Horizone Server

IN00B02WEB

Commissioning Instruction

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FIRST COMMISSIONING

INTRODUCTION

HORIZONE SERVER is a web server specifically engineered for monitoring and visualization of Home & Building Automation systems.

HORIZONE SERVER is fully compliant with worldwide standards like KNX and MODBUS, and with many other technologies used in intelligent buildings, alarm systems, fire and smoke detections systems, audio / video distribution systems.

The configuration and use of **HORIZONE SERVER** takes place directly through its web interface, which can be accessed through a conventional browser (from any device / operating system).

This chapter describes how to connect and configure **HORIZONE SERVER**.

CONTENT OF THE PACKAGING

The **HORIZONE SERVER** packaging contains the following material:

- HORIZONE SERVER
- connector for power supply and KNX bus
- Printed Quick Start Guide

HINT: **HORIZONE SERVER** is a pure WEB SERVER, therefore it is not usable for standalone visualisation, because it has no display.
Neither the server has any graphical interface (VGA, DVI, HDMI, ...), therefore it can't be directly display any graphical content.

Visualisation is accessed through client PCs, notebooks, netbooks, tablets and smartphones, connected to the server via Network.

HARDWARE INSTALLATION

INSTALLATION

HORIZONE SERVER is designed for installation on a 35 mm DIN rail. It requires a 12/24 VDC power supply, not included.

For a correct functionality, the following connections must be guaranteed:

Power supply 12V/24V DC (current consumption 240 mA at 12VDC) using the supplied connector.

KNX bus connection via supplied connector.

Network connection via CAT.5 network cable (not supplied).

The LED marked with the label "POWER" on the front of the server signals that the device is ON The LED labeled “SERVICE” remains off under normal circumstances.

Furthermore, **HORIZONE SERVER** has the following interfaces:

SD-slot: in the future will be used to expand the memory of **HORIZONE SERVER** through any compatible SD Card. Please note that this peripheral at the moment is not actually used.

RS232-interface and 2 USB-ports: for integration of third party systems.

	the connection to the KNX bus is not really needed for the configuration of **HORIZONE SERVER**, but it allows a more efficient programming, since direct tests of the system can be performed.

When commissioning **HORIZONE SERVER**, the following steps must be followed:

- Power off the system.
- Install **HORIZONE SERVER** on the DIN-Rail.
- Connect power supply and KNX bus to **HORIZONE SERVER**
- Power on the system.

Wait until complete boot up of **HORIZONE SERVER**.

	To ensure appropriate protection to the **HORIZONE SERVER** hardware and prevent damages, please consider installing appropriate lightning and surge protection devices on power supply. To grant full operation under any situation, please consider also installing an Uninterruptible Power Supply (UPS).

	If the **HORIZONE SERVER** hardware is altered in any way, irreversible damage can occur. Any intervention on the equipment should be performed only by skilled personnel authorized by **EELECTRON SPA**.

ENVIRONMENTAL CONDITIONS

For proper operation and storage of **HORIZONE SERVER** please respect indications below:

OPERATION	Ambient temperature 0°C - 70°C
STORAGE	Ambient temperature -10°C - 70°C

MAINTENANCE / WARRANTY

HORIZONE SERVER is fanless and without moving parts. The industry-tested hardware, the reduced size and minimal power consumption, make it ideal for long term, high availability applications and operational conditions.
The device has 24 months warranty from date of delivery (date of the invoice).

IMPORTANT INFORMATION

In case service is needed, before shipping the device, please contact our technical support team through the email address **support@eelectron.com**. Our team will authorize the shipment and will help you to fill in the “Service request” form.

Devices arriving to **EELECTRON SPA** facility without the “Service request” form complete with all necessary information will not be accepted and will be shipped back to origin.

In case of shipment, please use appropriate packaging and sufficient protection through shock absorbing elements.
EELECTRON SPA will not respond for damages caused by inappropriate handling.

Processing time of service requests is 2 weeks.

For technical reasons, only complete systems can be accepted for service.

NETWORK CONNECTION

For the usage/configuration of **HORIZONE SERVER** a fully functional network connection is required. Factory IP address of **HORIZONE SERVER** is:

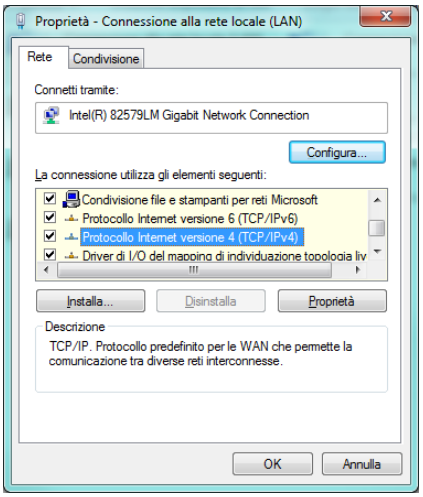
IP address: 192.168.0.110
Subnet mask: 255.255.255.0
Gateway: 192.168.0.110

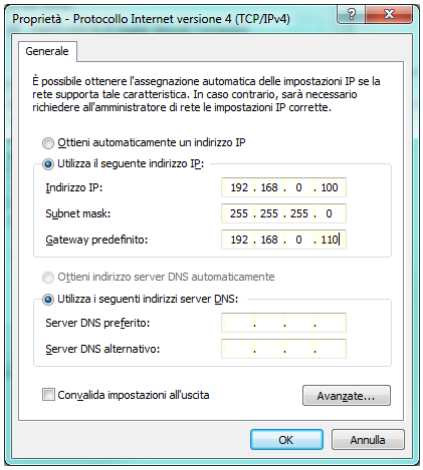
To set the IP address of **HORIZONE SERVER**, according to the needs of your network, follow these steps:

- Connect a PC directly to **HORIZONE SERVER** through a standard Ethernet cable.
- Open the network configuration settings of your PC.
- Change the settings of the TCP/IP – Protocol (Version 4) of PC network interface according to the following values:
  IP address: 192.168.0.100
  Subnet mask: 255.255.255.0
  Gateway: 192.168.0.110

Save the new settings. Depending on the installed OS, a restart can be necessary.

The following screenshots show how to change the network settings on Windows OS:





Once the network settings have been changed, open a browser on your PC (Google Chrome preferred) and enter the following URL into the address bar of the browser:

http://192.168.0.110/Horizone/modules/system/externalframe.php?context=configuration

This link will open directly the configuration environment of **HORIZONE SERVER**.

If the network connection is working properly, you will be requested to login.

The best performance for using/programming **HORIZONE SERVER** can be achieved with the following browsers:

- Google Chrome
- Apple Safari

HORIZONE SERVER is compatible with following additional browsers:

- Mozilla Firefox
- Opera
- Microsoft Edge

HORIZONE SERVER is NOT compatible with the following browsers:

- Microsoft Internet Explorer

Browser compatibility is continuously under evolution, it is recommended to check out the list of the compatible browsers in the documentation of newly released product versions.

LOG IN

On delivery, **HORIZONE SERVER** has preconfigured the following users:

Username	Password	Description
Admin	admin	**System Administrator**. Can edit the visualisation, create users and change their access rights / permissions
manager	manager	**User for the installation / configuration of the system**. It can change all settings regarding the visualisation, but has no access to system settings.
user	user	**Basic user for client-access**. It can navigate through the whole visualisation, but has no or very limited access to the administration of .

On the first configuration of **HORIZONE SERVER** you must login with the “admin” user.
Do this by entering the appropriate data into the login screen; once logged in you will see the following screen:

FRONT END AND BACK END ENVIRONMENTS

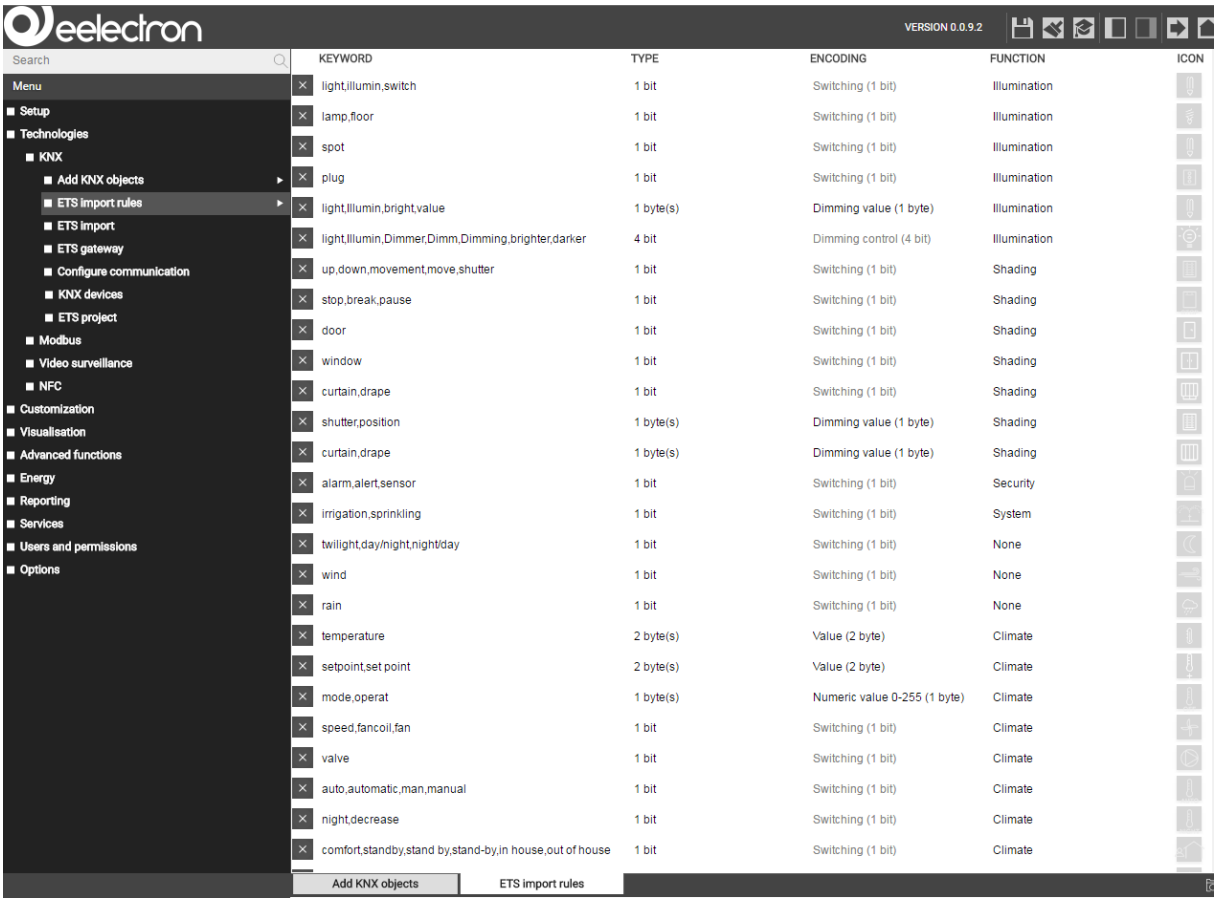
The graphical interface of **HORIZONE SERVER** is made of two main environments:

“ADMINISTRATION” or “BACK END”. This is the configuration area, in which (depending on the users permissions) all settings can be managed.

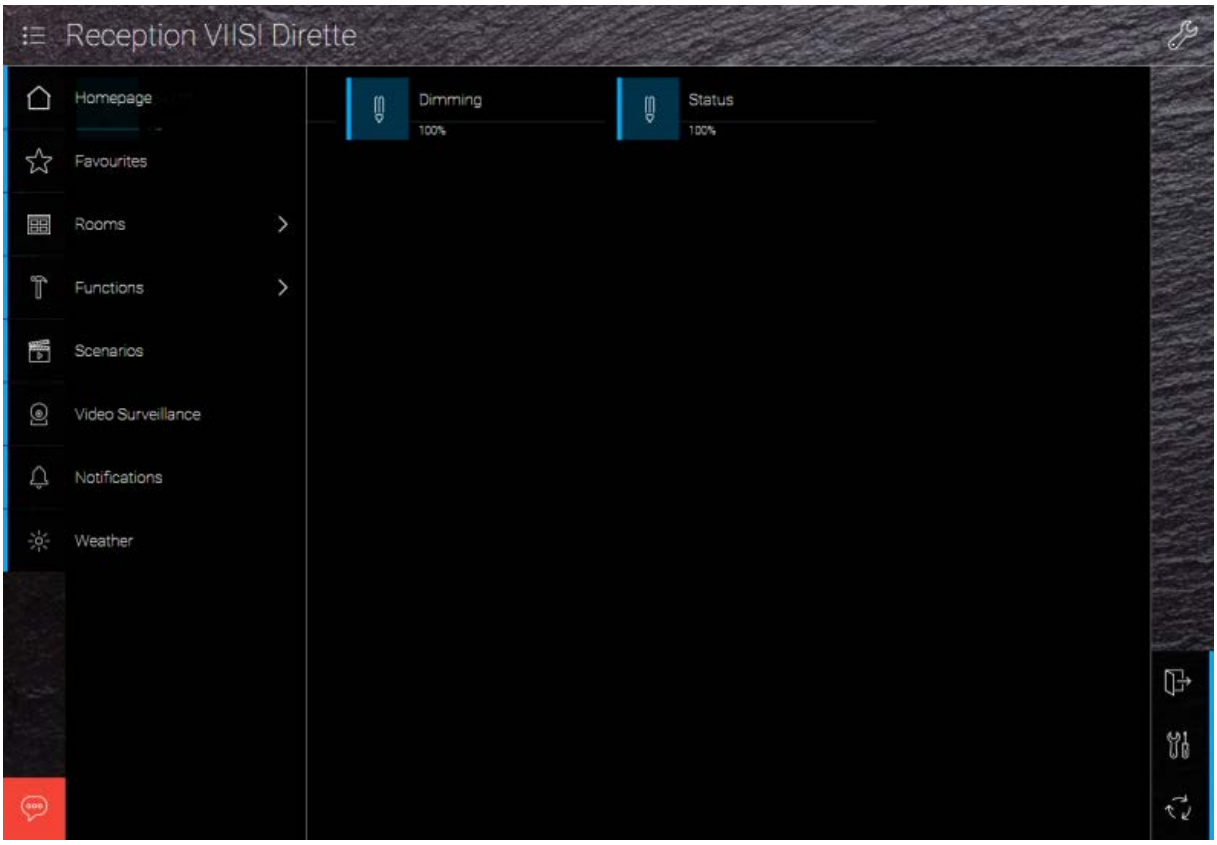
“VISUALISATION” or “FRONT END”. This is the user visualisation environment. It allows the user to navigate through rooms/pages, created by the professional installer through the back end, and to actuate all objects in real time.

Both areas are based on web technology and can therefore be controlled from within a browser window. The main difference between the two levels is the graphical design:

BACK END was designed with a simple graphic style, optimized to display the maximum amount of information and options in a clear form.



FRONT END was designed to allow the inexperienced users the most intuitive and easy navigation. The modern and stylish design-makes it very comfortable for the end user to take full control of its system.



A simple button allows the professional to switch from one environment to the other:

From the BACK END, the button to switch to the FRONT END is positioned in the upper right corner of the screen.

From the FRONT END, the button to switch to the BACK END is positioned in the lower right corner. The user must have the permissions to access the BACK END.

Alternatively, the two environments can be accessed directly by entering the following links inside the browsers address bar:

LEVEL	EXAMPLE
BACK END	http://192.168.0.110/Horizone/modules/system/externalframe.php?context=configuration
FRONT END	http://192.168.0.110/Horizone/modules/system/externalframe.php?context=runtime

To save time during configuration, both environments can be displayed simultaneously in different tabs of the browser, which makes it faster to switch between the areas. Note: To see the changes in the FRONT END in real time, it is recommended to refresh the browser window after any change done in the BACK END.

RESET OF IP ADDRESS TO FACTORY DEFAULTS

The IP address of **HORIZONE SERVER** can be reset to factory default settings through the RESET-button on the bottom side of the device:

Localize the RESET-button on the device.

Press the RESET-button until the SERVICE-LED starts blinking (minimum 10 seconds). Then release the RESET button.

Press the RESET-button again within the next 5 seconds. After a short pause the SERVICE-LED stays on for some seconds.

As soon as the SERVICE-LED turns off, **HORIZONE SERVER** is reachable at the factory IP address 192.168.0.110

If the SERVICE-LED stops blinking after the RESET-button was pressed for the first time (10 seconds) and before you were able to press the RESET-button again, please repeat the whole procedure.

GENERAL OVERVIEW

INTRODUCTION

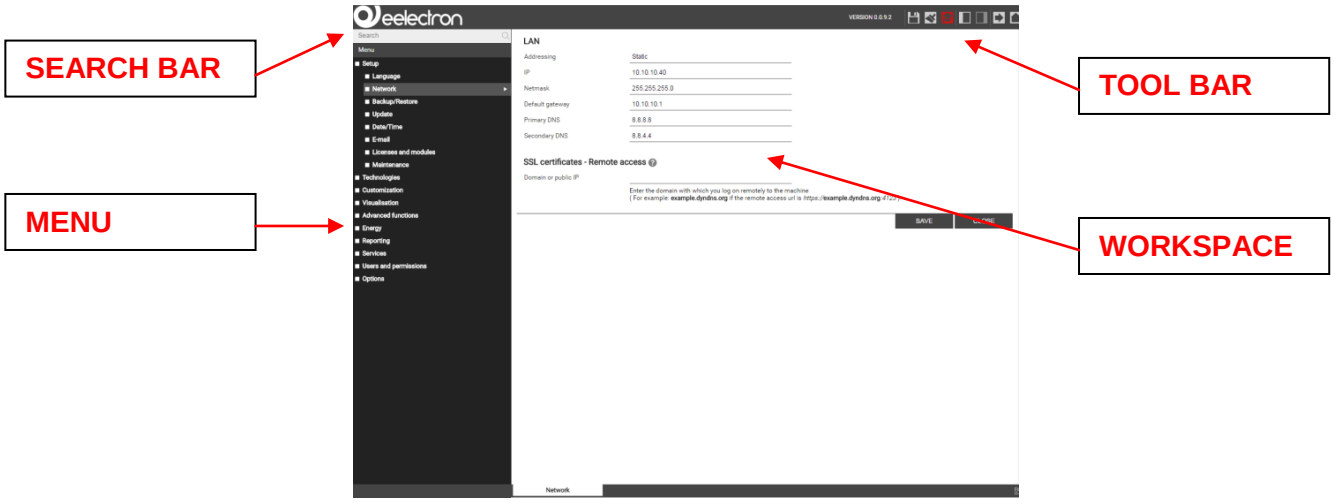
This chapter gives an overview of the ADMINISTRATION area of **HORIZONE SERVER** and explains different tools and menus, which can be used to configure the web server.

BACKEND – GRAPHICAL INTERFACE

The BACK END is divided into the following sections:

SEARCH-BAR	The search bar is located in the upper left corner in form of an input filed, which allows to find objects quickly by entering keywords related to the searched objects.
MENU	Main menu of the software, shown as a tree-view. Through this menu all sections of the software are accessible and objects can be created / modified / deleted.
TOOLBAR	The toolbar in the upper side of the BACK END is always shown and allows switching quickly to the mostly used functions through the related buttons.
WORKSPACE	Main area for showing the chosen configuration options; the single menus and configuration windows of the objects are shown in here. It is possible to open more menus / windows in the main area at the same time; the different menus / windows will be accessible through different tabs in this case.

The following screenshot shows the single sections of the ADMINISTRATION area:



TOOLBAR

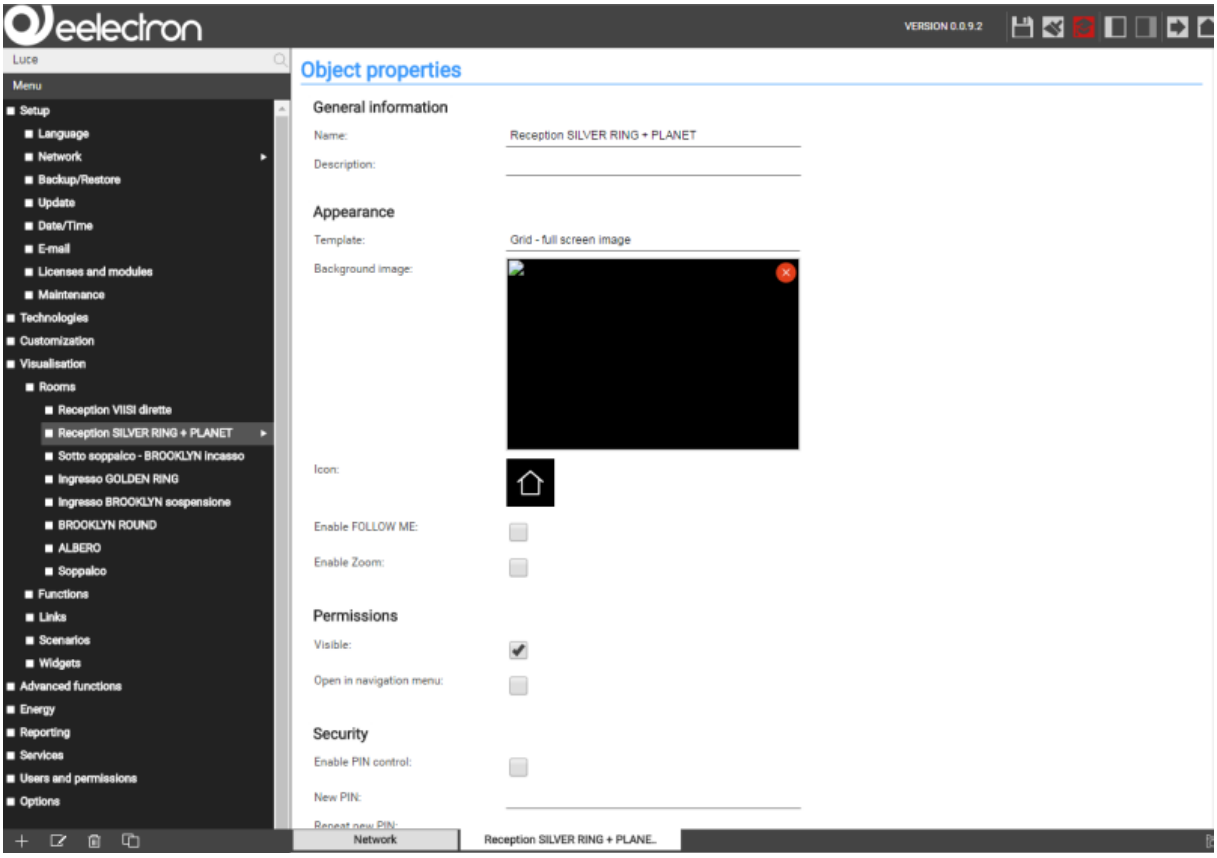
Following functions are always present in the toolbar:

SAVE	Allows saving all changes into the flash memory of HORIZONE SERVER, what will preserve the data even if the web server is powered off. The button turns red whenever changes are made, but not saved yet. In addition, every 5 minutes an automatic saving of all changes takes place, so pressing the “SAVE” button is only necessary if the system should be shut down/restarted immediately after making the changes.
BASE / EXPERT	Changes the visibility of various options / parameters within the configuration pages. The BASE mode displays only the necessary settings and visible objects; the EXPERT mode, however, shows even more advanced options as well as hidden objects.
LOGOUT	Ends the current session and allows you to log onto the web server as a different user.
VISUALISATION	Allows switching to the FRONT END area and therefore accessing the visualisation, now showing all modifications made in the configuration.

