:	light1-1 (1/1/11)
Control type:	Circular slider
Minimum value:	0
Maximum value:	255
Step:	10
Slider color:	#00991E × ×
Background color:	#3351FF × ×
Round line cap:	<ul> <li>Image: A start of the start of</li></ul>
Hide title:	
Hide min/max/step buttons:	
Line thickness:	15 🗘 %
Size:	200 🗘 In Show control mode
	Save Cancel

- 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							
Object: Control type: Show icons in Usermode:	light1-1 (1/1/11) Custom value select						
	Save Cancel						



## 2.1.3 Change the object state

In the object list, by pressing on the object.

button, you can change the state of the

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

Set object value	X	Set object value		×
Object name: Group address: Data type: New value (21):	Weather T High 5/1/5 09. 2 byte floating point	Object name: Group address: Data type: New value:	Output 1 1/2/1 01.001 switch false	]
	Save Cancel		Save	ancel

#### 2.1.4 Custom values

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

📄 to set it	up
-------------	----

Custom values		×
Default text: Object value: Object value:	Bedroom light         0       Image: Display text:         1       Image: Display text:         Light on       Image: Display text:	
	Save Cancel	



#### 2.1.5 Object control bar

🔕 Add new object 💿 Auto update enabled 🔂 Clear 🗔 Mass edit 🔞 Mass delete 🔢 🔍 Page 1 of 1 🕨 💹 🌊 IP > TP policy: None; TP > IP policy: None

- > 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.

Visualization parameters		X				
Group address list: Control type:	9 object(s) selected   Toggle  Save Cancel					
Custom values		×	Mass edit			×
Group address list: 9 object(s) selecte Default text: Object value: 1 🗘 Dis Add custom value	d v play text: On		Group address list: Field list: Data type:	24 object(s) selected 1 field(s) selected 01.002 boolean		
	Save Cance			Save	Cancel	

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: 0.20 0.27 0.25, Memory: 14%, KNX/TP: OK Sync project data

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 fifteenminute 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: <u>http://en.wikipedia.org/wiki/Load (computing)#Unix-style load calculation</u>

- 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.

actor Scripting	Objects	Object logs	Schedulers Tre	end logs	Vis, st	tructure	Visualization	Vis. graphics	Uti	ilities Modbus	Enocean A	lerts Log	s Erro	or log	🕑 Help
hiect filter		Group	Object name	IP >	TP	Eve	Data type	Current value	1.00	Export Taos	Undated a	at Set	Vis	Cus	
bjeet inter		1/1/8	Bedroom Music			22 4	6 01 001 swi	off	m	(m)	04.08.201	14 🔍			0
Name or group ad	dress:	1/1/13	Bedroom Volume	(m)	100		► 05.001 scale	0%		1000	23.07.201	14 🔍			0
bedroom		1/1/21	Bedroom Tem		100		р 09.001 Те	30.*0		[[[[]]]	10.07.201	14 🕞			0
ata type:		1/1/22	Bedroom Temp		100		⊳ 09.001 Te	35 10	100	(m)	25.07.201	14 🕞			0
Not specified	~	1/1/23	Bedroom Humidity				► 05.001 scale	48.%		(m)	10.07.201	14 🔍			0
206		1/1/38	Bedroom W. rig				L 01 001 ewi				22.07.201	14 😡			0
ugs.		1/1/30	Bedroom W rig		1000		L 01.001 ewi	00	100		22.07.201	14 Qg			
		1/1/33	Bedroom W. left				p 01.001 awi	off			23.07.201	14 QB			0
latch mode:		1/1/40	Bedroom W. left		1000		L 01.001 ewi	00			23.07.201				0
🖲 All tags 🛛 🔘	Any tag	1/1/50	Bedroom C Light		100		p 01.001 awi	00		1000	23.07.201	14 Q			0
		1/1/51	Bedroom C Lig				- 05.001 ecale	60%			24.07.201	14 🔍	C.A.		0
Apply	filter Cancel	1/1/52	Bedroom D light	100	100		L 01.001 souic	0070	100		23.07.201				0
		1/1/52	Bedroom El light				p 01.001 ewi	00			23.07.20	····· ((1))			0
		1/1/55	Bedroom_ri_light			<u></u>	p 01.001 SWI	UII			23.07.20	4 Ugy	a contraction of the second se	1	9