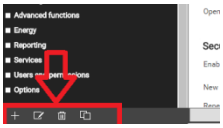
NAVIGATION MENU

USE OF NAVIGATION MENU

The navigation menu is a typical tree-view-menu. After accessing the BACK END area all the main entries are shown; the sub-menus are accessed by extending the corresponding main menu. The navigation in this menu is done simply with a mouse. Clicking on an entry in the navigation menu turns the clicked entry into blue. If the entry has additional submenus, the entry will be extended and the sub-menus are displayed. Another click on the selected entry will close the section and hide the submenus again.

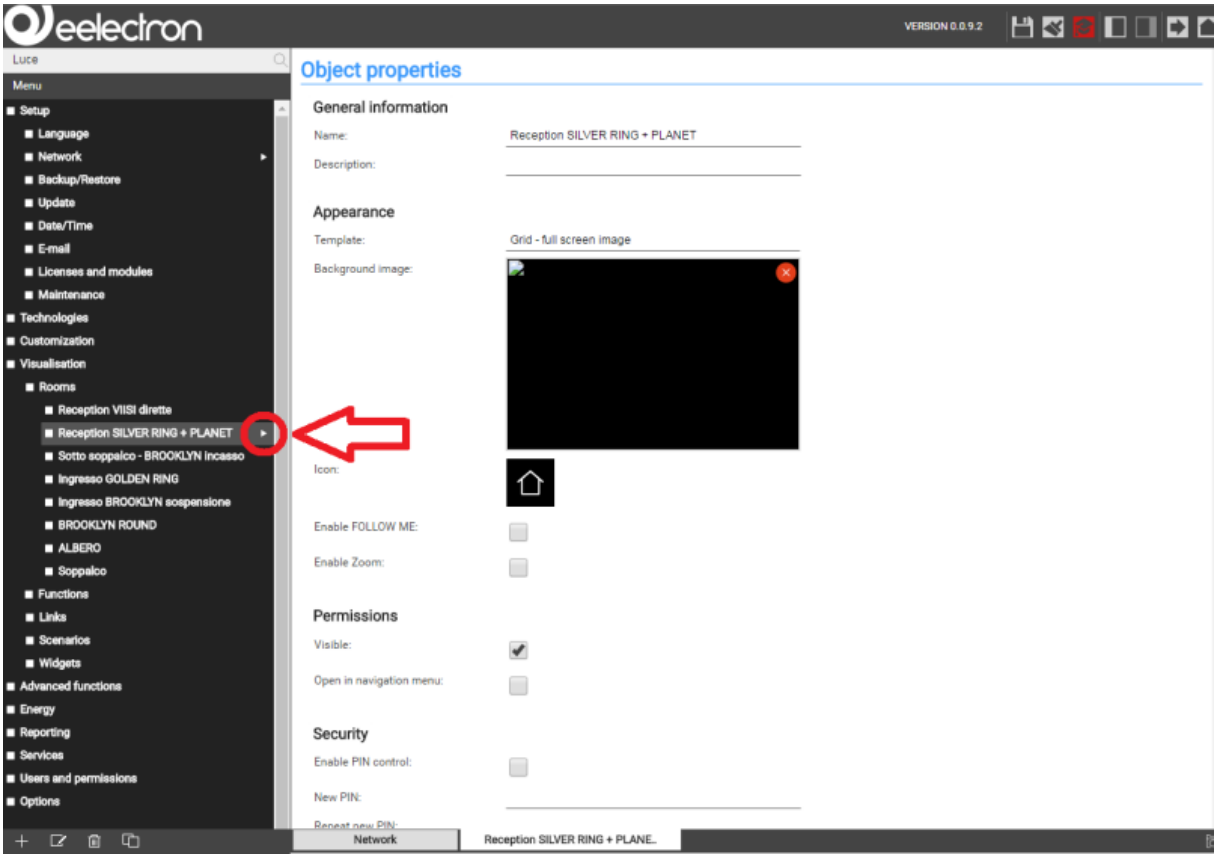


If actions can be performed for the selected entry, they will be displayed in the TOOLBAR at the bottom left corner of the navigation menu in form of different buttons. The following actions may be displayed:



NEW / ADD	Allows the creation of a new object within the selected entry. Depending on the selected item different types of objects are created; if a menu allows the creation of multiple types of objects, then a context menu will be dis played in order to select the object type to create.
DELETE	Deletes the selected entry from the project
EDIT	Allows editing of the selected entry. The configuration page of the selected object is open in the workspace on the left.
CLONE	Creates a copy of the selected entry.

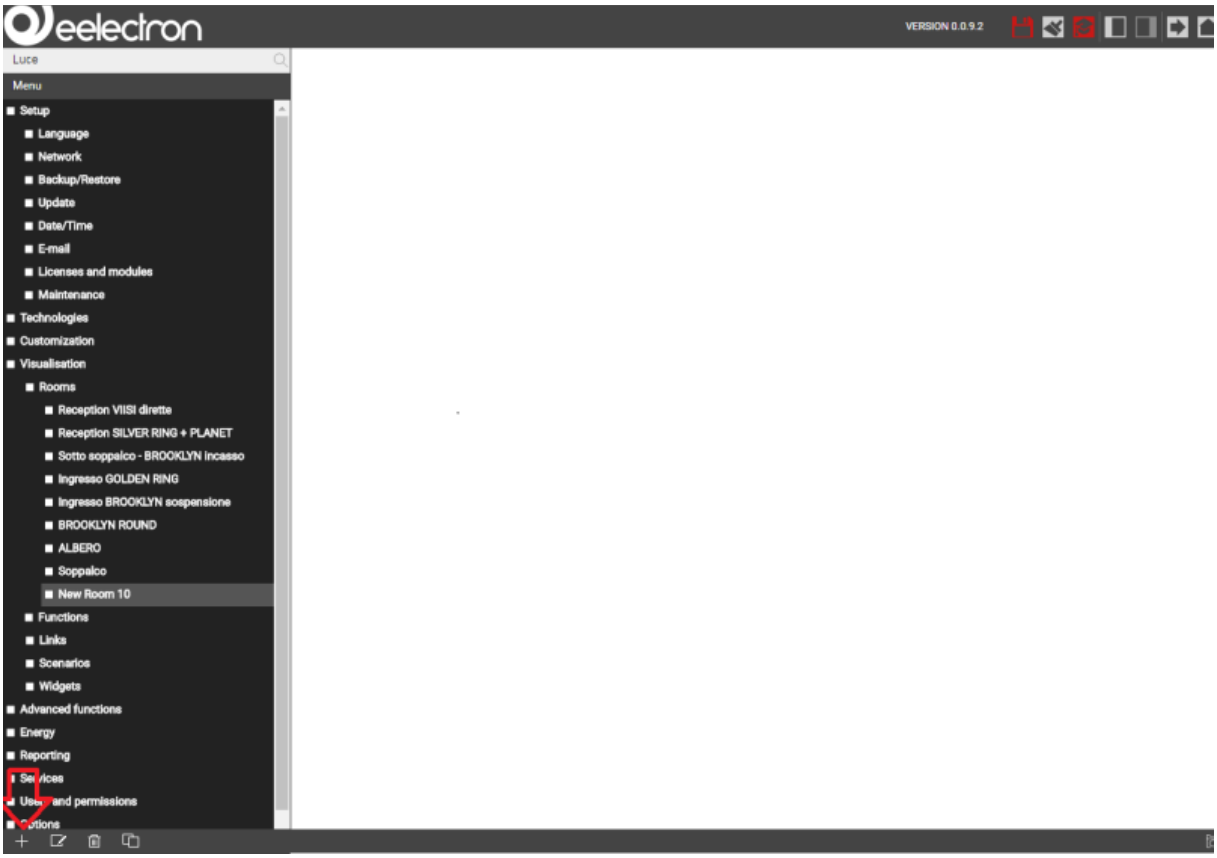
If the selected entry supports the EDIT-action, TRIANGLE will be displayed on the right side of the entry. Clicking on these points has the same effect as clicking on the EDIT button in the TOOLBAR.



If the configuration window of an entry is opened through the EDIT-action, the entry will show an arrow-icon on the right side. This icon will be displayed until the configuration window of the entry is closed and shall facilitate the navigation if multiple tabs are opened in the workspace.

As mentioned before, some of the entries of the navigation menu permit to create submenus or to insert new objects. This is done using the NEW button in the TOOLBAR: by pressing this button a new object (the object type depends on the selected entry) will be created and selected automatically. If the EDIT button is clicked, the configuration window of the newly created object will be opened.

Example: To create a new room, just select the entry "ROOMS" (in the main menu "VISUALISATION") and click on the NEW button. The new room will be created and - if other rooms have already been created before - shown at the end of the sub-menu:



For rooms it is also possible to create further sub-menus following the same procedure (as in the further course of this manual will be explained); the resulting tree-structure can so also be used in the visualisation.

The DELETE button removes the selected entries from the project. This action is blocked for the system menus and indispensable objects, to prevent the user to remove them by accident.

MENU STRUCTURE

The navigation menu permits to access every setting of the web server and has the following structure:

SETUP	Contains generic settings and parameters of the web server
TECHNOLOGIES	Contains the configuration pages of all technologies supported by the web server (KNX. Video surveillance, intercom etc.)
CUSTOMIZATION	Contains the configuration pages for customizing the graphical design of the visualisation and the web server plugins
VISUALISATION	Allows the configuration of the visualisation itself (rooms, functions, scenar ios etc.)
ADVANCED FUNCTIONS	Allows the configuration of additional functions (e.g. logics, notifications etc.)
USERS AND PERMISSIONS	Allows the configuration of new users and their access permissions

SETUP

The menu SETUP contains the following entries:

LANGUAGE	Permits to change the language of the GUI
NETWORK	Permits to configure the network parameters of the web server
UPDATE	Permits to update the web server through specific update-packages
BACKUP/RESTORE	Permits to create a backup of the current database, to import an already created backup or to reset the database to factory settings
DATE/TIME	Permits to configure date/time of the web server and all date/time related settings
LICENSE AND MODULES	Permits to edit the single license codes and modules for enabling additional functions

Further information can be found in the appropriate section of this manual.

TECHNOLOGIES – KNX

This section contains all settings for establishing a communication with the KNX bus:

ETS-IMPORT-RULES	Permits to configure import-rules, through which the imported group addresses will automatically be configured and connected to the desired icon/function, in dependence of the defined keywords
ETS IMPORT	Allows the import of a ETS-project into HORIZONE SERVER
ETS GATEWAY	Permits to use HORIZONE SERVER as ETS programming interface, even via internet
KNX DEVICES	Allows the control / management of the physical KNX devices of the system
CONFIGURE COMMUNICATION	Permits to change the parameters of the used KNX communication interface
ETS PROJECT	Permits to navigate through the single group addresses and to edit them; the navigation structure will be the same as the one in ETS.

TECHNOLOGIES – VIDEO SURVELLAINCE

In this section IP cameras can be integrated into the visualisation; they can be reached inside the visualisation by clicking on the related icon in the navigation menu.

TECHNOLOGIES – INTERCOM

This section contains several configuration menus for using **HORIZONE SERVER** as VoIP server (for the integration of door communication systems):

INTERNAL UNITS	Client-PCs, IP phones or soft phones (SIP protocol support is required)
EXTERNAL UNITS	Compatible video or audio door stations (SIP-Protocol support is necessary, supported video format: MJPG or H263/H263+/H264)
CALL GROUPS	External and internal units can be grouped into a call group; by calling a call group, all the internal and external units belonging to the call group will start ringing.
TELEPHONE LINES	IP telephony lines to which calls can be forwarded; this object type can be used to integrate analogue devices (PSTN, ISDN or GSM).
SETTINGS	Generic parameters of the SIP server configuration

NOTE: depending on the server configuration, this section could need additional licenses.

CUSTOMIZATION

This section contains the following entries:

THEMES	Permits to change the design (theme) of the FRONT END
NAVIGATION MENU	Permits to personalize the navigation menu of the FRONT END
FAVOURITES	Permits to change the favourites page of the FRONT END
OPTIONS	Allows the configuration of several aspects / plugins of the FRONT END
CUSTOM SYMBOLS / FUNCTIONS	Allows the customization of the existing functions / symbols as wells as the creation of completely new renderings.

CUSTOMIZATION – NAVIGATION MENU

This entry permits to customize the navigation menu of the FRONT END environment. Existing entries can be hidden (only possible in EXPERT mode) and also rooms (see next section) can be added to the navigation menu. Therefore, proceed as described below:

Open the settings window of the entry NAVIGATION MENU by clicking the 3 points or the EDIT button.

Search the desired room by using the search function (see page 27) for further information about the search function).

Drag the selected room inside the configuration window of the navigation menu and drop it there.

In this way rooms can directly be added into the navigation menu and so they are visible in the home screen inside the navigation menu (and also directly in the main page of the FRONT END, if this option is active).
Furthermore, any system entry access, which is not desired, can be easily hidden from the navigation menu; in this way the FRONT END can be directly adapted to the customer's needs.

VISUALISATION – ROOMS

This section allows the configuration of the rooms inside the visualisation. This section is initially empty and allows the creation of new rooms (from a technical point of view objects of type "GROUP"), which can contain other rooms or other objects supported by **HORIZONE SERVER**.

For each room a so called “Template” can be selected. Depending on the selected THEME, different Templates are available. Currently the following Templates are available:

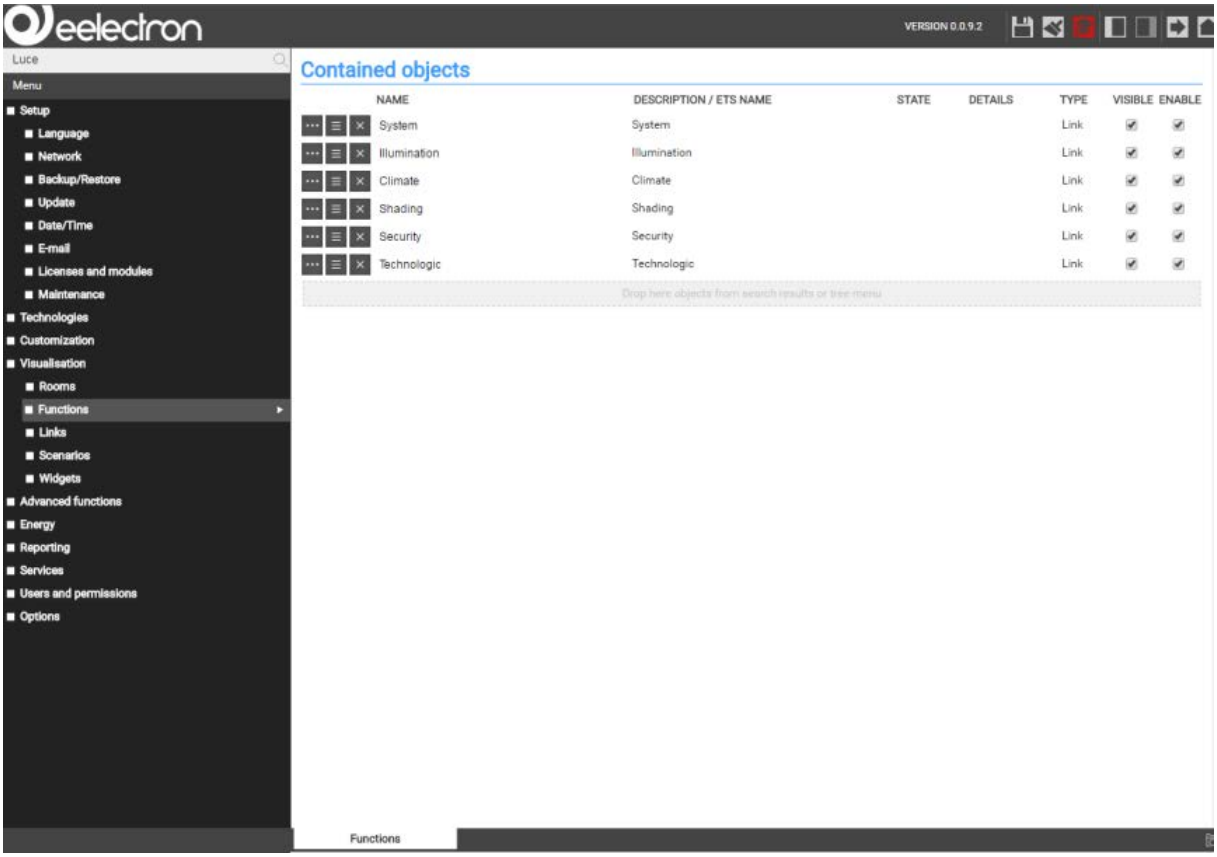
BACKGROUND	Background image (photo, graphic rendering, plan), on which the single control objects are positioned. Clicking on such a control object, it either sends the related command on the KNX bus or opens a box containing further control options.
GRID	Shows the contained objects in table-form. Depending on the type of object, it can be controlled directly by clicking on the related buttons of the object or a pop-up
Image: -> NO IMAGE -> FULL IMAGE -> ON TOP -> ON RIGHT -> ON LEFT	window is opened with additional controls, when the object is clicked. The grid may also include an image file that is positioned depending on the selected template.

If the entry ROOMS is selected directly and its configuration window is opened by clicking on the EDIT button, the order of the contained rooms can be changed. Since this group belongs to the system, no other settings are available.

VISUALISATION – FUNCTIONS

This section allows the organization of the FUNCTIONS, which are to be considered as categories through which all objects can be grouped based on their typology. If an object, for example, is linked with the FUNCTION "Illumination", it is automatically copied into the group "Illumination" of the FUNCTIONS. This group can be called directly in the FRONT END, providing quick access to the objects of the same typology.

After activating the EXPERT-mode through the appropriate button in the toolbar, for each FUNCTION it can be defined whether it should be visible in the FRONT END or not:



Furthermore, the order of the single entries can be changed. Click on the blue ORDER-button of an entry, drag it up or down to the desired position and drop it there to fix the entry in the new position. The new sequence is shown in the FRONT END after accessing the FUNCTIONS menu again.

Further information can be found in chapter 6 of this manual.

VISUALISATION – LINKS

This section allows the configuration of links. Using these objects you can create page jumps to other rooms of the visualisation or even to external web contents (like the contents of a web server or a homepage).

Further information can be found at page 103 of this manual.

VISUALISATION – SCENARIOS

This section allows the configuration of scenarios. With scenarios, multiple actions can be executed sequentially- if necessary also time delayed – with only one click. Scenarios can also be started as a passive event by other objects or via scheduling.

The order of the single scenarios can be changed by opening the configuration menu of the SCENARIOS entry and by moving the single scenarios to the desired position through drag and drop.
In EXPERT mode it is also possible to define for each scenario if it should be visible in the FRONT END or not.

Further information can be found at page 97 of this manual.

VISUALISATION – WIDGETS

This section allows the configuration of so-called widgets, in which KNX objects of the same device can be grouped and therefore will be accessible and operable in one of the available templates (for example: thermostats, blinds, dimming, RGB control, etc.).
For more information, refer to page 85 of this manual.

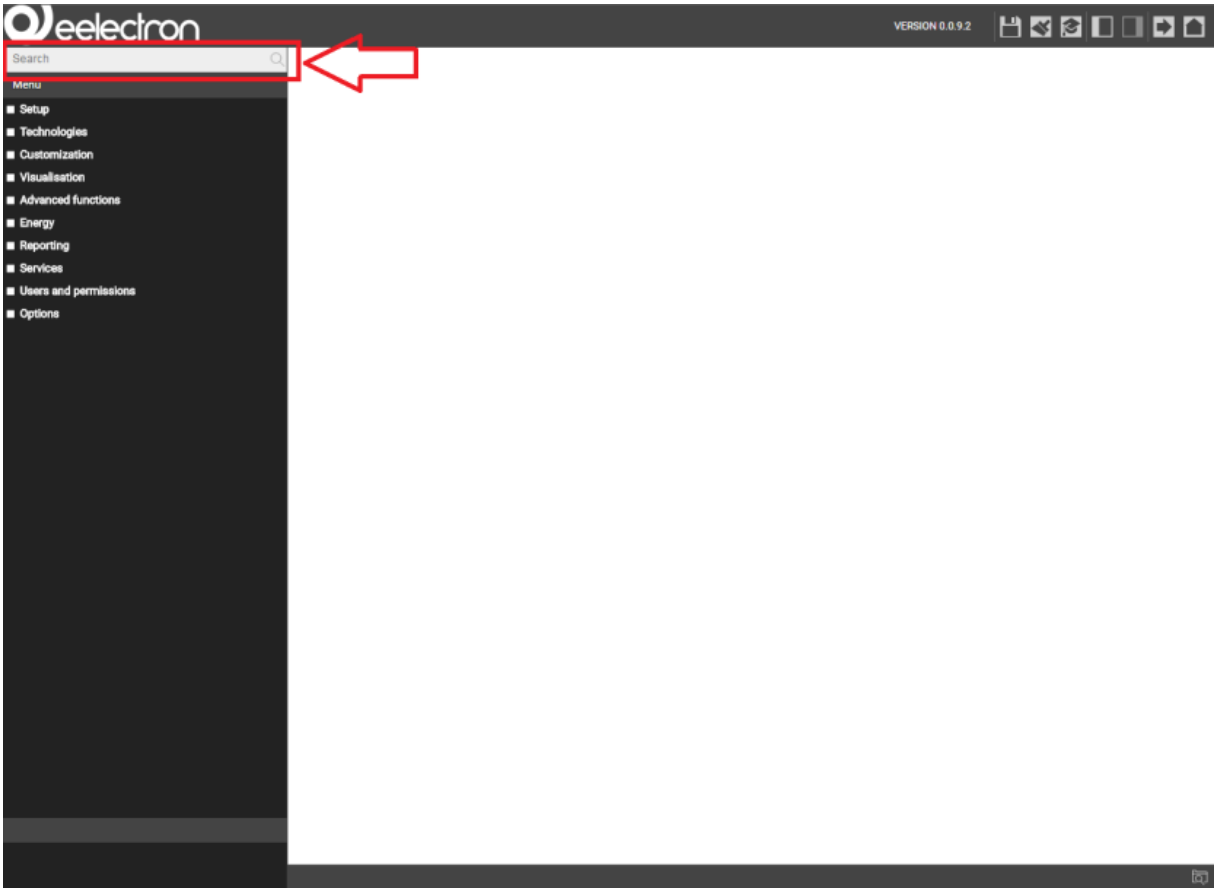
ADVANCED FUNCTIONS

This section permits to extend the system with functionalities that are not programmed on KNX level. The following advanced functions are available:

LOGICS	Allows AND/OR operations on 1 bit KNX-objects
CONDITIONS	Permits to compare a value of one or more objects with a fixed value and to define events, which are launched in dependency of the comparison result
VIRTUAL OBJECTS	Permits to create virtual objects for example for saving values, for connecting passive and active events etc.
INTEGRATORS	Permits to observe / evaluate values over a given time period; specially convenient for evaluating energy-values
NOTIFICATIONS	Permits to send notifications (either “on screen” or via mail) in dependency of events within the installation
CLIENTS	Permits to create relations between the devices connected to HORIZONE SERVER (each connected device will be shown as CLIENT) and different actions of the software, like e.g. scenarios, VoIP actions, …
SCRIPTING	Permits to create own, PHP-based scripts in order to extend the functionalities of HORIZONE SERVER

SEARCH BAR

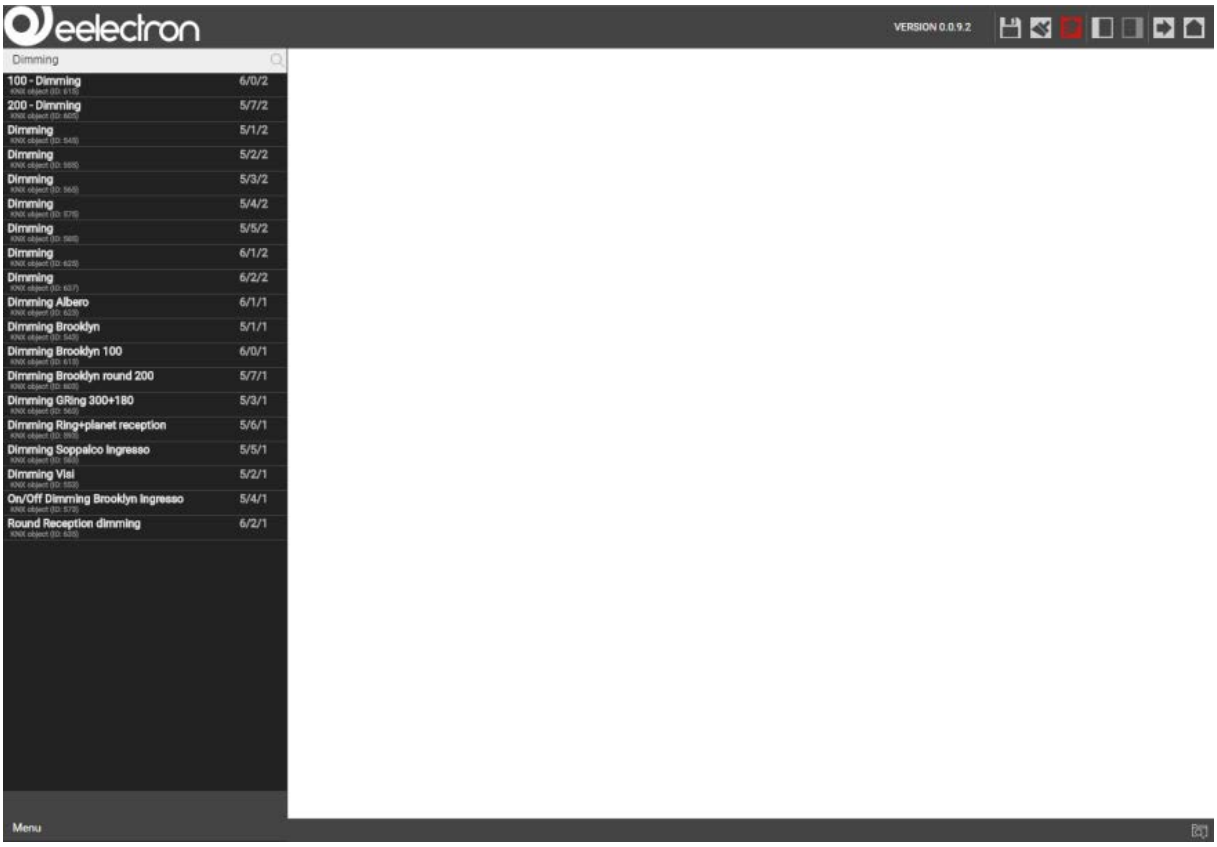
Entering one or more keywords into the search box in the upper left corner, the software searches for all objects, which include the specified keyword in their names or other primary properties. The results are displayed in the left area instead of the navigation menu, which is minimized for this purpose:



The results are shown together with the following information:

NAME	Name of the object inside the software's database
TYPE	Object-type; shown directly under the name of the object
PRIMARY PROPERTY	If available, on the right side the primary property of an object is shown (for example: the group address of a KNX object)

A result entry will be highlighted if it's clicked; as within the navigation menu, there will appear some action buttons in the bottom toolbar, if the selected object allows editing. In this case, the 3 points on the right side of the selected entry will be visible, enabling a quicker access to the property window.



The search function also supports the multiple selection of objects by holding the CTRL key of your keyboard while selecting the desired objects with the mouse. The selected objects will all be highlighted.

The TOOLBAR can show the following action buttons:

EDIT	Opens the configuration window of the selected objects
DELETE	Removes the selected objects from the project
CLONE	Clones the selected objects

The CLONE-action creates a one-on-one copy of the selected objects. After the execution of this command, the search results are refreshed and also the cloned objects will be shown (can be recognized from the prefix “Copy of ...”).

When cloning an object, not only the objects itself is duplicated, but also all of its connections / relations with other objects This means that the cloned object will be contained in the same rooms, logics, scenarios etc. as also the original object. Therefore, after the creation of a cloned object, all relations and connections should be checked and, if necessary, corrected.

NOTE: if the original object was present in a room with BACKGROUND view, the cloned object will be positioned AT THE SAME PLACE in the room and will cover the original object. In this case, please edit the BACKGROUND view and place the cloned object in a different position.

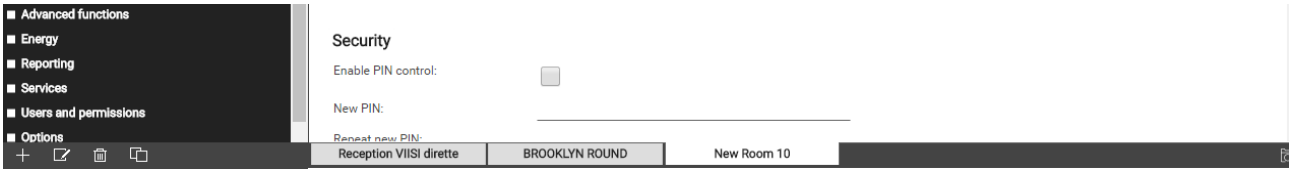
WORKSPACE

OVERVIEW

The WORKSPACE is the working surface of the BACK END area. It offers the possibility to open several configuration windows at the same time in different tabs.

USE OF TABS

All opened tabs are displayed in the TAB-BAR of in the lower area of the WORKSPACE:



If a large number of tabs is opened, they cannot be displayed all in the TAB-BAR. The hidden tabs can be accessed through the button at the right end of the TAB-BAR, which, on click, shows a complete list of all opened tabs. To close an opened tab, move the mouse pointer on the tab title and click on the appearing X-icon. If there are present any unsaved changes in the tab, you will be informed about it before the tab is closed, in order to avoid data loss.

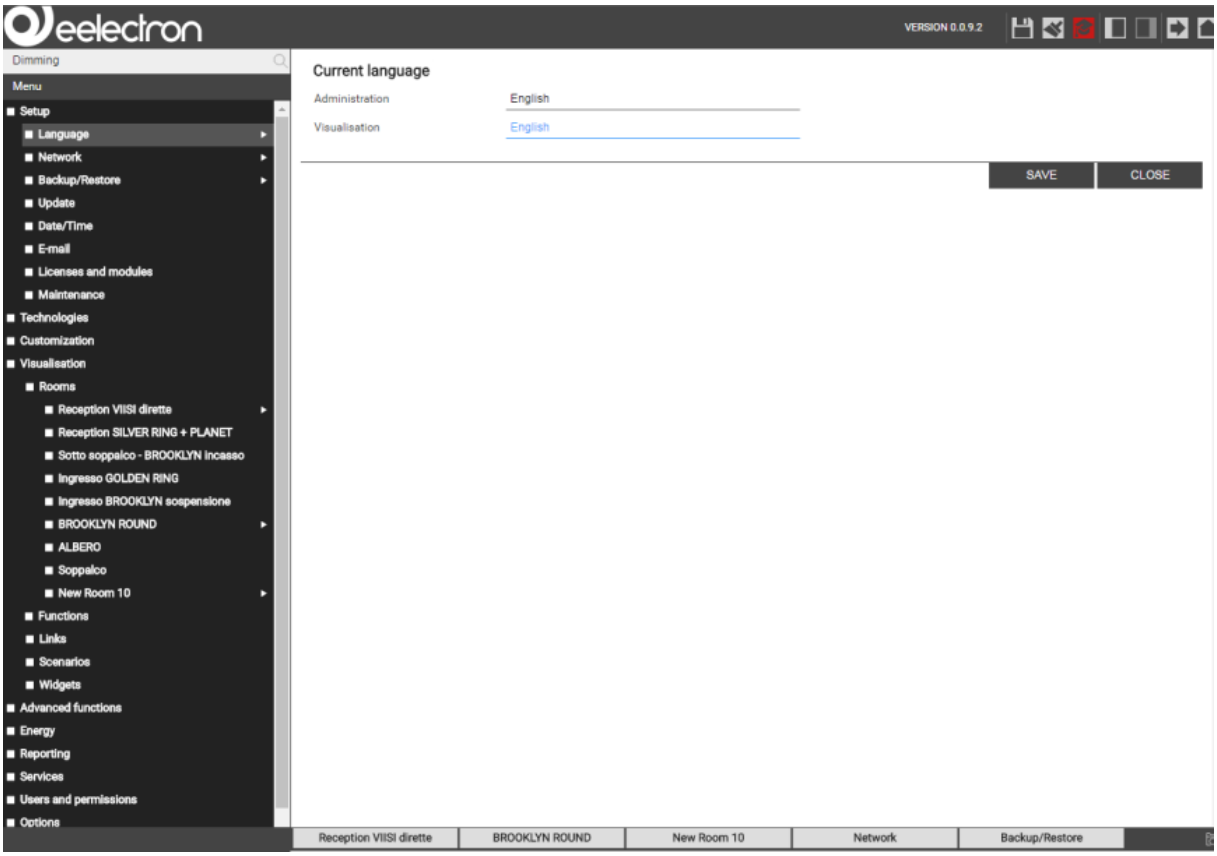
SETUP

INTRODUCTION

This chapter explains the configuration pages for installation, commissioning and maintenance of **HORIZONE SERVER**. All sections and menus described in this chapter can be found in the SETUP section of the navigation menu. To have access to all of these settings, you must be logged in as administrator.

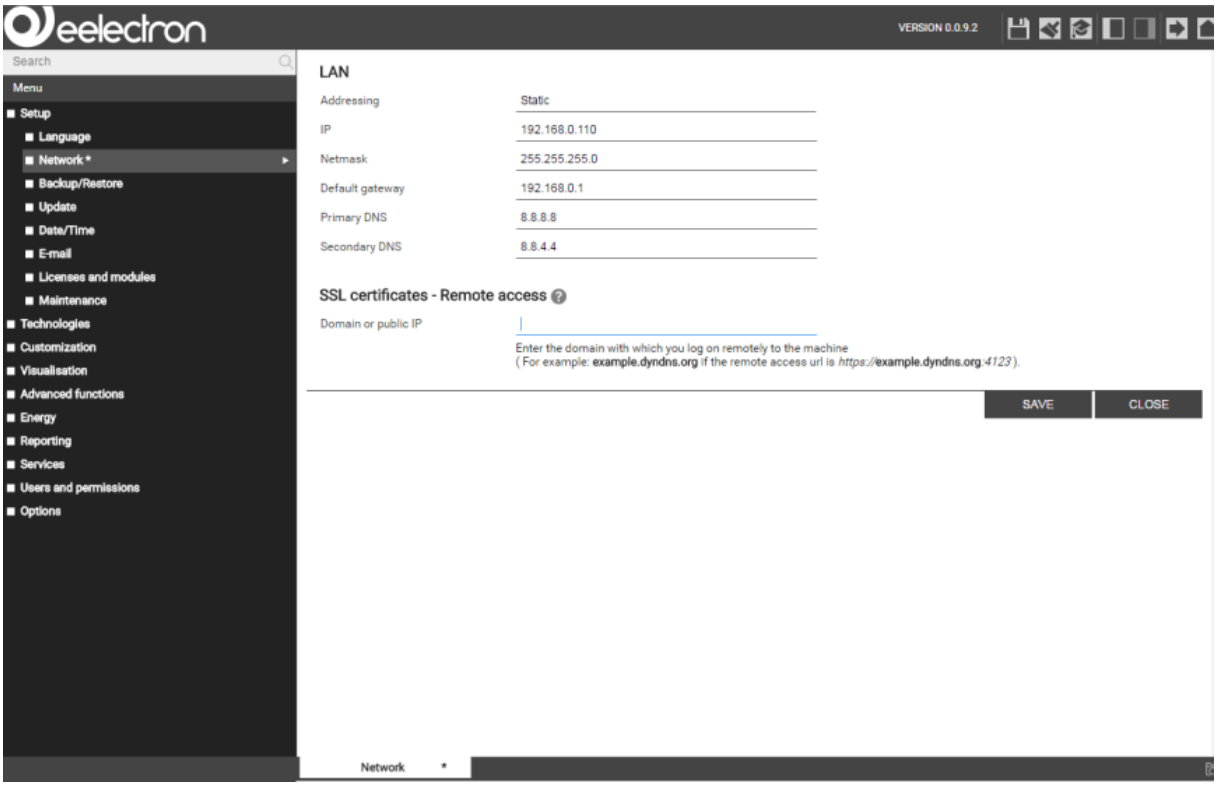
LANGUAGE

This page allows the configuration of the language that should be used for the different environments of **HORIZONE SERVER**. Currently the language can be set separately for the FRONT END and BACK END. Select the desired language and click on "SAVE". Once the storage procedure is completed, the page will be refreshed and displayed in the selected language.



NETWORK

This page allows the configuration of the network parameters of **HORIZONE SERVER**:



The available parameters are:

IP ADDRESS	IP address of **HORIZONE SERVER**; this address must be present in the network only once and must be compatible with the IP addresses of the other devices inside the same network (if unsure, please contact your network administrator)
SUBNET MASK	If no special network configuration is used, don't change the standard value "255.255.255.0"
GATEWAY	Enter the IP address of your router (if present) or the referenced server of the network (if unsure, please contact your network administrator). **NOTE:** in order to guarantee remote access to **HORIZONE SERVER**, you must enter the IP address of the Internet router, through which you want to access the web server. For more details, see the appropriate section of this manual.
PRIMARY DNS SECONDARY DNS	DNS addresses over which **HORIZONE SERVER** can access the internet (if available). If no connection is possible with the default addresses, please contact your network administrator.
DOMAIN OR PUBBLIC IP	Enter the domain or public IP that is used to log on to the machine from remote. For example: **example.dyndns.org** if the remote access URL is https://example.dyndns.org:4123-

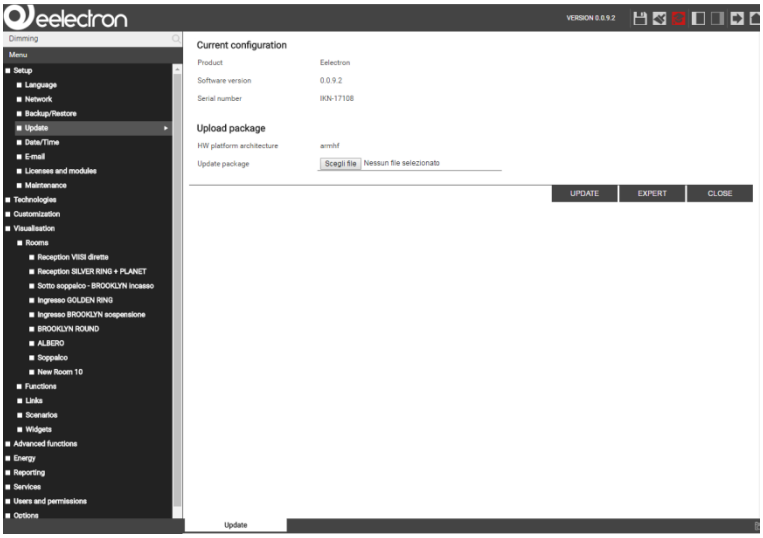
After modifying any of the network parameters, click on "SAVE". Wait for network address change procedure to complete. At the end of the procedure the system will reload the web interface.

	Use only suggested browsers to run the network configuration update procedure. Do not use the browser for normal navigation or to perform other tasks during the procedure. Never interrupt the procedure closing the browser window or exiting the browser. Check carefully that the new entered data are correct before clicking on the “SAVE” button. If incorrect settings are saved, **HORIZONE SERVER** will probably be no longer accessible through the network.

In case this may happen, the IP address must be reset to factory default through the hardware reset procedure.

UPDATE

This menu permits to update the software version of **HORIZONE SERVER**; please use only official update packages published by **EELECTRON SPA**, in order to avoid malfunctions. To update **HORIZONE SERVER**, please proceed as follows:



- Save the update package (downloaded from homepage or received via mail) on your PC without unpacking it.
- Open the UPDATE menu in the BACK END of **HORIZONE SERVER**.
- Check if the update package includes a newer version of the software (current version is shown on top).
- Choose the update package through the button “Choose file” (or similar, depends on the browser).
- Click on the button “UPDATE”.

The update process will run automatically. Please wait the end of procedure. Depending on the configuration and software version, the update may take several minutes.

Once the update process is completed, a brief summary as well as the new software version is displayed. To complete the update, please click on the "Restart now" button. Reboot may take up to 2 minutes.

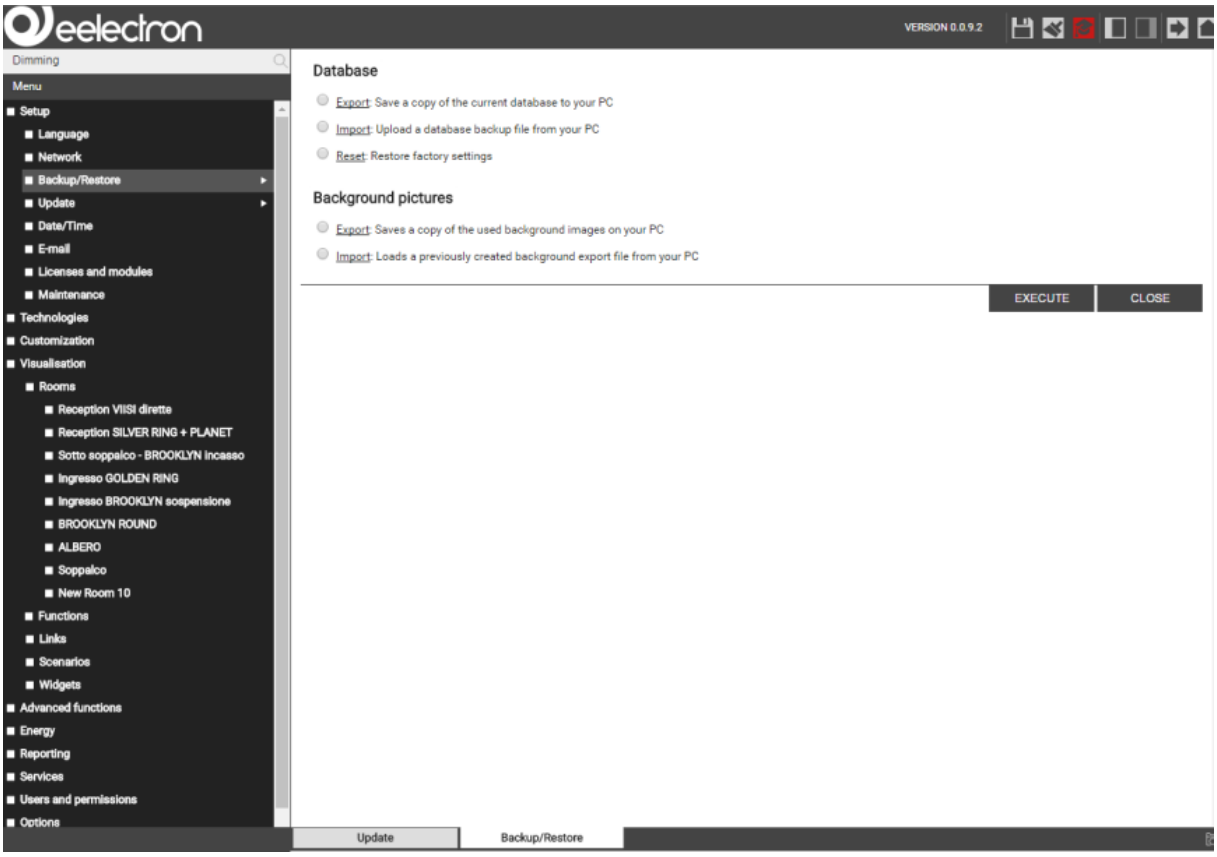
After waiting for such time, clear completely browser cache and restart the browser.