#### 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.

Logic Machine									Neighbours	: Select n	eighbour		▼ <u>Start</u>	page
Scripting Objects Object logs Sc	chedulers Trend logs	Vis. structure	Visualization	Vis. graphics	Utilities	BACnet	Dali	Modbus	Enocea	n 1-wir	e Alerts	Logs	Error log	0
Levels / Plans Layouts / Widgets														
Name	Visible	Descr	iption					Duplicate	Move up	Move d	Add / I	Export		
📴 House								Ē1	٩		0	1	0	*
📄 Vertical								Ē:	٠		0		0	
1_page_2	Usermode, Touch							Ē.	٠	4		1	0	
Alternative_1_page_2	Usermode, Touch								٠			1	8	
Alternative4_zone_1_page_2	Usermode, Touch							Ę:	٠	4		1	0	
Romantic_zone_1_page_2	Usermode, Touch							C)	٠	4		<b>(</b>	(3)	
Alternative3_zone_1_page_2	Usermode, Touch							Cr.	٠				0	
Alternative4_zone_1_page_2	Usermode, Touch							Ē1	٠	4		1	0	
Favorites	Usermode, Touch							Ē:	٠			1	0	
Cameras	Usermode, Touch							C:	٠	4		1	8	
Garage doors	Usermode, Touch							-	٠	4			8	
Audio_Video	Usermode, Touch							Ē1	٠	4		1	(3)	
Climate control	Usermode, Touch							Ēħ	•	8		1	0	-
Add new level														
Version: 20141127								CPU/	IO: 0.28 0.1	5 0.14, Me	mory: 8%,	KNX/IP	Sync project	data

## 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:	I	
		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.

Import			×
Linked objects: File:	Clear     Choose File     No	Keep Keep	
		Save	Cancel

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 <sup>3</sup>, to delete a specific entry press on the red icon <sup>3</sup>.

Select an action	×
Add second level	
Add plan	
Import	
Import	

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



Plan		×
Parent:	Vertical	
Name:	1_page_2	
Plan size:	768 🗘 1320 🗘 🔲 -	
Layout:	-	*
Usermode visualization:	Show	*
Touch visualization:	Show	*
Pin code:		
Primary background image:	BG_page_768x1692px.jpg ×	*
Secondary background image:	JAX_test.svg ×	*
Background color:	#E5E5E5 × •	
Touch background color:	× •	
Repeat background image:		
Fixed primary background:		
Admin only access:		
	Save	incel

- > **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 size 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*  $\rightarrow$  *Images/Backgrounds*in advance:





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

## 2.2.2 Layouts / Widgets

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

Layout		×
Parent:	Layout	
Name:		
Plan size:	1024 🗘 768 🗘 🔲 🗸	
Primary background image:	× 🗸	
Secondary background image:	× •	
Background color:	× •	
Touch background color:	× •	
Repeat background image:		
Fixed primary background:		
	Save Cancel	

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*  $\rightarrow$  *Images/Backgrounds* in advance.

Widget		×
Parent:	Widget	
Name:	Thermostat	
Plan size:	1024 🗘 768 🗘 🔲 -	
Widget position:		
Primary background image:	1024x748_color.svgz × v	
Background color:	#FEBA65 × •	
Touch background color:	× •	
Repeat background image:		
Fixed primary background:		
	Save Cancel	

- 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 size 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.



Reactor	Scripting	Objects	Object logs	Schedulers	Trend logs	Vis. structure	Visualization	Vis. graphics Uti
Structure Ma Ho Structure	in Dining room Bedroom Floor2 Bedroom use 2 Kitchen youts dgets	up	(*)	21	23C			
	Change Tor	uch object of	rder					

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.

Plan editor		<b>&gt;&gt;</b>
Object		
Main object:	1/3/3 💌 🗾	
Status object:	Use main object 💌	
Custom name:		
Read-only:		
Hide in Touch:		
Hide background:		
Send fixed value:		
No bus write:	🔲 In Usermode/Touch	
Pin code:		
Widget:	No widget 💙	
Display mode:	No widget	
On icon:	thermostat	
Off icon:	~	
Show control:	🔲 In Usermode	
	Add to plan Cancel	

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 *side* 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.

Plan size: 600 🗘 1024 🗘 🔲	•
---------------------------	---

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

- 27.0	+ 00
Plan editor	»
+ Object Link	Text label Image Frame Gau 🔶
Main object:	▼
Status object:	Use main object 🔹
Custom name:	
Read-only:	
Hide in Touch:	
Hide background:	
Send fixed value:	
No bus write:	In Usermode/Touch
Pin code:	
Widget:	No widget 💙
Display mode:	Icon and value
Touch icon:	× •
Additional classes:	
Font size:	12
Text styles:	□ B □ <i>I</i> □ <u>U</u>
Custom font:	•
Font color:	× •
Show value background:	
Show control:	Inline in Usermode
	Add to plan Cancel
Element position:	10 🗘 10 🗘
Element size:	
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.



Additional ic	ons						×
Min value	-10	Max value	0	Icon	sun-moon-off	~	3
Min value	0	Max value	10	Icon	sun-moon-on	•	
Min value	10	Max value	20	Icon	sun-rain-on	¥	
Min value	20	🗘 Max value	30	Icon	sun-rain-off	•	$\odot$
Add ico	n						
					Save		Cancel

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

Element position:	460	Ŷ	65	Ŷ	
Element size:	50	Ŷ	50	Ŷ	0

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.



Plan editor		»
← Object Link Te	ext label Image Frame	Gau 🔶
Link to:	Garage doors	•
Custom name:	Link to garage	
Hide in Touch:		
Hide background:	•	
Display mode:	Icon	*
Icon:	Garagedoors.svg	*
Active state icon:	×	~
Additional classes:		
	Add to plan	Cancel
Element position:	460 🗘 65 🗘	
Element size:	50 🗘 50 🗘 🕻	
Save and r	eload plan	Cancel

- 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

Plan editor	>>
+ Object Link	Text label Image Frame Gau 🔶
Text:	Test
Font size:	29
Text styles:	
Custom font:	Tahoma 💌
Font color:	#00CC28 × •
Additional classes:	
	Add to plan Cancel
Element position:	360 🗘 65 🗘
Element size:	50 🗘 50 🗘 🙆 📾
Save and	reload plan Cancel

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.

Scripting Objects	Object logs Schedulers Trend logs Vis. str	ucture Visualization Vis. graphic	s Utilities BACnet Dali Modbus Enocean 1-v	vire Alerts Logs Error log	() Help		_
2	Contraction of the second seco	<ul> <li>•</li> <li>•&lt;</li></ul>	Shutters	0 () () ()	Plan editor      Object Unk Ter      Image source: Image ut: Image size: External link: Additional classes:	2 t label   Image   Frame   Gau Remote     http://opentb.com/wp-cont 400	> +
Deiete	Window to garden				Element position: Element size: Save and rel	Apply Cancel 512 305 30 400 300 300 300 300 300 300 300 300 300	
Version: 20141127					CPU/IO: 0.62 0.26 0.09, Me	mory: 11%, KNX/IP Sync project d	data

- > 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 an	Cancer			
	_		Plan editor	»
	: 123	>	← Object Link	Text label Image Frame Gau
			Source:	Url 💌
Status: ac	tive, period: 1 January - 31 December	C' Edit	Frame size:	480 🗘 320 🗘
Value	Run at	Add event	Custom name:	
false	12:00 C E	dit 🗙 Delete	Hide in Touch: Additional classes:	
true	12:00	dit 🗙 Delete		
				Add to plan Cancel
false	12:00 C E	dit 🗙 Delete	Element position:	10 0 10 0
			Element size:	
			Linlock ourres	t plan for editing



## 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: http://192.168.1.212/mjpg,   Window size: 640   640 480   Custom name: Image: Camera.png   Icon: camera.png   Auto open window: Image: Camera.png   Hide background: Image: Camera.png   Add to plan Cancel	Plan editor	»
	<ul> <li>Image Fra</li> <li>Source url:</li> <li>Window size:</li> <li>Custom name:</li> <li>Icon:</li> <li>Auto open window:</li> <li>Hide background:</li> <li>Additional classes:</li> </ul>	me Gauge Camera Graph → http://192.168.1.212/mjpg, 640
Element position: 10 10 10 10 Element size:	Element position: Element size:	

- 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.