HINT FOR MAC USERS: if the update package is downloaded with SAFARI or the integrated mail client, it will be unpacked automatically, which prevents a successful update. In this case, please download the update package again using an alternative browser / email client.

Use only suggested browsers to run the update procedure.
Never interrupt an update procedure closing the browser window or exiting the browser. Do not use the browser for normal navigation or to perform other tasks during update procedure. Aborting this kind of procedures may result in important system file damage and consequent total system block. Recovery from this status may not be possible lo-cally: it may need a hard reset, possible only returning the system to manufacturer.

BACKUP / RESTORE

This page allows the creation of a backup of your project, or also the import of a previously created backup (even from another **HORIZONE SERVER** or the **HORIZONE SERVER PDK**). In addition, **HORIZONE SERVER** can be reset to factory defaults (the IP address will NOT be affected by the reset).

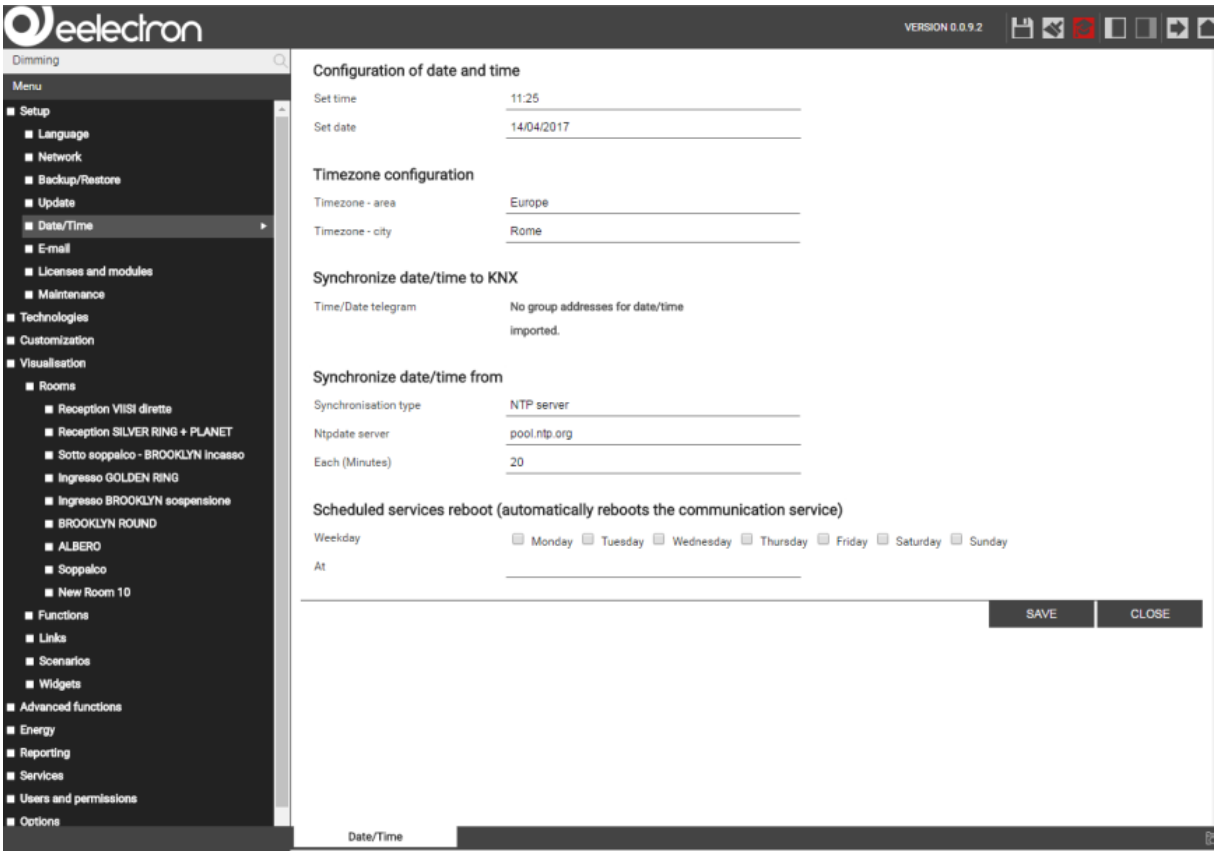


After the desired action has been selected (and in case of the import action a suitable backup has been selected), click on "EXECUTE" and wait for the desired action to be processed.

	Never interrupt a “backup import” or a “reset to factory defaults” procedure closing the browser window. Aborting this kind of procedures may result in important system file damage and consequent total system block. Recovery from this status may not be possible locally: it may need a hard reset, possible only returning the system to manufacturer.

DATE / TIME

This page allows setting several parameters related to date and time of **HORIZONE SERVER**.



DATE / TIME CONFIGURATION

Permits to manually adjust the system time of the web server. If in the own ETS project at least an object of type date or time is available, **HORIZONE SERVER** can be configured to send these values automatically on the bus to synchronize other devices with its date and time.

TIMEZONE SETTINGS

Allows configuring the time zone in which **HORIZONE SERVER** is located.

ONLINE UPDATE

Allows defining a time server and a time interval to update automatically the system time; if no special settings are required, it is recommended to use the default settings.

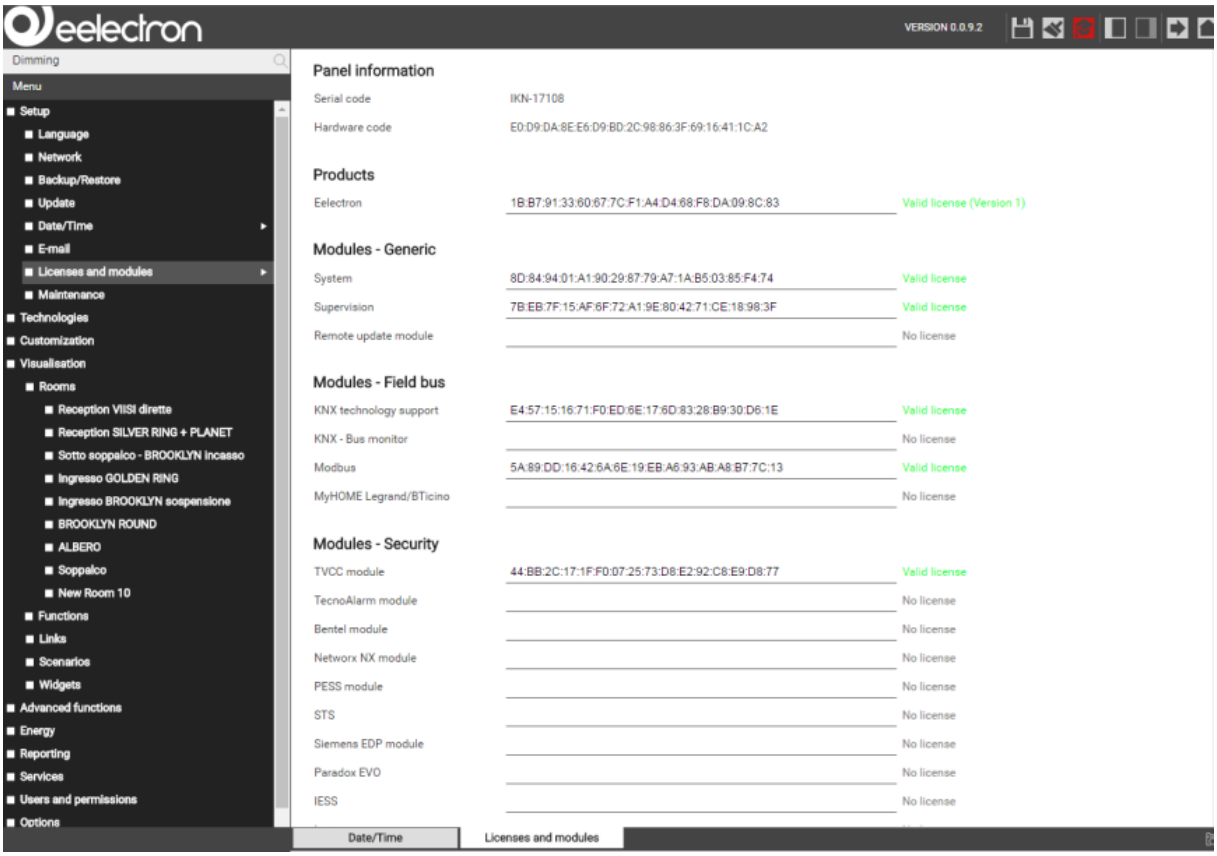
SCHEDULED SERVICES REBOOT

Provides an automatic restart of the system services, running in background, on **HORIZONE SERVER**. Week day and time for the scheduling of the automatic restart of the services can be configured here. Normally, the automatic restart of the services is not required, therefore it is recommended not to activate it unless discussed with **EELECTRON SPA** support team.

LICENSES AND MODULES

In this page, all software modules available on **HORIZONE SERVER** are listed and can be activated inserting the appropriate license key. An additional license can be purchased and activated later, at any moment.

To activate an additional license just copy the license key, received after purchasing the additional software module, in the corresponding field. Close the procedure by clicking on “Save”. Once the save process is completed, beside the entered license you will see the status "Valid license" or "Invalid License". Should the license result as not valid, please check the copied license-code again.



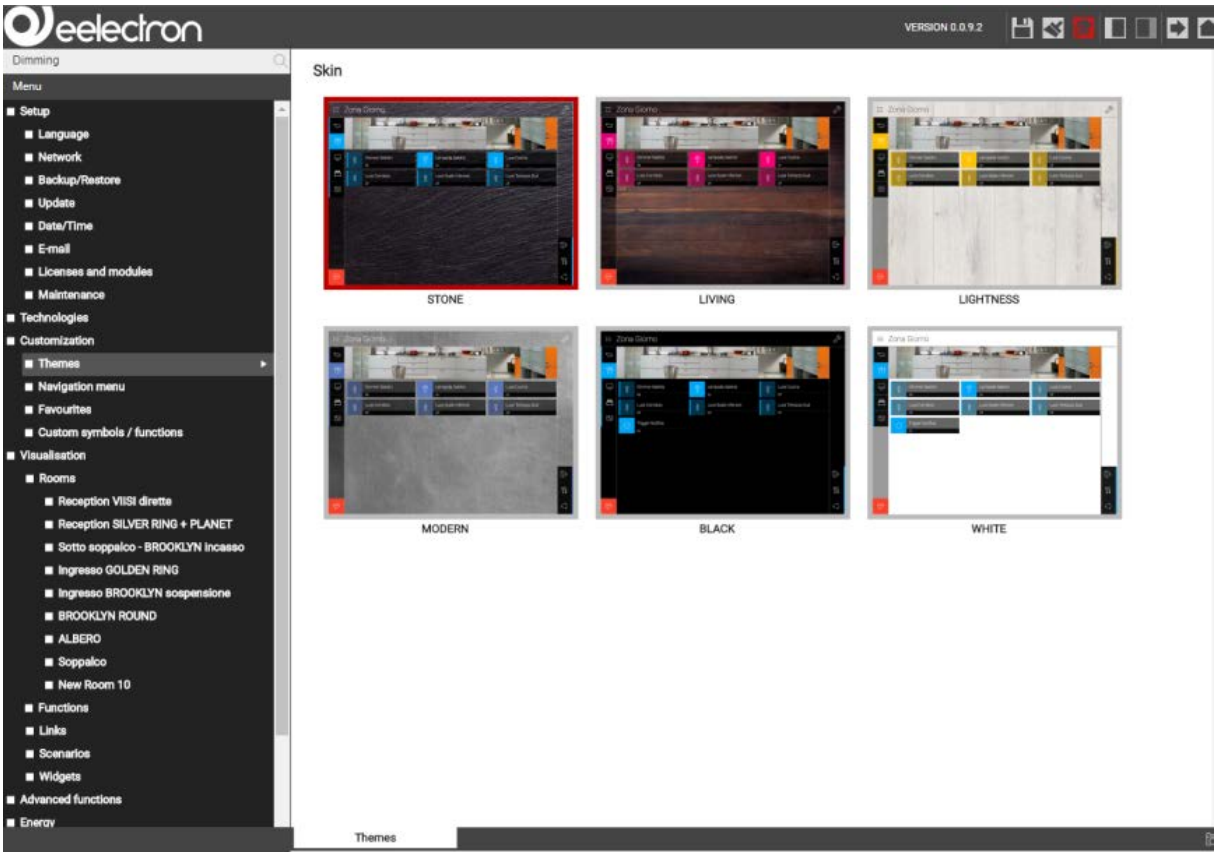
Licenses are hardware-dependent.

It is not possible to transfer license keys from one **HORIZONE SERVER** to another.

CUSTOMIZATION

THEMES

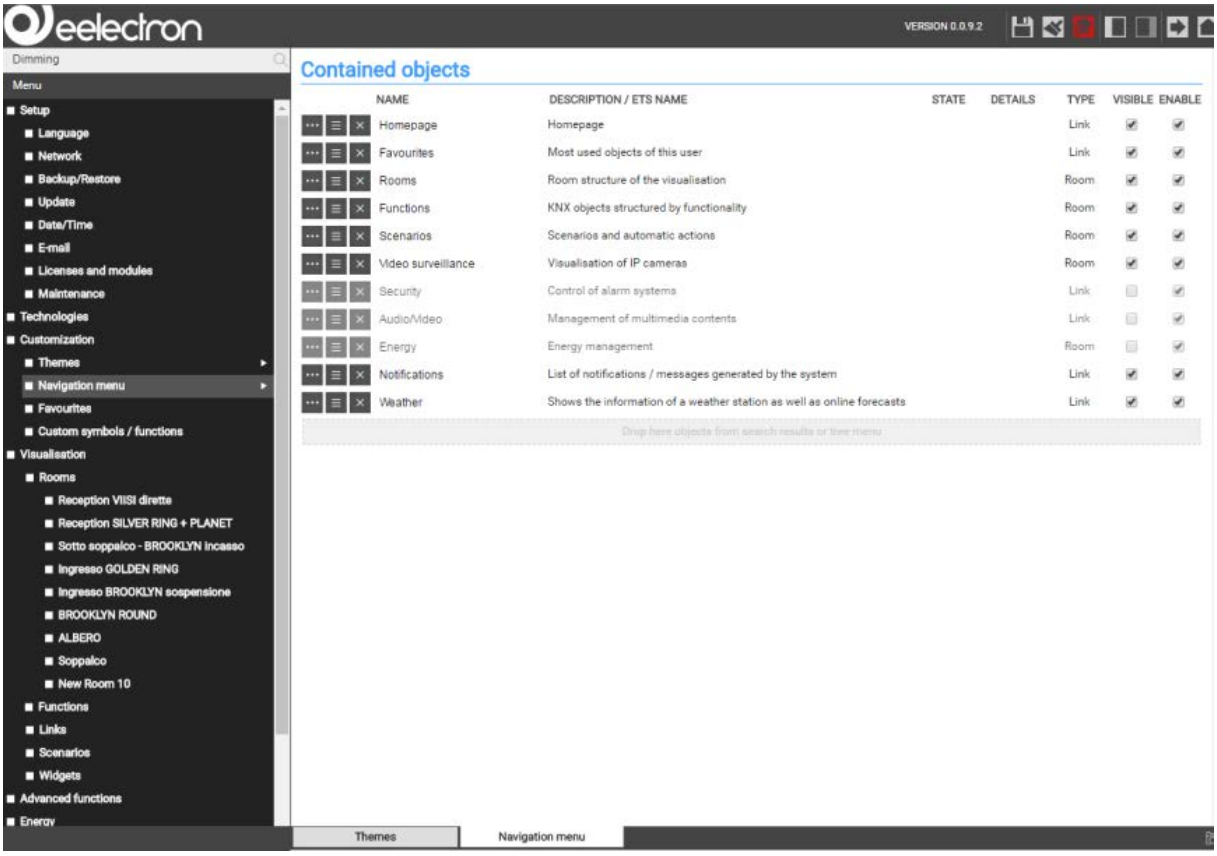
HORIZONE SERVER offers different themes for changing the design of the FRONT END. In this page, it is possible to choose which is the preferred theme.



On delivery the theme “STONE” is preconfigured; all screenshots in this manual refer to this theme.

NAVIGATION MENU

This page permits to personalize the navigation menu. The individual links can be defined, as well as their order within the navigation menu itself. If the EXPERT mode is active, all personalization options of the navigation menu are accessible:



Through the option "VISIBLE" the individual menu items for the navigation menu can be activated or hidden; all hidden menu items are displayed semi-transparent and are not visible in the navigation menu. Menu items of the system itself cannot be deleted, but only hidden.

To change the position of a menu item, it can be moved through "drag and drop" using the blue ORDER button, as already explained for other objects.

It’s also possible to add rooms to the navigation menu so that they are directly accessible from the navigation menu and the HOME page. This can be done by searching the desired room with the search function and pulling them into the list ("drag and drop").

Once the FRONT END is refreshed, the changes made in the navigation menu will be visible.

FAVOURITES

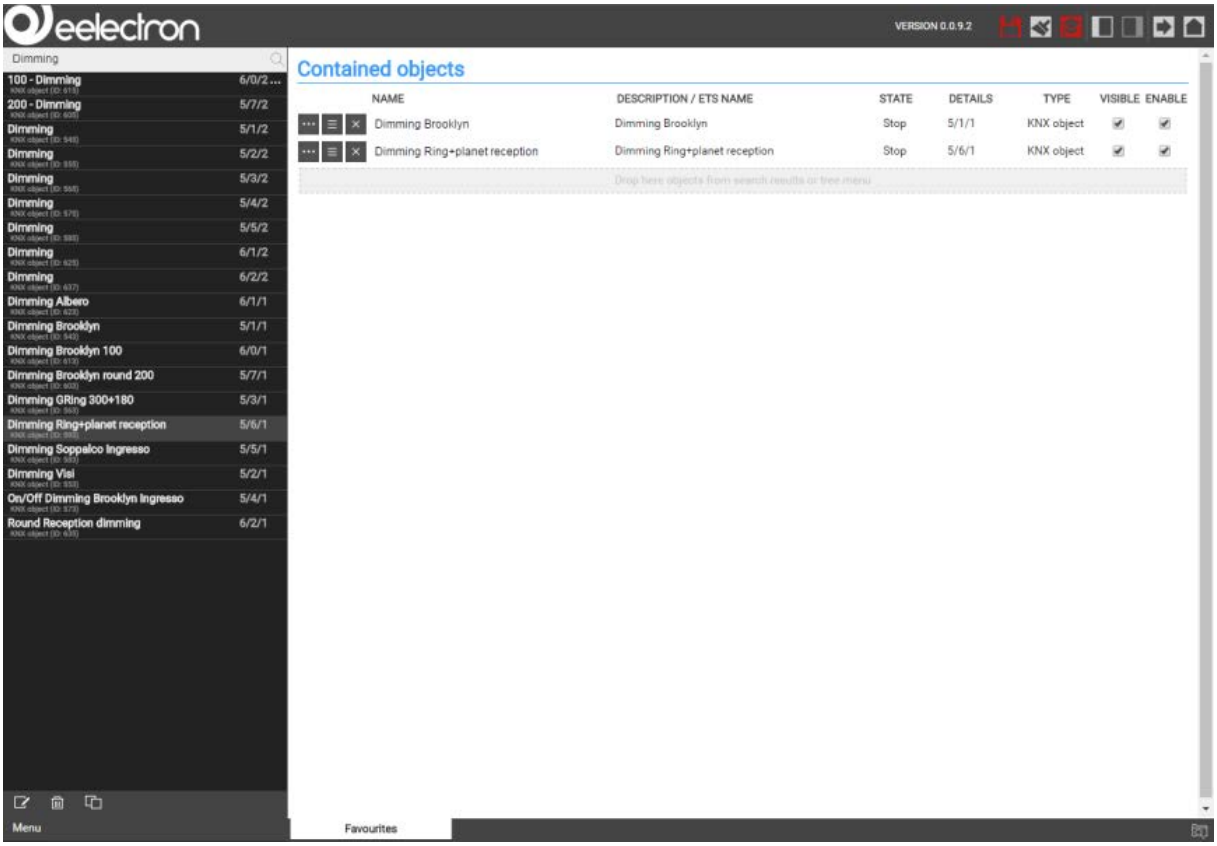
All objects that in the FRONT END have been identified as "FAVORITES" can be managed here. On delivery this list is empty. The end user can define various objects in the FRONT END as "FAVORITES" on his own, which results that the defined objects will be automatically included in the list shown below. The “FAVOURITES” are reachable either through the navigation menu or through the HOME page.

In this configuration window the list with the favorites can be modified:

Objects can be deleted from the list with the DELETE button.

The order of the single objects can be changed by dragging them (using the blue ORDER button) to the desired position in the list and dropping them there.

New objects can be added by dragging them in directly from the search function.



OPTIONS

This menu contains several important settings that allow the configuration of important elements and functionalities of **HORIZONE SERVER**.

HOME

This menu allows the customization of the graphical interface of the HOME page. The HOME page may contain different information from the system, the local weather forecast and different information from the created visualisation; the background image is also customizable:

REDIRECT TO FAVOURITES	This option redirects any access to the HOME page directly to the FAVOURITES page, which contains the objects that are mostly used from the customer
SHOW CURRENT WEATHER INFO	This option embeds the weather forecast into the HOME page; the forecast information for the defined location are set in the menu “WEATHER”
SHOW WEATHER FORECAST	Enables/Disables the weather forecast for the next 2 days
USER WEATHER INFO AS BACKGROUND	Enables/Disables the adaption of the HOME page’s back- ground in dependency of the actual weather information.
BACKGROUND IMAGE (IF NOT WEATHER)	Alternatively to the already mentioned options, a static image can be defined as background image of the HOME page.
SHOW DATE SHOW TIME	Enables/Disables the display of date/time inside the HOME page. Hint: Date and time are synchronized through HORIZONE SERVER and not through the local browser.
CLOSE NAVIGATION MENU	If you activate this option, the navigation menu will be closed automatically, if the HOME page is opened. If you disable this option, the navigation menu will remain in its last state (open or closed) when the HOME page is opened
SHOW MENU CONTENTS ALSO IN PAGE	This option permits to show all sub-menus of the navigation menu also directly in the HOME page for a faster and more comfortable navigation.

MAIL

This section allows configuring all parameters required for sending mails through **HORIZONE SERVER**:

SMTP SERVER	SMTP-Server for sending mails
USERNAME	Username for accessing the SMTP server
PASSWORD	Password for accessing the SMTP server
ACTIVATE AUTHORIZATION	Defines whether for the communication with the SMTP server a user authentication is required or not
FORWARDER (MAIL ADDRESS)	Mail address of the sender; will be shown in the sent mail as address from which the mail comes from
PORT	Port for the communication with the SMTP server
USE SSL PROTOCOL	Defines whether the SSL protocol shall be used for the communication with the SMTP server or not. 36

NOTIFICATIONS

This page permits to configure the behaviour of **HORIZONE SERVER** when displaying video notifications in the FRONT END. Three different type / priority level are defined. For each type you can define whether the notification panel should automatically pop up or just an advice should be shown in the HOME screen / navigation menu.

As default setting, only ALARM type notifications should force the notification panel to pop up automatically at the centre of the screen.

MOBILE DEVICES

This page permits to configure specific functions which only are required when accessing **HORIZONE SERVER** through mobile devices (Android or Apple iOS).

The available options are:

EVENTFOR	Defines on which kind of touch event the commands should be sent to HORIZONE SERVER; you
SENDING OUT	can select between:
COMMANDS	On touch: the command is sent out immediately when the requested function is pressed. This option gets the best performance, but can go in conflict with the gestures of the mobile devices: e.g. scrolling or zoom. This can happen, for example, when you start a scrolling move directly on a function: the command will be sent out, even if you only wanted to scroll. On release: the command will only be sent out when the touchscreen is released. This can cause a small delay in operation, since the command is not sent out when you press the function, but only when you release your finger from the screen again. On the other side, using this method there will be no risk that it interferes with the gestures of the mobile device and that commands are executed unintentionally.

BACKGROUND VIEW

This page permits to customize the BACKGROUND view mode of rooms. For example, you can define whether the symbols should be shown in their default dimensions or if they should be visualised in reduced dimensions, what permits to insert more objects into each room.

WEATHER

In this menu the location, for which the weather data should be displayed, can be defined. Simply specify the name of the location, province, region or zip code, as required by the used weather service (WORLD WEATHER ONLINE – www.worldweatheronline.com).

	Please do not use commas to separate the data. The weather service doesn't support that. Please use spaces to divide the single words / numbers.

The usage of the weather services requires a valid "Weather API ID", which can be obtained for free on the following web page:

http://free.worldweatheronline.com/register.aspx

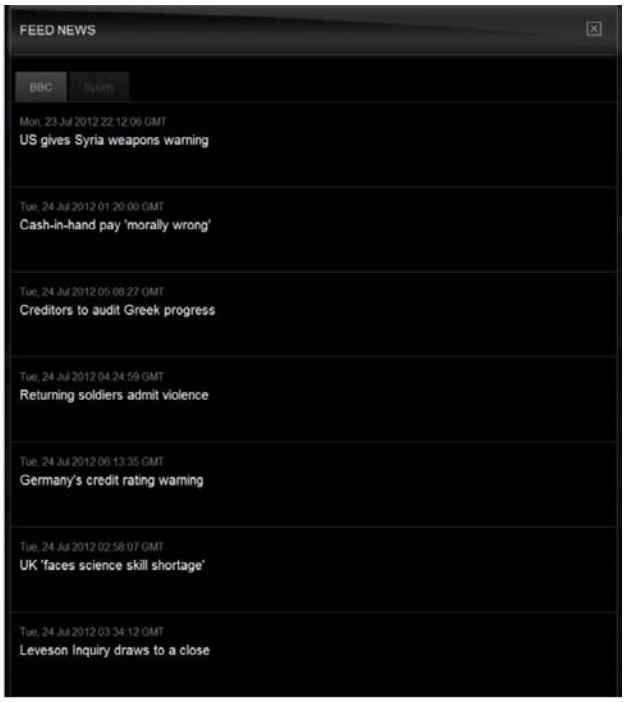
	Without valid Weather API ID the weather services of **HORIZONE SERVER** cannot be used. In this case, please disable all kind of weather information / display within the HOME page, as described within the last chapters.

RSS FEEDS

Up to 5 RSS feeds can be integrated into the visualisation; through the appropriate link in the navigation menu, the page displaying the specified RSS feeds can be reached. For each feed a title and the appropriate URL can be specified:

Parameter	Value
Feed 1- Title	BBC
Feed 1- URL	http://feeds.bbci.co.uk/news/rss.xml
Feed 2- Title	Sports
Feed 2- URL	http://feeds.bbci.co.uk/sport/0/rss.xml?edition=uk

The configuration shown in the above table will result in the following display of the RSS feeds popup:



To get the appropriate feed URL check out the homepage of the provider of the feed. If the corresponding URL is not already listed, but only a link to the RSS feed is available, you can get the URL through the context menu (right-clicking on the link) by selecting the option "Copy address"; the link address will be copied to the clipboard and from there it can be easily pasted into the configuration of **HORIZONE SERVER**.

NOTE: Not all RSS feeds are necessarily compatible with the XML encoding used by HORIZONE SERVER and therefore may not be shown correctly.

WEB BROWSER

In this page the start page of the integrated browser function can be defined; this web page will be the first page shown, when the web browser function inside the FRONT END is accessed (through the navigation menu).

	The web browser integrated inside the visualisation area is not compatible with all web pages. Specifically, the browser is not compatible with pages that use an automatic forwarding to other sites cannot be handled properly. For such web pages, it is recommended that you configure them as "favourites" of the main browser itself and use the corresponding functions of the browser to navigate directly to these pages, independently from visualisation pages.

DISPLAY INTERACTION

This page contains different options regarding the usage / interaction of the software on client devices.
The following options are currently available:

ON-SCREEN-KEYBOARD (LOCAL & REMOTE)	Permits to enable – both locally (PDK) or remote via network – an on-screen keyboard, through which it is possible to make text inputs within the software even on touch devices that don't have an own soft- or hardware keyboard.
CLEANING MODE (LOCAL & REMOTE)	Permits to enable – both locally (PDK) or remote via network – a special button within the TOOLBAR of the FRONT END; by clicking on this button, a cleaning page will be shown that blocks any interaction with the software for 30 seconds and therefore permits to clean the touch display avoiding the risk of unwanted clicks within the visualisation.

CUSTOMIZATION OF FUNCTIONS AND SYMBOLS

This section permits to customize the graphical aspect of the objects of the software. It is possible to extend the predefined symbol library and to customize the different functions used to represent the various object types of HORIZONE SERVER within the FRONT END.

The different customization possibilities have been designed for advanced users. In order to prevent malfunctions of the software, the standard functions cannot be modified directly; it is necessary to clone them, afterwards the copy can be edited.

HIDE NAVIGATION AREA

It is possible to show the visualisation pages of **HORIZONE SERVER** even without the graphical navigation area (title bar, navigation bar, toolbar). In order to enable this, please add one (or more) of the fol-lowing expression into the address bar of the browser:

skipheader=true	Hide title bar (on top)
skipmenu=true	Hide navigation bar (on the right side)
skipfooter=true	Hide toolbar (on the bottom)

When inserting the expressions into the address bar of the browser, please pay attention that the inputs are case sensitive!

Furthermore, the expressions must be inserted following the typical directives for web parameters:

- The first entry must be led by the character"?"
- Following entries must be separated by the character "&"

Example: *http://192.168.0.110/Horizone/modules/system/externalframe.php?context=runtime&skipmenu=true&skipheader=true&skipfooter=true*

The following screenshot shows a visualisation page in template view (will be explained in the further chapters of the manual) with 4 buttons, with disabled navigation area:

This special way of representing the pages of **HORIZONE SERVER** can be created thanks to the template view, which permits to create pages with limited access (max. 8 objects) that do not permit to access other areas of the visualization.

	Without navigation area it is not possible to access all areas of the visualization. Please consider this during the creation of the visualization and BEFORE enabling this kind of visualization!

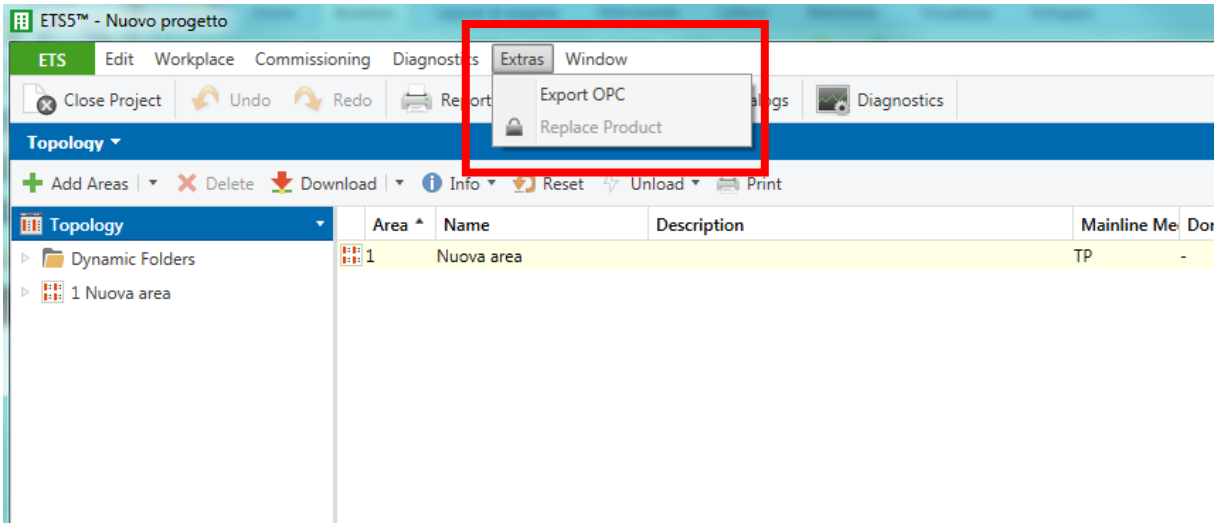
KNX

INTRODUCTION

The following chapters will show in detail how **HORIZONE SERVER** has to be configured in order to work in a KNX system. Prerequisite for creating the VISUALISATION on **HORIZONE SERVER** is a KNX project that has been programmed either with ETS3, ETS 4 or ETS5. The focus of the subsequent chapters is initially on how the individual data points are imported and what options for these data points are available. The creation of the graphical interface of the VISUALISATION will be explained in [see page 75], "Rooms".

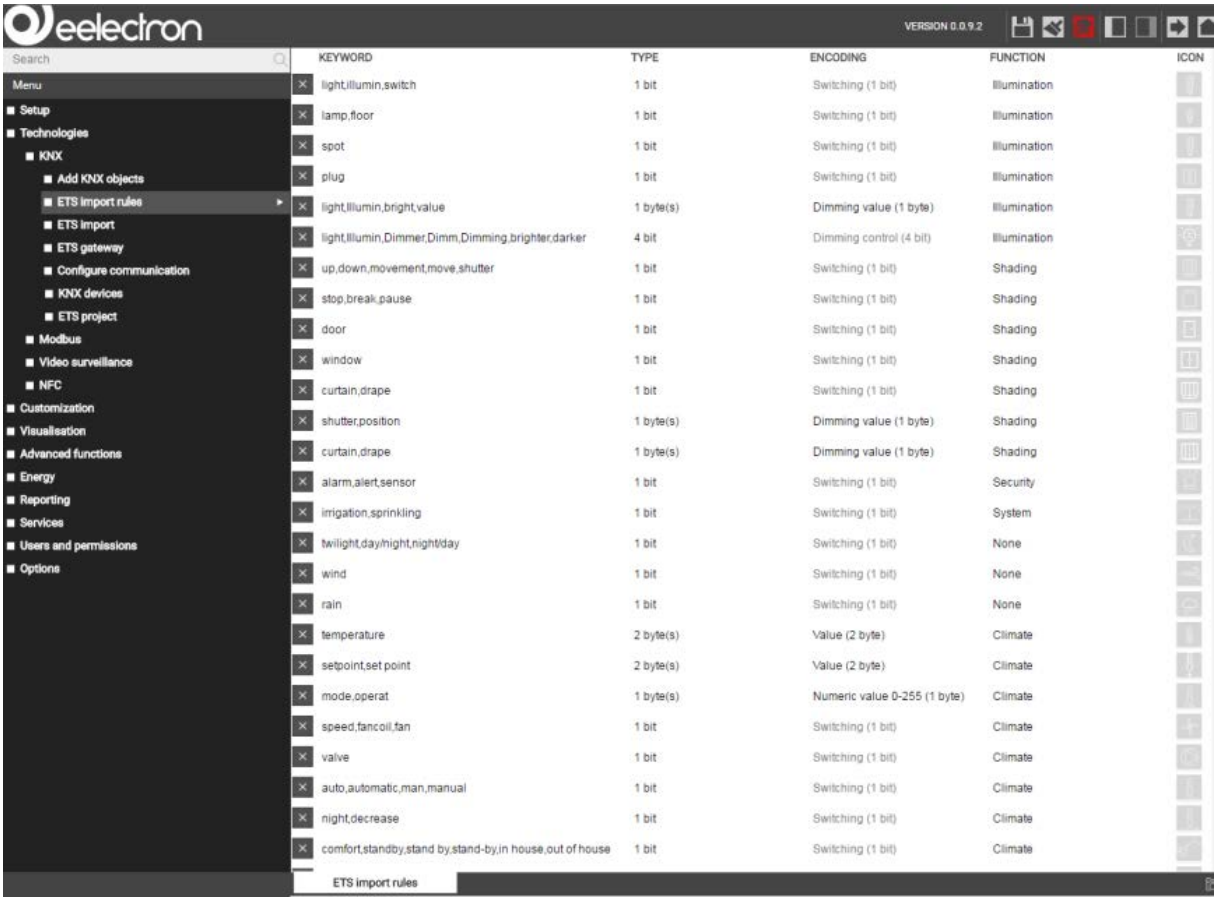
EXPORT OF THE ETS PROJECT

HORIZONE SERVER allows the import of KNX projects from ETS3, ETS 4 or ETS5. **HORIZONE SERVER** automatically takes over the structure and functionality of each single group addresses contained in the ETS project. The entire import process only takes a few minutes.



ETS IMPORT RULES

Before the KNX project is imported into **HORIZONE SERVER**, you should just think about the use of the ETS import rules. The administration of the ETS import rules can be found in the BACK END of HORIZONE SERVER under "TECHNOLOGIES" -> "KNX":



The ETS-import rules automate the import process by assigning function and graphical appearance to the single data points depending on the configured criteria. The available criteria are data type (length), encoding and user-definable keywords, which the import engine will search in the name of the group addresses. In **HORIZONE SERVER** some ETS import rules, which apply to generically used data points, are already predefined; adjusting the ETS import rules is worthwhile, since it will make the personalization of many data points after the import no more necessary.

Following parameters can be defined:

KEYWORD	One or more keywords, of which at least one must be present in the name of a group address of the imported KNX-project, so that the ETS import rule will be applied correctly. When multiple keywords are specified, they must be separated by a comma; blank spaces are recognized as part of the keyword!
TYPE	Length (in bit/byte) of the target group addresses in the KNX project
ENCODING	Encoding to be used by **HORIZONE SERVER** in order to interpret the KNX bus data correctly; the available encodings depend on the data length defined in "TYPE"
FUNCTION	During the import process **HORIZONE SERVER**, for each group address present in the KNX- project, creates a KNX object in its internal database. Each KNX object, created from signed to the here defined FUNCTION category during the import process
SYMBOL	Icon for showing the object graphically inside the FRONT END. It will be assigned automatically by the defined ETS import rule

The ETS import rules are used by **HORIZONE SERVER** as follows: during the import process, all group addresses within the import file are scanned and for each address a KNX object is created. If at least one of the keywords defined in an ETS import rule is found in the name of a KNX object, **HORIZONE SERVER** checks whether the data length of this object matches the one defined in the ETS import rule ("TYPE"). If this second parameter matches, the ETS import rule is applied for this KNX object. For the matching KNX object, the encoding defined in the ETS import rule will be applied automatically. Furthermore, it will be assigned to the FUNCTION category defined in the ETS import rule. It will also get the symbol specified in the rule. Any further editing of KNX objects, which have already been customized by an ETS import rule, is normally not needed. This can save a lot of time.

All KNX objects, which do not match at least one ETS import rule, must be edited manually during or after the import process, in order to assigning data length, encoding and the icon. Especially for large ETS projects with numerous group addresses, it is recommended to make use of the ETS import rules, since the manual configuration of the single KNX objects can take a lot of time depending on the number of KNX objects.

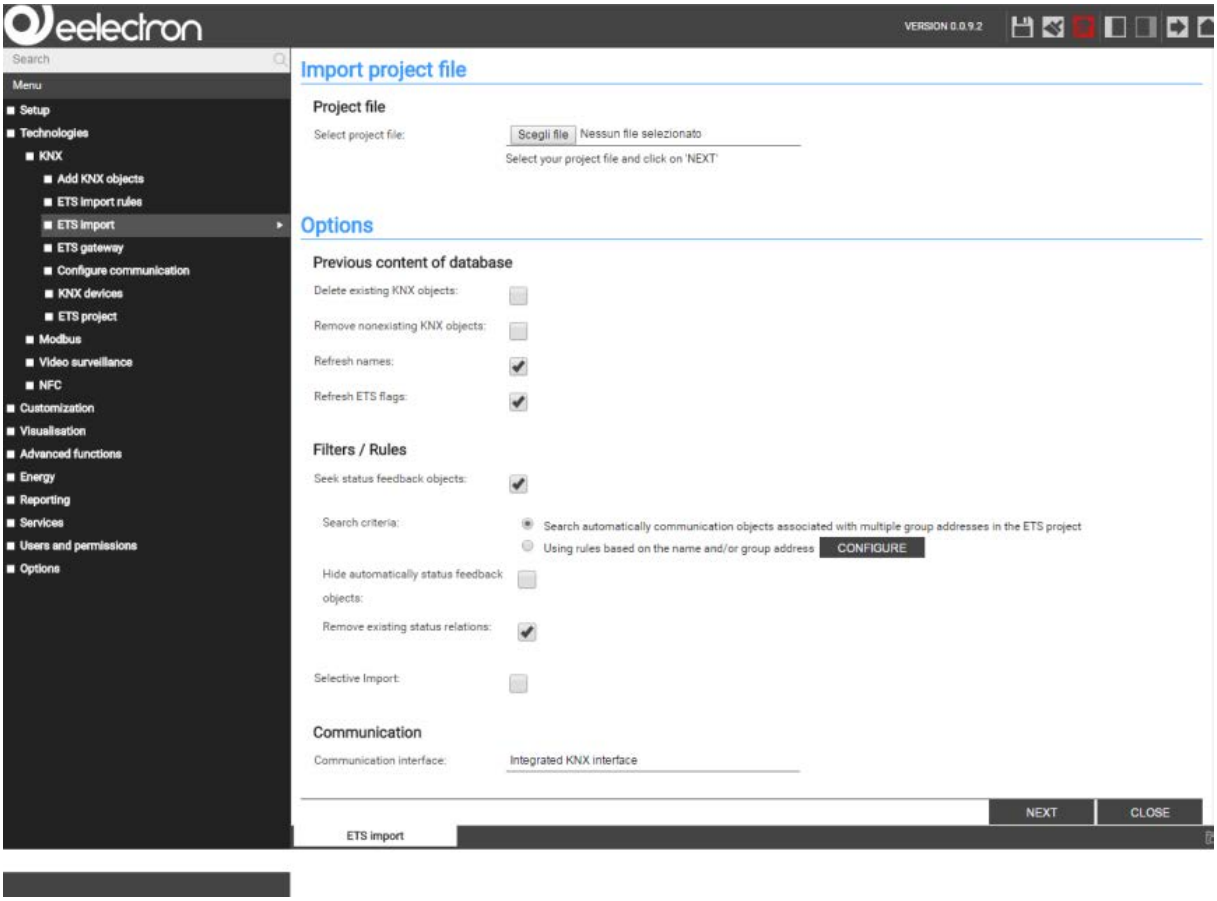
The ETS import rules can be modified also during the import process, in the moment when those KNX objects are listed, which do not match with any ETS import rule.

ETS IMPORT

Access to the BACK END environment.

In “TECHNOLOGIES“ -> “KNX“, choose “ETS IMPORT”
Select (through the “BROWSE“ button) the file to be imported.

Configure the import options as desired and click “NEXT” for starting the import procedure.



The BASE mode gives the user only the possibility to decide whether a previously imported project should be deleted or updated. If the existing project will be updated, the individual objects are updated in a way to keep their configuration as good as possible.