Logic Machine			Start pag
Scripting Objects Object logs Scheduler	rs Trend logs Vis. structure Visualization Vis. Icons Utilities Enocean Alerts Logs Error log 🚱 Help		
Structure	Camera view	A Plan editor	»
Home		Object	
Floor 1     Floor 2     Floor 2     Floor 3     Gungalow     Crema Room     Crema Room     Creasing Room     Conservatory     W.C.     Utilty Room     Study     Guest House     Bedroom     Study     Study     Study     Study     Study		Man object: Status object: Custom name: Read-only: Hide in touch: Sort order: Hide background: Send fixed value: Display mode:	Add to plan Reset
test		Plan link	+
		Camera	+
	Link to lounge	Graph	+
	6 <sup></sup>	Text label	+
		Image	+
		Gauge	+
		- Unio	ck current plan for editing

#### 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.

Plan editor	»
🗲 abel 🛛 Image 🛛 F	rame Gauge Camera Graph 🔶
Data object:	1/1/8 Temperature
Custom name:	
Icon:	OFF-Denchum.jpg
Window size:	640 🗘 480 🗘
Number of points:	10
Auto open window:	
Hide background:	
Additional classes:	
	Add to plan Cancel
Element position:	10 🗘 10 🗘
Element size:	<b>\$</b>
Save and	d reload plan Cancel



- > **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

ScriptingObjectsObject logsSchedulersTrend logsVis. structureVisualizationVis. graphicsUtilitiesBACnetDaliModbusEnocen1-wireAlertsLogsErrToomsImages / BackgroundsFontsEdit custom CSS $AccesscontrolAlgostingAudio, V.shAudio, V.deo.sAudio, V.deo.sA$	tart page	•	our	ct neighb	hbours: Sele	Nei											chine	Logic M
Inages / BackgroundsFontsEdit custom CSSImages / BackgroundsFontsEdit custom CSSImages / BackgroundsImages / BackgroundsIm	rror log	Logs	Alerts	1-wire	Enocean	Modbus	Dali	BACnet	Utilities	Vis. graphics	Visualization	Vis. structure	Trend logs	Schedulers	t logs	s Object	Objects	Scriptin
$\left  \begin{array}{c} \hline \\ \hline $													stom CSS	ts Edit cus	is For	Backgrounds	Images /	Icons
Control_Light       Control_Secur       Control_Volu       Control_stop       Control_tight       Control_stop       Control_tight       Control_stop       Control_tight       Control_stop       Control_stop       Control_tight       Control_tight       Control_stop       Control_tight       Contro	^	a	Control_Gara	) ) (	Climatecontr	_Cont	Climate	as.svg	Came	Bedroom_sh_i	kathroom_sh	io_Video.s	sh_i Aud	Audio_V_s	il_ico	Al_Contri	control	Acces
Control_Light Control_Secur Control_Volu Control_stop Control_temp Down_icon.svg Favorites.svg Garagedoors.s Gmail_icon.svgz Google_icon.s			8+		Μ		ĺ	Y	Z					F				
Image: Note of the section of the s		s	oogle_icon.s	vgz G	Gmail_icon.s	oors.s	Garaged	es.svg	Favori	Down_icon.svg	OK.jpg	-Denchum	volu Con	Control_Vo	Secur	Control_S	LLight	Contr Hall_s
	-										•							(
Add icons     Delete selected															ted	Delete selecte	ons D	Add i

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.

Add new graphics		×				
Name (optional): File:	Choose File No file chosen					
Name can contain letters, numbers, underscore and minus sign ZIP archive containing multiple graphics can be uploaded, each item cannot exceed 2MB, whole archive size cannot exceed 16MB						
	Save Cancel					

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

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



gic Machine										Neig	hbours: Se	lect neighb	our	۲	Start pag
cripting Objec	ts Object logs	Schedulers T	rend logs	Vis. structure	Visualization	Vis. graphics	Utilities	BACnet	Dali	Modbus	Enocean	1-wire	Alerts	Logs	Error log
cons Images	/ Backgrounds	Fonts Edit cu	tom CSS												
* : 										2					
AI_I_page_2	AI_BG_NOFI.Jpg	AI_BG_NOF2.J		_nors.jpg		AI_zoni3_1_p	AI_ZONI4	+_1_p	AI_ZONI:	р_1_р	AI_ZONI6_I	_p /	a_zonikom	an	
Al_zoni_1_pa	Al_zoni_1_pa	Anhnen.jpg	Audio	_Video )	Audio_Video	BG_1024x128	BG_color	_5.svgz	BG_page	e_768	BG_polosi_	tra E	3G_polosi_t	ra	
BG_round_1.jpg	BG_round_2.jpg	Bathroom_pa	Bathro	oom_pa	Bedroom_pag	Bedroom_pag	Cameras	pag	Cameras		Chinese_pa	att (	Climate_Co	nt	
							_								
Climate Cont	Favorites nan	Favorites_nao	Fr F	320.svaz	Fr. color2.svaz	Garage doors	Garade	doors	Garage	nane	Garane na	ae H	tall_name_2	s	

#### In Fonts tab you can add custom fonts

Logic Machine					Neighbours:	Select neighb	our	٣	Start page
Scripting Objects Object	t logs    Schedulers	Trend logs	Vis. structure	Visualization	Vis. graphics	Utilities	BACnet	Dali	Modbus
Icons I Images / Backgrounds	Fonts Edit cus	tom CSS							
Font									
	Add font					×			
	File:		Choose File	No file chose	n				
	Only TTF	and OTF fon	ts are supported	l. Page reload is	required for ne	W			
	Tonts to t	ecome visible	e în the visualiza	ation editor					
				Sav	/e Canc	el			
O Add font									
Version: 20141127				CPU	/10: 0.85 1.43 1.7	2. Memory:	14%, KNX/	IP Synd	project data

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

Logic Mach	ine									Neigh	bours: Se	lect neighbour	í.	•	Start page
Scripting	Objects	Object logs	Schedulers	Trend logs	Vis. structure	Visualization	Vis. graphics	Utilities	BACnet	Dali	Modbus	Enocean	1-wire	Alerts	Logs
Re	ESF file	General ci	aighbours The second s	Reset / clear	ation	System	Date and	time	Install up	dates		Backup			
Version: 20	141127								CPU,	IO: 0.32	2 0.88 1.44,	Memory: 13	%, KNX/IP	Sync p	project data

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.

Import ESF file	×					
ESF file: Choose File No file chosen						
It will be nece Existing object considered du	ssary to set correct data type for some imported objects. Is will not be overwritten. Objects with the same name are plicates and might not get imported					
	Save					

#### Date and time - data and time settings

Date and time		×
Current: Time: Date: Timezone:	Tue Jan 2 03:20:43 2001 3 20 43 C Get from system 02.01.2001	
	Save	

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

*Restore*– restore configuration from backup



Restore		×
LM backup file:	Choose File No file chosen	
Warning: maximur Current database, s Logic Machine will r	n backup size is 16MB. cripts and visualization will be deleted. eboot after successful restore	
	Save	el

#### General Configuration - system general settings

General configuration			×					
Interface language:	English		~					
Automatic address range start:	1/1/1							
Discover new objects:	Yes, bus sniffer enab	oled	~					
Object log size:	1000		\$					
Default log policy:	Log only selected ob	ojects	•					
Alert log size:	200		Ŷ					
Log size:	200		\$					
Error log size:	200		\$					
Save object values in storage:								
Enable Block editor:								
Code editor tab size:	2 🗘							
<ul> <li>If log size is changed to a smaller value, excess logs will be deleted on next auto clean-up (every 10 minutes)</li> <li>Log policy only affects new objects, current per-object log settings are kept unchanged</li> <li>Warning: excessive object logging degrades performance</li> </ul>								
		Save Ca	incel					