The EXPERT mode shows additional options for the ETS import:

REMOVE NONEXISTING KNX OBJECTS	If this option is enabled, all previously imported KNX objects that are not present in the new ETS project anymore will be deleted from the HORIZONE SERVER database.
REFRESH NAMES REFRESH ETS FLAGS	If an existing HORIZONE SERVER database is updated, two options define whether the names and the read/write flags of the KNX objects within this database should be adapted to the new names and flags from the ETS project or not. These options should not be enabled if changes have been made to KNX objects directly in HORIZONE SERVER, instead of making them in ETS project before importing it.
CREATE AUTOMATIC RELATIONS	This option enables / disables the automatic recognition of relations between individual group addresses in the ETS project and the creation of the same relations in the HORIZONE SERVER database, for example for updating statuses of individual objects across multiple group addresses (e.g. for central functions). Enabling this option usually results in a correctly functioning and always refreshed visualisation. If manual changes to the relations between KNX objects and group addresses have been performed in HORIZONE SERVER, it is better to disable this option, otherwise all manual changes will be overwritten. More details about modifying relations between KNX objects and group addresses can be found in the following chapter.
SELECTIVE IMPORT	This option allows to select the single group addresses to import. Note: This option is enabled automatically when the ETS-project to be imported contains more group addresses than the license of HORIZONE SERVER allows.
COMMUNICATION INTERFACE	The interface, through which HORIZONE SERVER communicates with the imported KNX group addresses, can be selected here. As factory setting, HORIZONE SERVER communicates with KNX bus, through the integrated KNX interface. In case, for a specific project, it is needed that HORIZONE SERVER communicates with KNX bus through IP backbone, a special setting is available to activate this kind of communication.

By clicking "NEXT" the import process is started, which will last a few minutes depending of the size of the ETS project to import. **HORIZONE SERVER** will automatically create the appropriate KNX objects which can be used to create the graphical visualisation in the FRONT END. Once the import process is finished, a summary of all actions is shown:

As soon as the project is imported, **HORIZONE SERVER** checks if the single KNX objects are matching an ETS import rule. If for a KNX object at least one ETS import rule is matching, it will be applied; no additional configuration of these objects will be necessary.

If all created KNX objects match at least one ETS import rule, after some seconds the section “ETS IMPORT RULES” will disappear and by clicking “NEXT” the import procedure can be completed (the communication service is restarted automatically, so that the web server can manage all the new created objects).

If some of the created KNX objects do not match any ETS import rule, they are all listed during the import process and can be personalized manually:

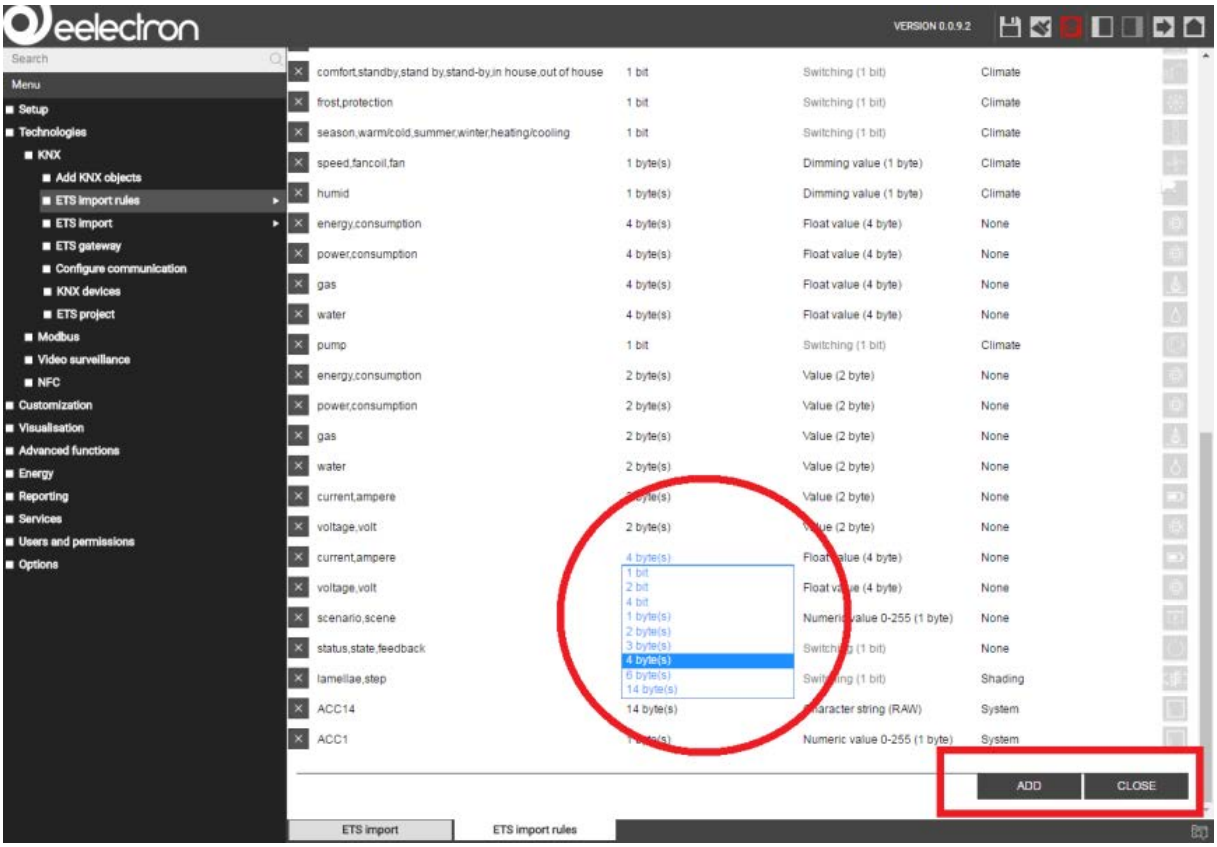
The available options are the same as you can define in the ETS import rules: encoding related to the settings inside the ETS project, function and icon (the shown icon depends on the selected encoding and function for the related object):

The selection of the icon during this phase can more be seen as the definition of the ”graphical function“ (a combination of icons, buttons, properties, …), which is used in order to show the object correctly within the VISUALISATION.

Further information regarding the graphical function can be found in the next chapters [see page 75] of this manual.

At this stage, it is also possible to modify the ETS import rules again. This is very useful if the list shows a lot of KNX objects that have similar keywords in their names and could use the same configuration settings. In this case, the appropriate ETS import rule could be added.

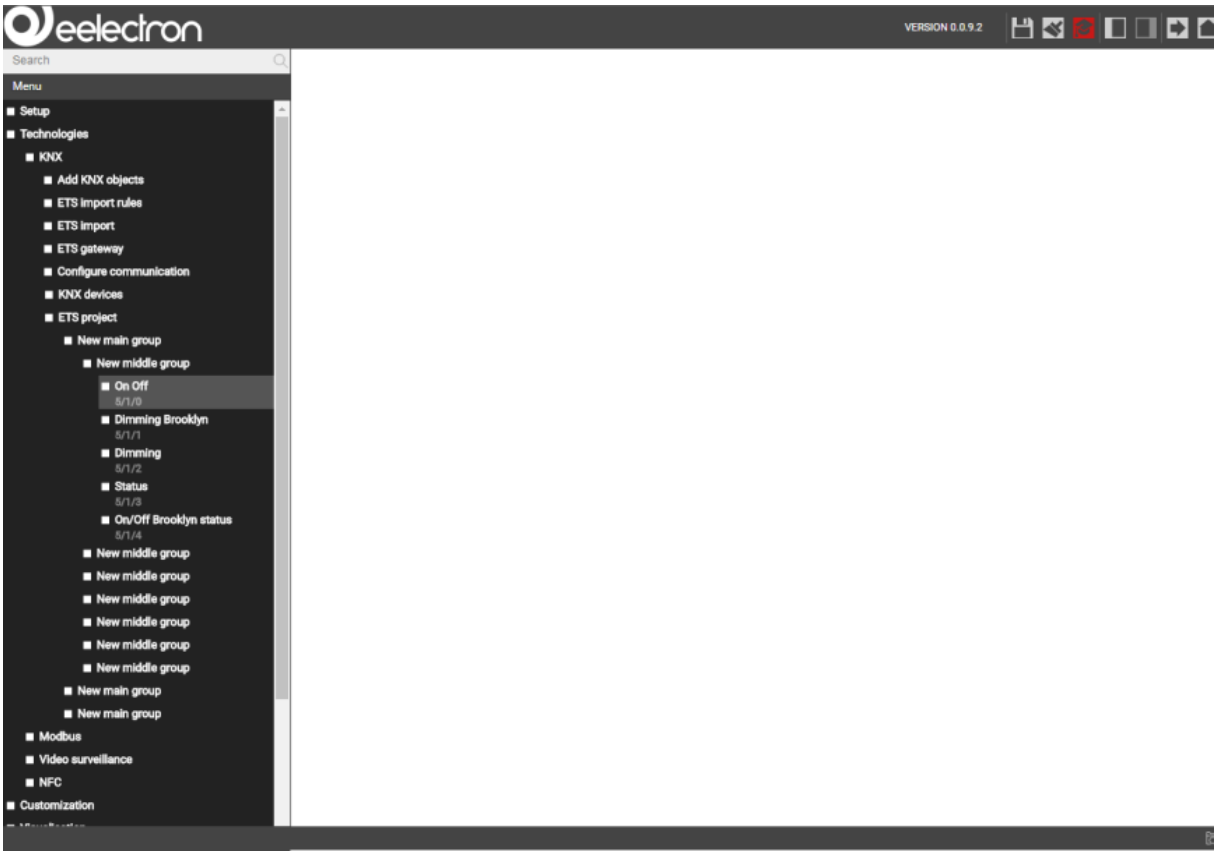
Add new ETS import rules or modify already existing rules directly editing them.



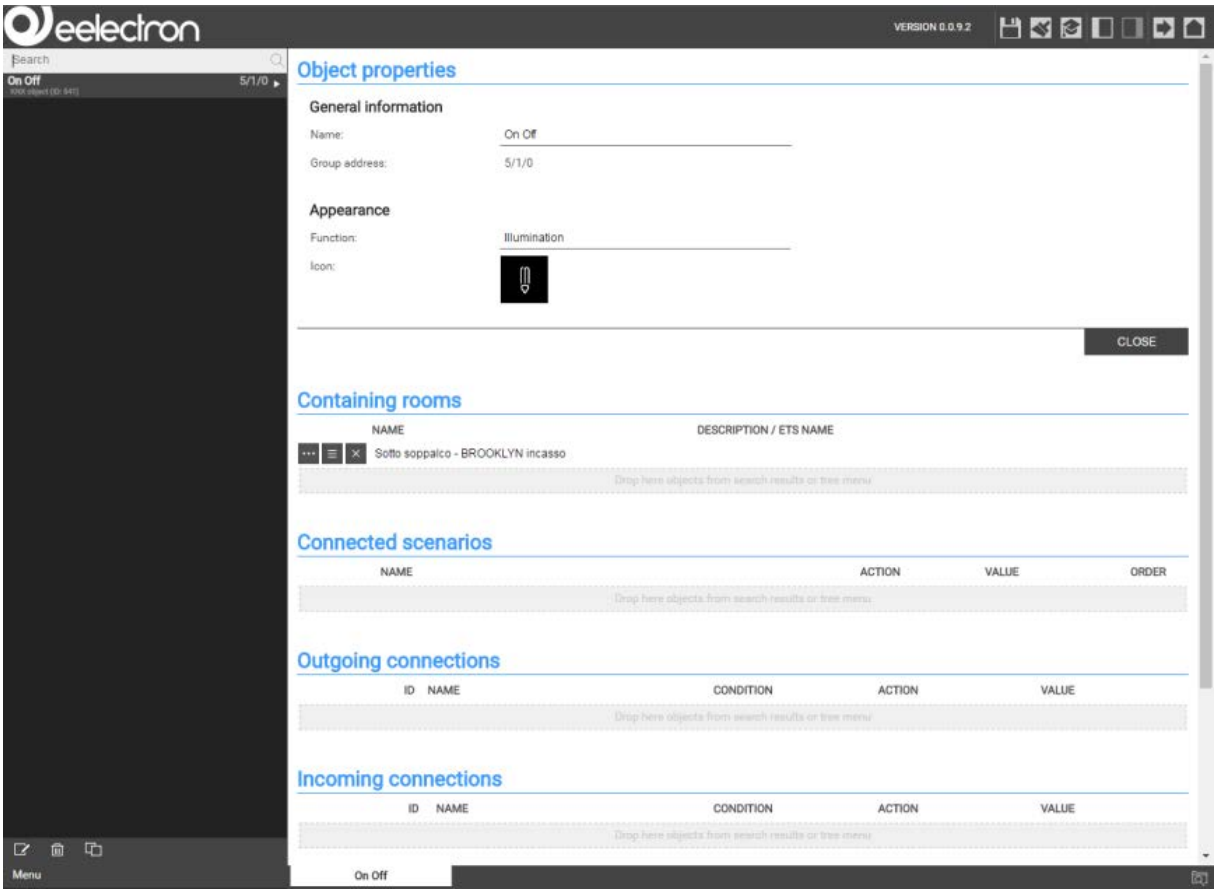
Once all objects are customized as desired, please click on “NEXT” to complete the ETS import.

	The software allows the termination of the ETS import process even without assigning a graphical symbol to the single KNX objects: nevertheless, this is not recommended, since such objects cannot be visualised correctly. However, it is also possible to edit the individual objects after the ETS import and therefore to assign them a graphical symbol in a second step.

Once the ETS import is completed, the single KNX objects are available under “TECHNOLOGIES“ -> “KNX“ -> “ETS PROJECT“.



The tree structure of ETS is imported and can be very helpful to find single KNX objects to be edited.



SELECTIVE IMPORT OF AN ETS PROJECT

It is possible to import only a part of the selected ETS project. In this case, you can select manually the group addresses that should be imported into **HORIZONE SERVER**. This can be an advantage in certain cases:

The project has already been imported in the past and now a version with new group addresses should be imported, without the risk of losing the changes made to the old group addresses.

Certain group addresses of the project should not be visible inside the visualisation.

The number of group addresses present in the ETS project exceeds the limit of the supported group addresses according to the version of your **HORIZONE SERVER**.

In the last case, **HORIZONE SERVER** will automatically enable the selective import; you will be able to import only the amount of group addresses supported by your version (is shown on top of the page).

The following screenshot shows an example of the selective import:

The group addresses present in the ETS project are sorted after middle groups and are shown in ascending order, together with their original ETS denomination. Through the checkboxes, you are able to select / deselect single group addresses. Furthermore, you can select / deselect entire middle groups through the checkbox beneath their title.

When changing the selection of group addresses, the total amount of selected group addresses is refreshed and shown at the top of the page. If the amount surpasses the limit of the web server, the button for starting the import process will be locked.

After having selected the desired group addresses, the import can be started by clicking on “NEXT”. At conclusion of the import, the group addresses that have to be customized manually will be shown, as already explained more specifically in the last chapters.

It can happen that the selective import cannot be concluded because some of the selected group addresses have relations to other group addresses that haven’t been selected before (for example feedbacks, multiple relations of central functions etc.). In this case, the following message will be shown:

Now you can select between the following actions:

Automatic integration of the missing group addresses by clicking the link in the message box.

Manual selection of the related group addresses or unselection of group addresses that are causing the warning.

Activation of the EXPERT mode and removal of the option “CREATE AUTOMATIC RELATIONS”.

If the missing group addresses are added, it is still possible that the message will appear again during the import, since also the newly added group addresses could have relations to other group addresses. In this case, just repeat the procedure as long as all relations are created correctly.

IMPORT OF A CSV FILE

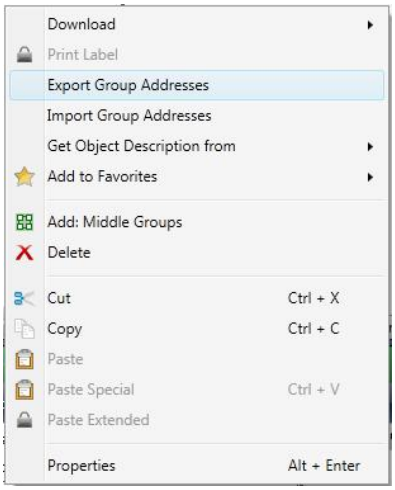
HORIZONE SERVER also supports the import of KNX group addresses through a CSV file. This is a very useful solution when it is needed to import a few group addresses on the fly. The file must be created with the following properties:

- Columns divided through tabulator.
- Name of the group address in the first column.
- Group address in the second column.
- Bit length (optional) in the third column.

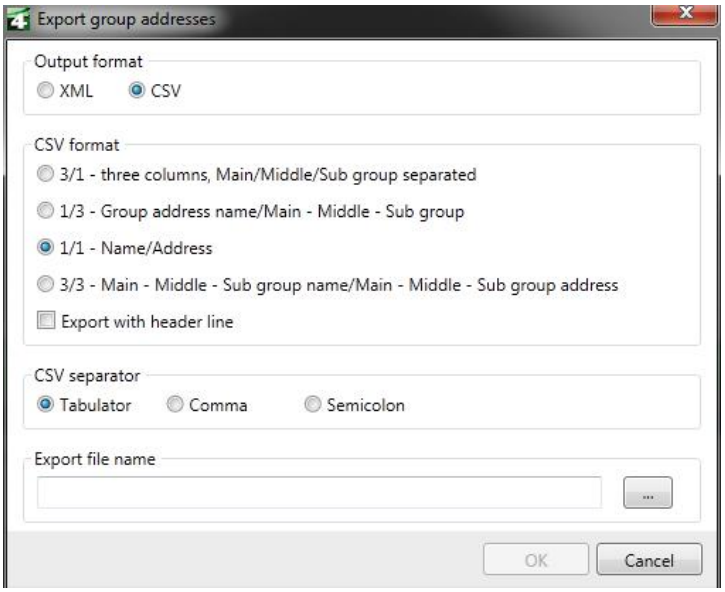
This file can be created manually (for example using Microsoft Excel), or exported directly from ETS. In the second case, please proceed as listed below:

Please select the group addresses that you want to export (by right-clicking on their middle or main group).

Select the entry “Export Group Addresses” from the context menu:



In the pop-up window please select “CSV” and set the following parameters (as shown in the screenshot on the next page): As “CSV format” select 2 columns (1/1 – Name /Address), as “CSV separator” select “Tabulator”



After the successful creation of the file, it can be used for import procedure in **HORIZONE SERVER** in
"TECHNOLOGIES" -> "KNX" -> "ETS IMPORT".

After starting the import procedure by clicking on the "NEXT" button, the objects are created automatically just as during the standard import procedure. Even in this case the matching import rules are applied and at the end the list of non-matching objects will be shown for manual configuration.

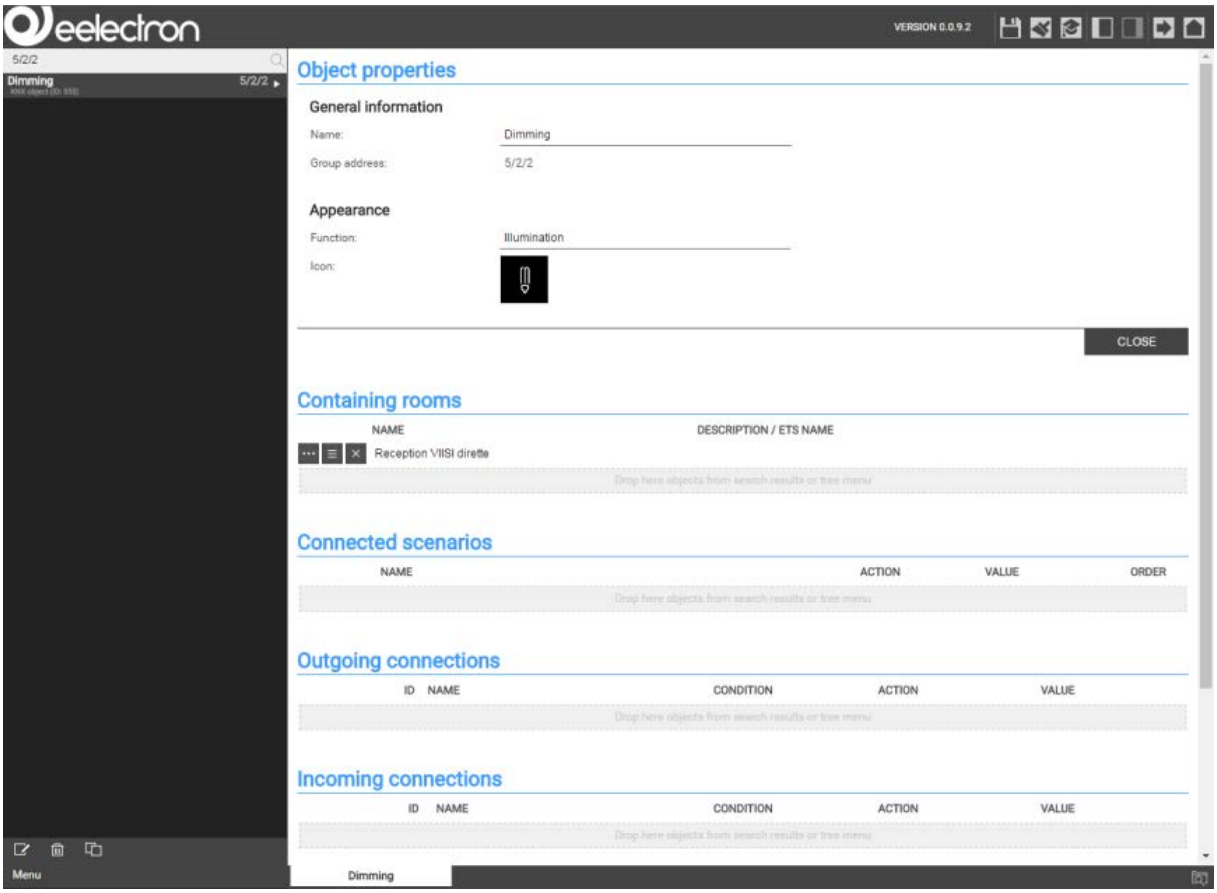
As a difference to the classic ETS import, the bit length of the objects (if not specified in the third column of the CSV file) has to be set manually. This information is not added by the ETS export.

	The CSV import can be useful above all when you want to create / import group addresses manually into **HORIZONE SERVER**, without using ETS. In this case you will just have to create a CSV file with the corresponding name and group addresses and import it.