- > 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-ftpserver-from- lm2/

#### Vis. Configuration - visualization specific settings

/is. configuration		5
Usermode sidebar:	Show as overlay (auto-hide)	~
Usermode view:	Center plans, enable auto-sizing	*
Usermode page transition:	No transition	*
Usermode auto-size upscaling:		
Usermode background color:	× ×	
Usermode background image:	×	*
Custom font:		*
Use dark theme:		
Enable swipe gesture:		
Disable object click animation:		
Dim inactive visualization after:	🗘 minutes	
Dimming level:	80 🗘 %	
Show alerts in Usermode:		
	Save	incel

- 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

User access settings	×
Disable password for Visualization:	
Enable password for Apps:	
Enable password for User directory:	
Visualization pin code:	
	Save Cancel

- > **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 <u>http://IP</u> 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

User		×
General Visualization		
Name:		
Login:		
Password:		
Repeat password:		
Visualization access:	None	
	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



User			×					
General Visualization								
SPC Multisite								
Overview								
house 12345								
My SPC houses								
general level								
general level with a	Idio							
Home Sweet Home	3D							
Tech Room								
Generic Demo KNX domo	ics							
1_page_H								
Favorites_H								
Cameras_H								
Garage doors_H								
Audio_Video_H								
Climate control_H								
- Shutters_H								
Lighting_H								
Access control_H								
Bathroom_H								
Conductor II								
		Save	Cancel					

# 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	2	Displaying alerts 1 - 25 of 2317

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

Page	1 o	of 93   🕨	N 2
------	-----	-----------	-----

## 2.8 Error log

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

Logic Machine Start page								
Scripting Objects Object	t logs Schedulers Tren	d logs Vis. structure Visualization Vis. icons Utilities Enocean Alerts Logs Error log 🕢 Help						
Error time	Script name	Error description						
22.02.2013 09:29:51	2.02.2013 09:29:51 init-script Line 6: attempt to index global 'temperature' (a nil value)							
21.02.2013 06:08:46	21.02.2013 06:08:46 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						
09 03 2012 12-52-11	init oprint	l in 6: attempt to index alabel "amonature" (a sil valua)	*					
Clear II 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.

Logic Machin	e												Start page
Scripting	Objects	Objec	t logs	Buildings	Visualization	Visualization icons	Utilities	Alerts	Logs	Error log	🕜 Help		
Log time			Messag	je									
15.05.201	2 14:20:33		* arg: 1	* table: [f2] *	number: 20 [f1] *	number: 10 * arg: 2 *	number: 12	?7 * arg: 3 *	string: tes	st			
15.05.201	2 14:20:28		* arg: 1	* table: [f2] *	number: 20 [f1] *	number: 10 * arg: 2 *	number: 12	?7 * arg: 3 *	string: tes	st			
15.05.201	15.05.2012 14:20:23 * arg: 1 * table: [f2] * number: 20 [f1] * number: 10 * arg: 2 * number: 127 * arg: 3 * string: test												
15.05.201	15.05.2012 14:20:18 * arg: 1 * table: [f2] * number: 20 [f1] * number: 10 * arg: 2 * number: 127 * arg: 3 * string: test												
Clear		Page	1 o	f1 🕨 🕅	2							Displa	ying logs 1 - 4 of 4
Version: 201	20419											© Em	bedded Systems 2012

# 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*  $\rightarrow$  *Edit custom CSS* tab. For more information of CSS examples please see our user forum: <u>http://forum.logicmachine.net/</u>





# 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.

■ <	Dining room	>
Temperature 27C	-	27.00 +
$\diamond$	Go to Trend logs 🕻	
💡 Lamp2		-
💡 Lamp2		-
Camp2		✓
Lamp2		-

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