KNX OBJECT PROPERTIES

KNX OBJECT DETAILS

If a KNX object is selected in the navigation menu or through the search function and the “EDIT” button is clicked, the following screen will appear:

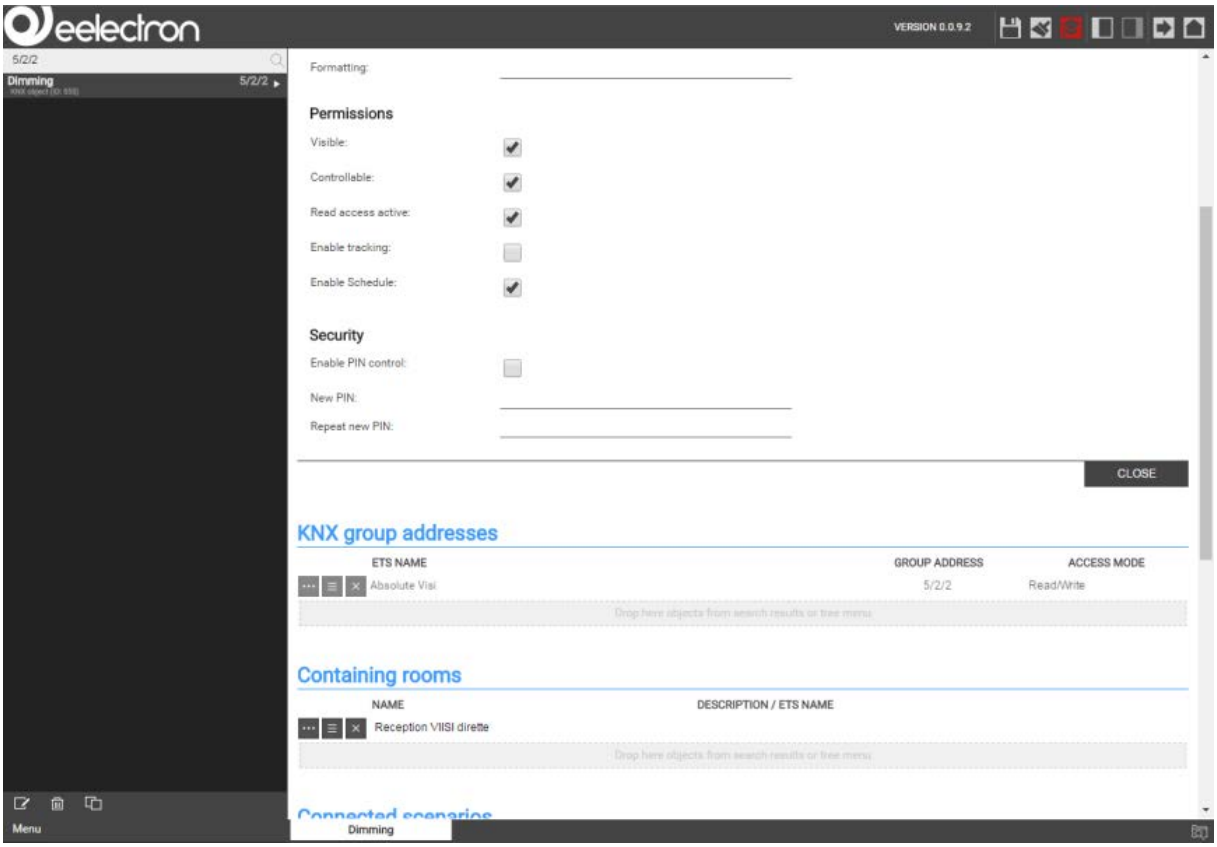


This page allows modifying all settings of the selected object and its relations to other objects present in the visualisation.

The first part of this configuration page contains all specific settings regarding the object itself. In BASE mode the following settings are accessible (as also shown in the screenshot):

NAME	Name of the object, which identifies it within the software. During the import process, the name of the corresponding group address from the ETS project is taken over; this setting can be changed here, if needed.
GROUP ADDRESS	Main group address used by the object for the communication with the KNX bus; this setting can't be changed, but its value can be used as keyword for the search engine.
FUNCTION	Category to which the object belongs to; the selection here determines which icons are available in the next option. It is also possible to assign the object to no function, if the object should not be listed inside any FUNCTIONS page in the FRONT END.
ICON	In a popup window the icon can be selected, through which the object will be shown in the FRONT END. The available icons depend on the type of the KNX object and the function assigned to it. If "None" is defined as function, all icons matching the type of the KNX object will be available.

Enabling the EXPERT mode further options are shown.



The additional options are:

ETS NAME	Name of the related group address from the imported ETS project; this name can be used as keyword in the search engine to find the object.
ETS ENCODING	This setting determines which encoding **HORIZONE SERVER** must use to communicate with the related group address via the KNX bus. **NOTE**: Changes to this setting should be considered carefully, since an encoding that does not match the settings of the related device can lead to incorrect behavior of the FRONT END.
VISIBLE	Defines if the object shall be visible inside the FRONT END or not.
WRITE ACCESS ACTIVE	Enables the operation of the object in the FRONT END through the defined graphical icon; this setting is normally configured automatically during the ETS import. If an object should be used only as a status display in the FRONT END, even if in the ETS project it was basically configured with write permissions, it is sufficient to disable the write access here. NOTE: To enable write access for objects, which were initially imported as read-only, the corresponding group address with write access must be configured, too (detailed information can be found ahead in this manual); improper settings can compromise the proper function of the system
READ ACCESS ACTIVE	Permits to read the current status of the object over the KNX bus; this flag is always active.

KNX GROUP ADDRESSES

This section is only visible in the EXPERT mode and allows the handling of the group addresses that are associated to an object. Depending on how the imported ETS project is structured, not only the main group address, from which the object was created during the ETS import, but also additional group addresses can be found here, whose can update the state of the object in the FRONT END (state feedback, central functions, etc.).

For each linked group address various communication options can be set: "Read only", "Write only" and "Read / Write"; before this communication options are changed, please make sure that in the ETS project the needed permissions for a correct functionality are configured.

HORIZONE SERVER can send active commands to only one of the listed group addresses. It is very important to ensure that only one of the linked group addresses has write permissions.

KNX group addresses, which shall refresh the status of a KNX object, can also be added after the ETS import (if not already done automatically by the import procedure:

Search the desired KNX group addresses with the search function.

Select the desired KNX group addresses from the search results list. Pay attention to select the KNX group address and not the KNX object with the same name.

Then drag the selected group address into the list of linked group addresses of the object and drop it there.

Define permissions (normally “Read only” when the added group address is mentioned for refreshing the status of the object).

The order of the linked KNX group address is extremely important. Only the first group address is used to create the graphical information related to the object. It must therefore be ensured that the main group address, from which the object has been created during the ETS import, is at the first place in the list. If this is not the case, the order of the linked group addresses can be changed by dragging the single group addresses with the MOVE-button to the desired position.

ROOMS AND CONNECTED SCENARIOS

The section "ROOMS, TO WHICH THE OBJECT BELONGS" includes all rooms of the software, in which the object is visible and accessible through the VISUALISATION. An object can exist in several rooms, but also in none; after the first ETS import an object belongs to no room, since the single rooms have to be created before an object can be assigned to them.

If some rooms are already configured, the object can be assigned to a room by searching the desired room through the search function and pull it into the list "ROOMS, TO WHICH THE OBJECT BE-LONGS" of the object ("drag and drop"). The other way around, it is also possible to use the configuration page of a room to add the individual KNX objects; more information about configuring the FRONT END by adding objects to the single rooms can be found in the appropriate chapter of this manual.

The list "LINKED SCENARIOS" shows all the created scenarios that contain the current object; more information about the scenarios can be found in the corresponding chapter of this manual.

ACTIVE AND PASSIVE EVENTS

The last two sections of the KNX objects configuration page allow the creation of events, which can offer the following actions:

Change status of the current object in dependency of another object status (PASSIVE)

Change status of another object in dependency of the current object status (ACTIVE) To create a passive or active event the following steps are necessary:

Search for the objects that should interact with the current object.

Drag the desired objects into the corresponding area (“ACTIVE EVENTS” or “PASSIVE EVENTS“) and drop them there.

For each created event, the following settings are available:

CONDITION	Determines the state of the object for which the event should be triggered; depending on the type of the object different statuses are available. The selection "Every status change" means that the event will be triggered at any status change of the reference object.
ACTION	Depending on the type of the object, different actions can be selected. If a KNX object is selected normally you can only choose between "Write" (write a command on the KNX bus) or "Read" (send a status request to the KNX bus); for more information about the possible actions with other objects consult the appropriate chapters of this manual.
VALUE	If the target object supports it, you can set the value the target object should be set whenever the event is triggered; the available values depend on the type of the target object. It is also possible to set the target object to the same value as the triggering object ("Value of ...") or its inverted value ("Inverted value of ...").

When you create an active event, the object that you are currently working on will be the object that triggers the event. If you instead create a passive event, the object that is added to the appropriate area will be the one triggering the event.

KNX SCENARIOS

Objects of type 1 byte during the ETS import can be defined as KNX scenarios. With these objects no status feedbacks or single commands are transferred, but a number, usually between 1 and 64, which tells the installed devices the KNX scene they should load from their memory; all states saved for the loaded scene will be set from the device. Some KNX devices can save various states for such a KNX scenario. Depending from the value they receive on the group address of the scenario, they can launch different actions and set different states of functions.

A KNX object can be defined as KNX scenario as follows:

Open the BACK END menu and open the desired object (1 byte) in a new tab.

Activate the EXPERT mode.

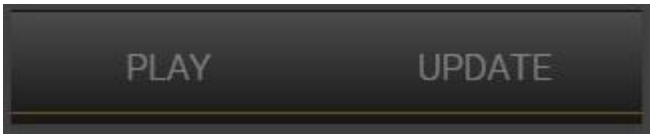
Ensure, that the “ETS ENCODING” is set to “Scaling - 0-100% (1 byte)”.

Configure the parameter “FUNCTION“ to “SCENARIOS“. If this entry should not be available, change the “ETS ENCODING” to another value and then back to “Scaling - 0-100% (1 byte)”.

Select an appropriate icon.

Set the value for the scenario to send on the bus when it is activated in the input field “VALUE KNX SCENARIO“.

Once a KNX scenario is configured it will appear in the FRONT END as shown below:



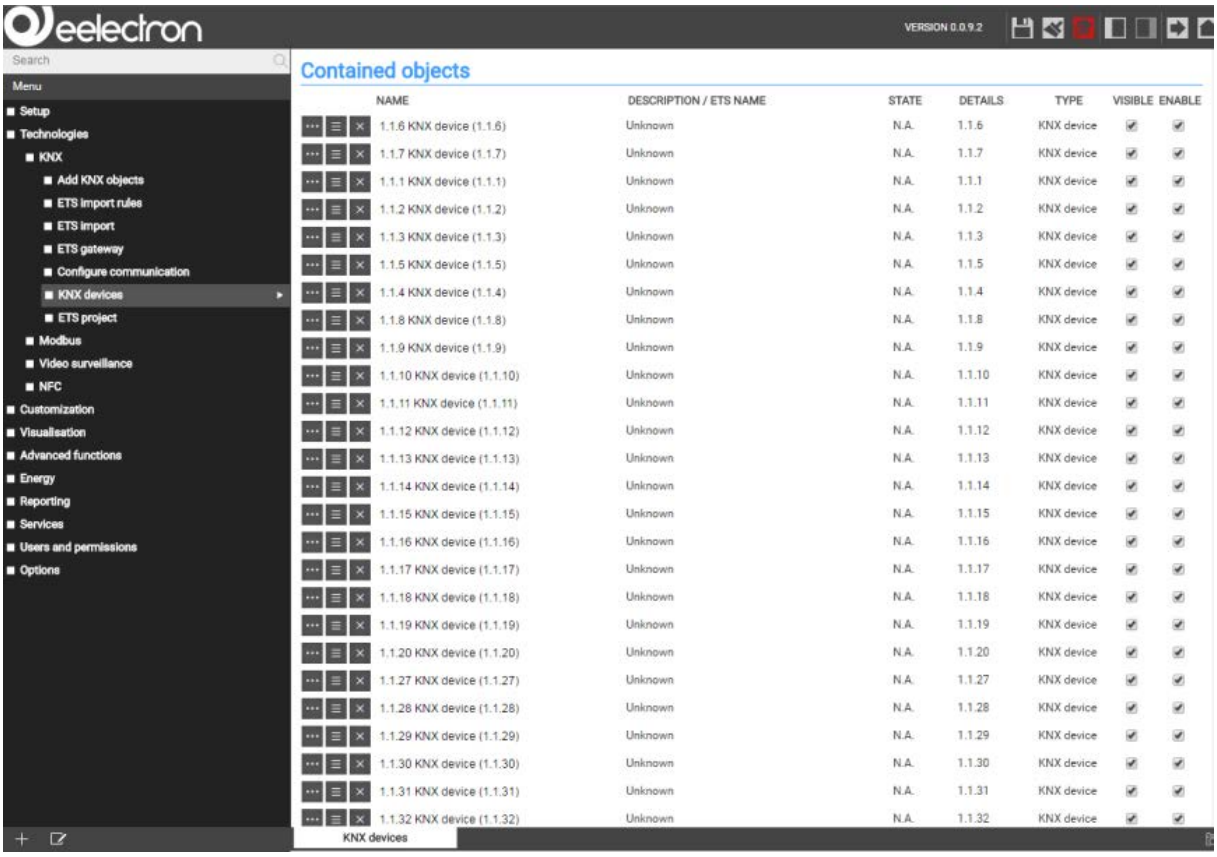
By clicking the PLAY button, the value configured for the parameter “VALUE KNX SCENARIO” will be sent to the KNX bus and the KNX devices configured for the usage of the KNX scenario will start the actions memorized for the received number.

By clicking on the UPDATE button, an “UPDATE KNX SCENARIO” command will be sent to the KNX bus and the KNX devices configured for the usage of the KNX scenario will memorize the update real-time status of all KNX objects associated to the KNX scenario.

KNX Devices

HORIZONE SERVER makes it possible to control the installed physical KNX devices of the system and to send out a warning when devices are not communicating anymore.

The installed KNX devices are created automatically during the import of the ETS project. At the end of the import procedure, the devices will be listed in the BACK END in “TECHNOLOGIES“□ “KNX“□ “KNX DEVICES“ (click on the 3 points beneath the title in order to get a listing of the present KNX devices, as shown in the screenshot on the next page):

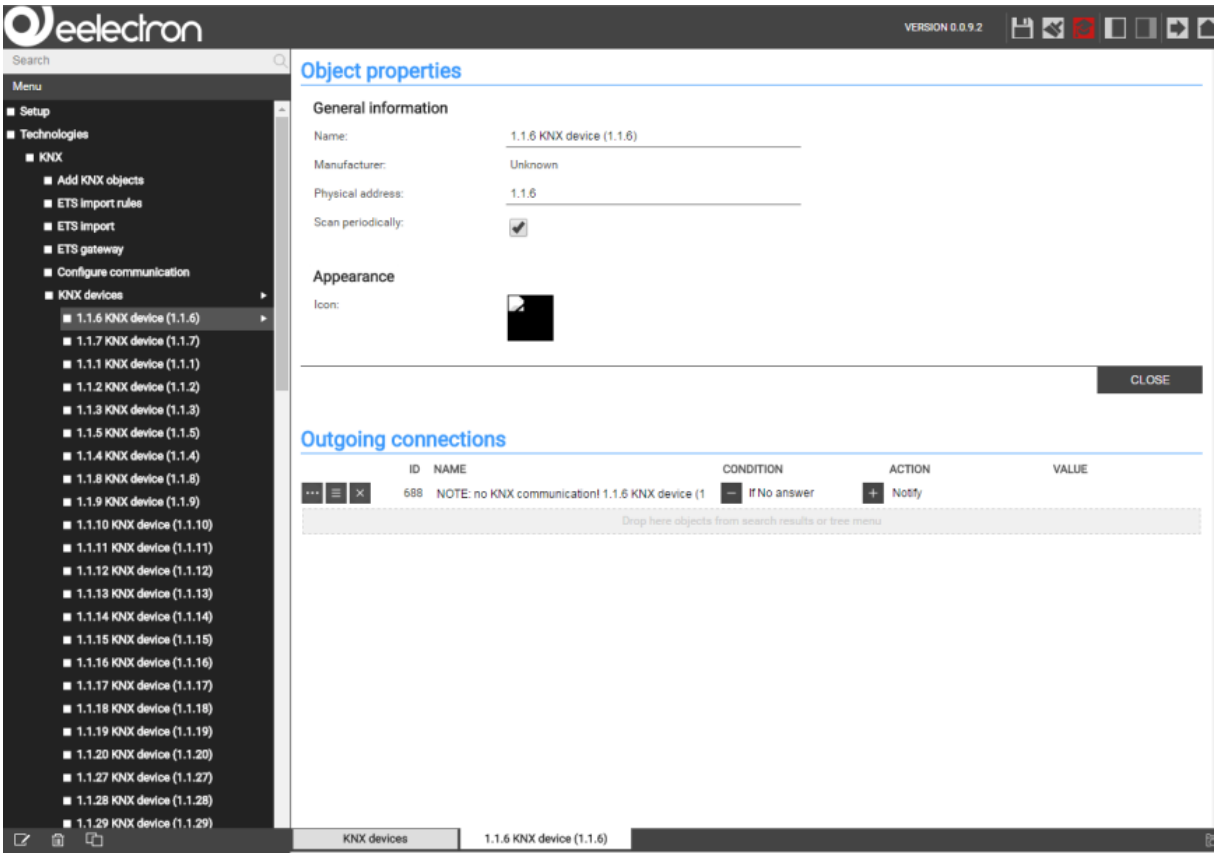


If you want to access the settings window of a single KNX device, you can either do that by clicking the “EDIT” button on the entry of the navigation menu or by clicking on the “EDIT” button (green) present in the listing of the devices. The column “STATE” in this listing shows information about the related KNX device:

N.A.	The device has never been reached / never answered a request. It is possible that it is not installed in the system yet
OK	The device answers the requests of **HORIZONE SERVER** correctly and is communicating normally
TEST RUNNING	The device has been reached and the server is currently waiting for its reply
NO ANSWER	The device has answered past requests correctly, but is currently not reachable anymore and therefore not communicating

The requests are sent to the KNX devices automatically; the single devices are requested one after another, which keeps the traffic on the bus on a low level.

The following screenshot shows the settings window of a KNX device:



The section “ACTIVE EVENTS”, as already mentioned before, can be used to determine actions that should be triggered whenever a status change of a KNX device is registered. **HORIZONE SERVER** automatically sends out a notification when the KNX device stops communication. Even this notification can be changed at wish (for example it can be transformed in a mail notification, as further chapters of this manual will describe).

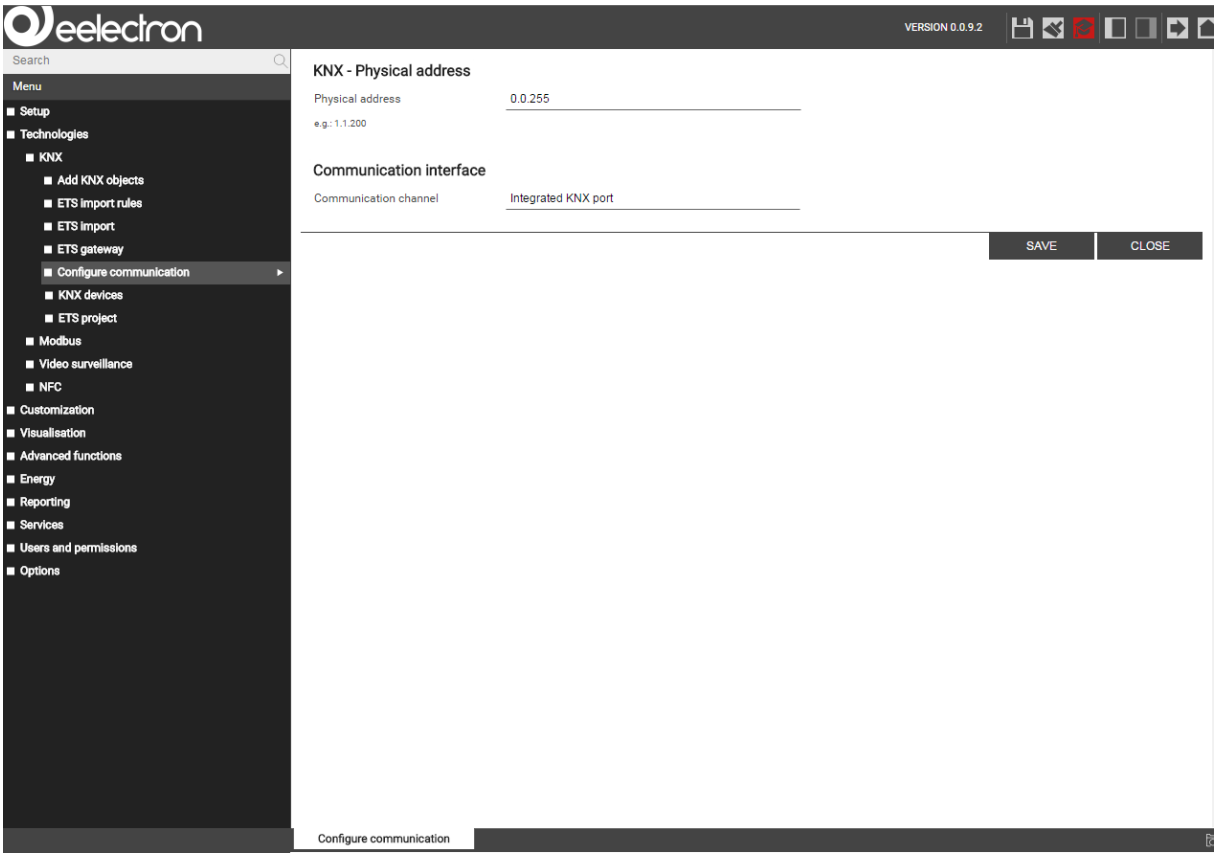
PHYSICAL ADDRESS OF HORIZONE SERVER

Through the menu “CONFIGURE COMMUNICATION“ IN “TECHNOLOGIES“ -> “KNX“ you can change the physical address of **HORIZONE SERVER**, used for the communication with the KNX bus.

The address must be entered in the format X.Y.Z, according to the requirements of KNX specification:

- First number between 0 and 15
- Second number between 0 and 15
- Third number between 0 and 255

As distinct from the most KNX devices, which necessarily must use a physical address, which corresponds to the line they are installed, **HORIZONE SERVER** is able to communicate with all devices of the system, independently from its physical address. Therefore, modifying the physical address of the server has merely the purpose to avoid conflicts with other devices and to keep a certain alignment with the KNX system.



ETS GATEWAY

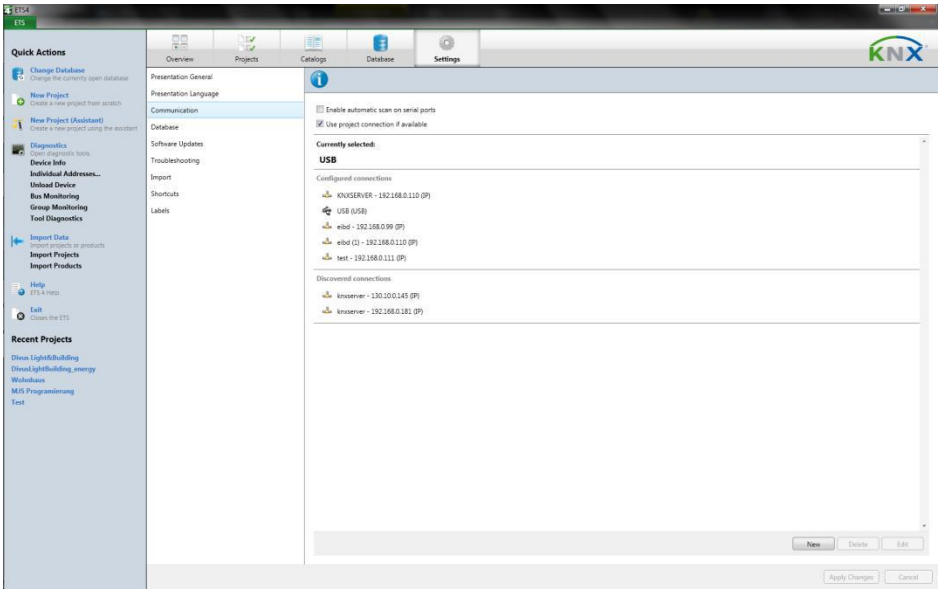
HORIZONE SERVER offers the possibility to use the integrated KNX interface as a gateway, in order to use it as programming interface in ETS, as well in the local network as also remotely via internet. In this way, the web server can be used to program KNX devices or to start diagnostic actions on the bus, without needing an additional interface (e.g. USB/KNX) connected to the own PC.

LOCAL USE

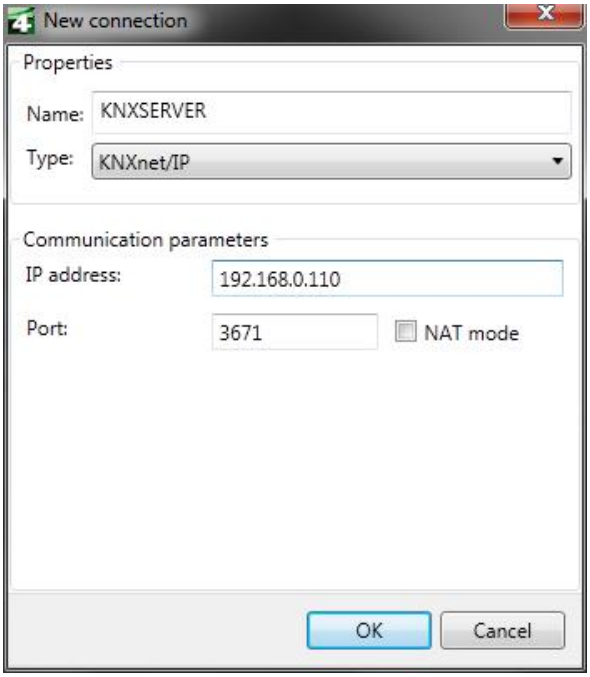
In the local network, the PC with the ETS installation can be connected directly to **HORIZONE SERVER** (also wireless, if an active Wi-Fi connection is present).

When using ETS4, please follow the steps below:

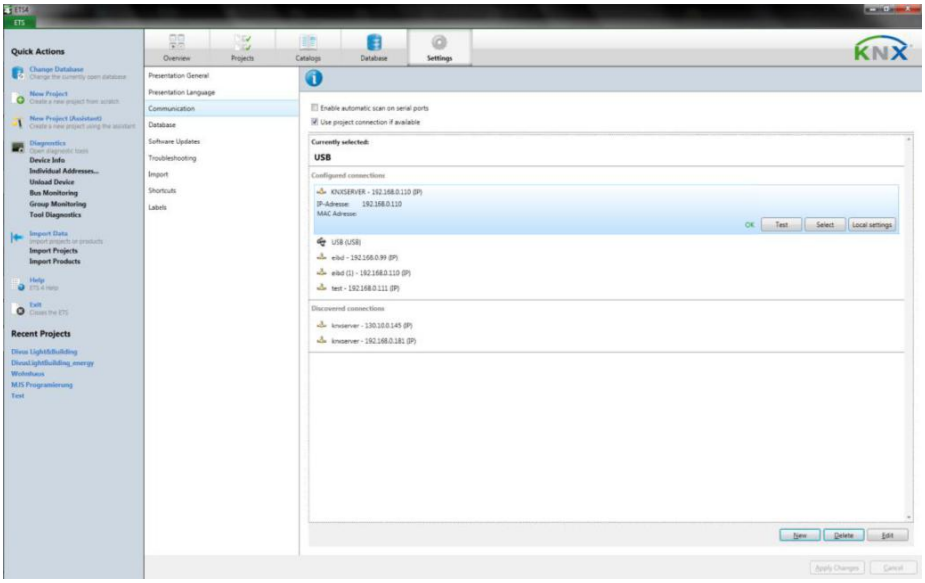
- In the main menu, please click on “SETTINGS”.
- In the lateral menu, click on “COMMUNICATION“.



Click on “NEW” in order to open the popup “NEW CONNECTION”. Enter a name for the connection, select “KNXNet/IP” as type. Finally, insert the IP address of the server and “3671“ as port (do NOT enable NAT mode).



After confirming through “OK”, the connection will be shown in the area “CONFIGURED CONNECTIONS”. Please select the created connection and click on “TEST” in order to check the connectivity; at positive result, click on “SELECT” in order to use **HORIZONE SERVER** as active interface.



The gateway function of **HORIZONE SERVER** can only be used with the diagnostic function “GROUP MONITOR”; the diagnostic function “BUS MONITOR” requires a direct connection to the bus. This remains valid with all versions of ETS.

USE THROUGH INTERNET

If the gateway function should be reachable also via internet, the “KNXNet/IP“ traffic must be forwarded through the integrated VPN service of **HORIZONE SERVER**.

As first step, this forwarding must be set up. In “TECHNOLOGIES” -> “KNX” -> “ETS GATEWAY”, fill in the described fields:

USERNAME	Login data for the connection with the VPN service
PASSWORD	
HOST IP	IP address of the VPN server (normally the IP address of **HORIZONE SERVER**, if not set up differently by the network administrator)
IP RANGE	Please specify an address area that will be used to assign an address to the PCs that are trying to connect remotely via VPN. Please use the format XXX.XXX.XXX.XXX-YYY Example: 192.168.0.120-130 (range with 11 IP addresses) The defined IP range must be free and must not be used by other devices present in the network.

After filling out all the fields, please click on “SAVE“. After a few seconds the correct saving will be confirmed by a message; from this moment on the VPN service is active.

Next step is to create a “Port Forwarding” rule in your internet router, in order that incoming VPN connections are correctly forwarded to **HORIZONE SERVER**. In dependency of the settings of your router, please configure a rule according to the parameters listed below:

- External Port: 1723
- Internal Port: 1723
- Internal IP address: IP address of **HORIZONE SERVER**

Transport: TCP + UDP

After creating this rule, everything is ready for remote connections. The connection must be configured on the remote PC as a VPN connection to the network, in which **HORIZONE SERVER** is installed. Therefore, the external (public) IP address / domain name of the network must be known.

Open the control panel and select

“NETWORK CONNECTIONS”.

Select “CREATE A NEW CONNECTION” from the menu on the left and then select “Connect to the network at my workplace”.

Now select “VPN CONNECTION” and specify a name for the connection (e.g. “**HORIZONE SERVER**”).

Then enter the IP address that should accept the VPN connection (public ad-dress / domain of the router / network).

Finally close the procedure, confirming the creation of the new connection.

Now access the properties of the newly created connection by right-clicking the new connection and selecting “PROP-ERTIES“.

Select the tab “NETWORKING” and double click the entry “INTERNET PROTOCOL (TCP/IP)”.

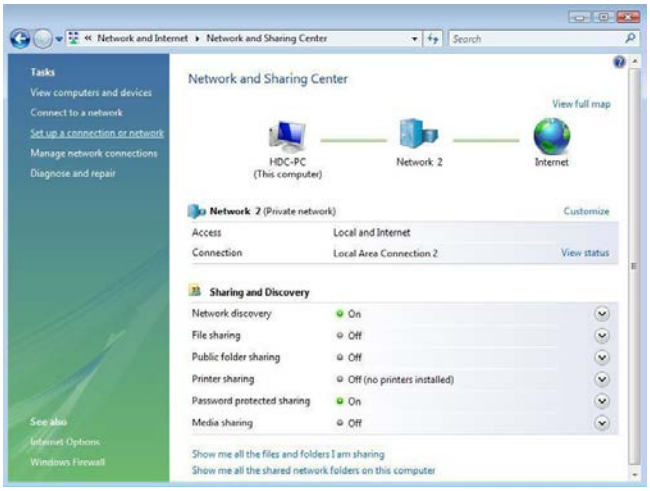
In the popup window please click on “ADVANCED” and in the menu “GENERAL” please DESELECT the option “USE DEFAULT GATEWAY ON REMOTE NETWORK”; now save the settings by confirming and closing all of the options windows.

Now it is possible to use the new connection; when double clicking the connection, a login window will appear, in which the login data specified in the configuration of **HORIZONE SERVER** must be entered.

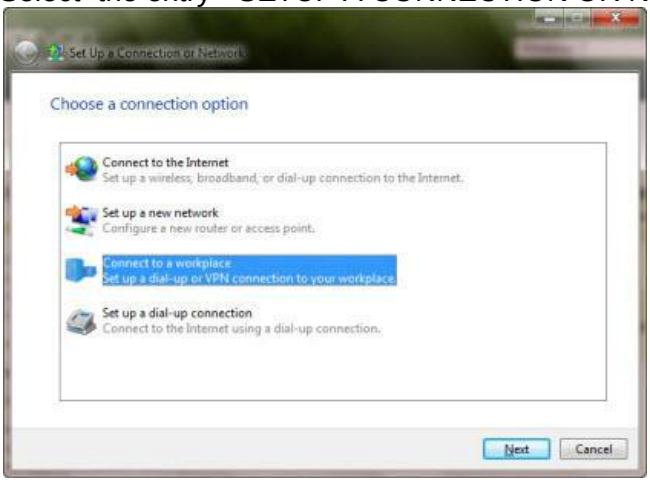
If the connection was established correctly, the remote PC will automatically get an IP address of the IP range specified in **HORIZONE SERVER**. Now the server can be used as programming interface of ETS, just as described for the usage in local network.

If you are using Windows VISTA, 7, 8 OR 10, please follow the steps below:

Open the control panel and select “NETWORK AND SHARING CENTRE”.



Select the entry “SETUP A CONNECTION OR NETWORK”.



Select “CONNECT TO A WORKPLACE”.

Select “USE MY INTERNET CON-NECTION (VPN)”.

Enter the IP address that should ac-cept the VPN connection (public ad-dress / domain of the router / net-work) and specify a name for the connection (e.g. “**HORIZONE SERVER**”).

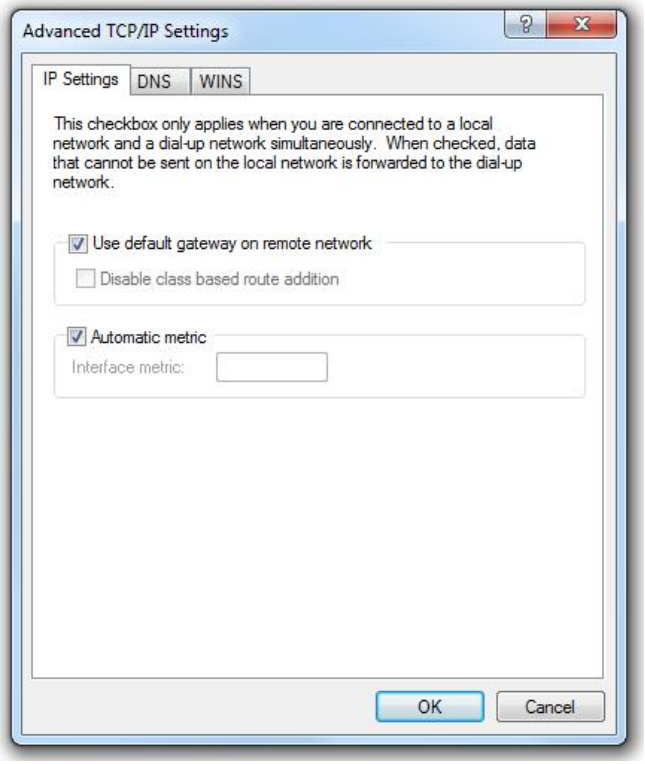
In the next window, specify the login data, just as defined them within **HORIZONE SERVER** and leave the field “DOMAIN“ empty.

Terminate the creation of the con-nection skipping the connectivity test.

The new connection should now show up in the network centre. (se-lect “CHANGE ADAPTER SETTINGS” from the lateral menu).

Now access the properties of the newly created connection by right-clicking the new connection and select “PROPERTIES“

Select the tab “NETWORKING” and double click the entry “INTERNET PROTOCOL (TCP/IP)” In the popup window please click on “ADVANCED” and in the menu “GENERAL” please DESELECT the option “USE DEFAULT GATEWAY ON REMOTE NETWORK”; now save the settings by confirming and closing all of the options windows.



Now it is possible to use the new connection; when double clicking the connection, a login window will appear, in which the login data specified in the configuration of **HORIZONE SERVER** must be entered.

If the connection was established correctly, the remote PC will automatically get an IP address of the IP range specified in **HORIZONE SERVER**. Now the server can be used as programming interface of ETS, just as described for the usage in local network.

ROOMS

INTRODUCTION

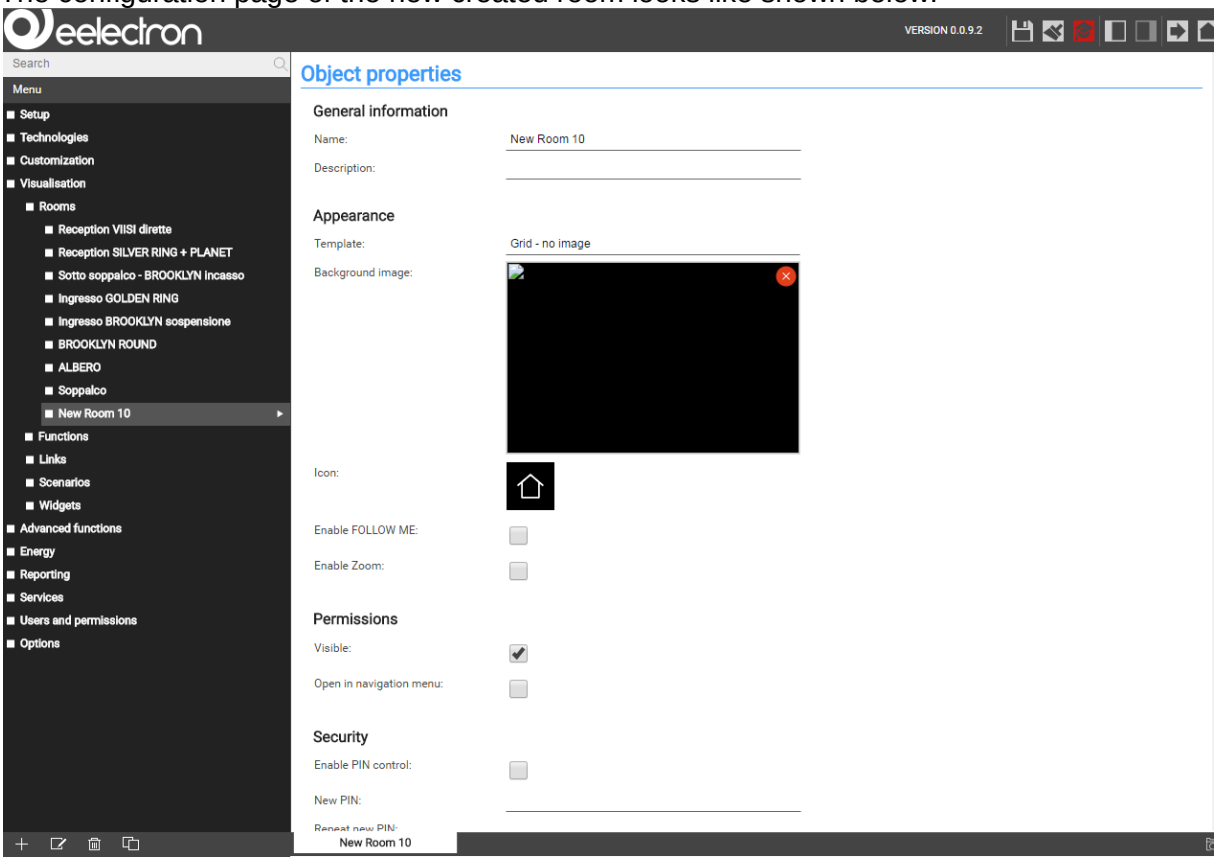
This chapter deals with the creation and customization of rooms, in which the various objects are grouped in the FRONT END. Normally it is recommended to keep the structure of the rooms similar to the structure of the building itself. It will be easier for the user to control the building through the VISUALISATION, when the navigation in the VISUALISATION is the same as the user would have to do in the building for reaching a KNX device (light switch etc.). Such a VISUALISATION can only be created when the rooms are structured inside the FRONT END at the same way they are structured in the real building and when in each room all the object are located, which are also truly installed as KNX devices in the real rooms of the building. This is only a recommendation; naturally the rooms can also be created freely and filled with any kind of object / function desired.

CREATE A NEW ROOM

In order to create a new room in HORIZONE SERVER, access the BACK END environment.
Select ”VISUALISATION“ -> “ROOMS“
Click on the ADD-button in the toolbar at the bottom

The new room will be added to the sub-menu “ROOMS”. If an already existing room is selected when the ADD-button is pressed, the new room will be added within the selected room; in this way also a tree-structure for navigation in the VISUALISATION can be created (e.g. a room “1.floor” could contain other rooms like “kitchen” or “living room”; in the FRONT END, accessing the room “1.floor” will be like accessing a sub-menu containing two other rooms “kitchen” and “living room”).

The configuration page of the new created room looks like shown below:

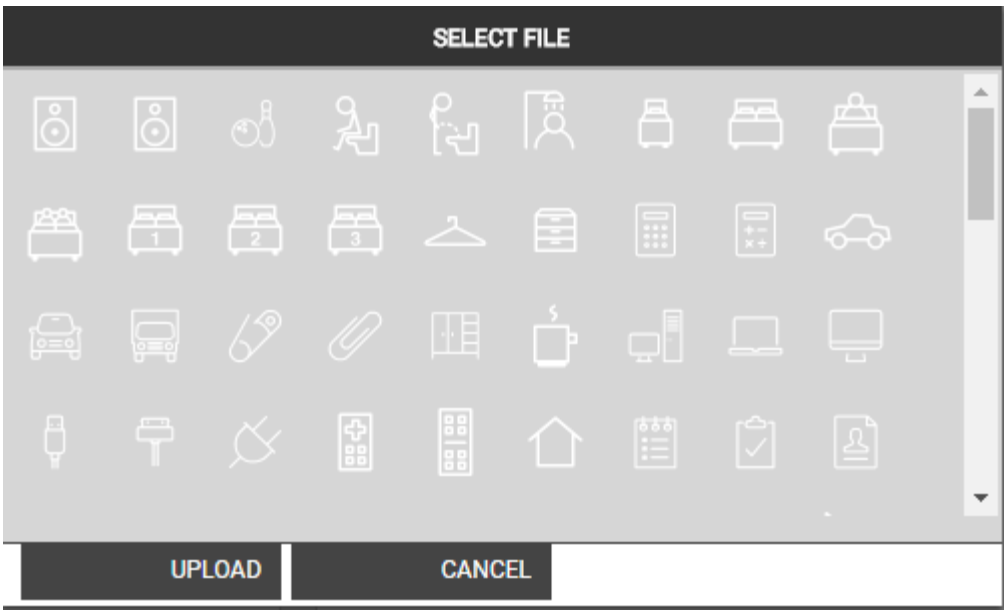


The settings for a new room are:

NAME TEMPLATE	Name of the room that will also be shown in the VISUALISATION and the navigation menu of the FRONT END. Defines the graphical layout through which the room will be shown in the FRONT END; following templates are available: • GRID: the contained objects are shown aligned according to a grid. It is possible to embed a picture in full screen behind the objects. Alternatively, an image can be inserted at the top, at the right or at the left of the contained objects. With the grid templates, the image is simply decorative. The position of the objects is constrained to the grid, therefore it cannot be related to the image itself. • BACKGROUND: The contained objects are positioned directly upon a background image. Each object can be freely moved and positioned over the image. The position of each object can be logically related to any graphical element of the image. • NONE: this option means that the room acts as sub-menu for the navigation inside the FRONT END and so no objects will be shown in this room; only the contained sub-rooms will be shown in the navigation menu of the FRONT END.

BACKGROUND IMAGE	If the chosen template provides embedding a background image, here the desired image can be defined; with a simple click on the empty square a pop-up window will appear, showing all uploaded pictures and allowing their selection: Through the UPLOAD button further images can be uploaded to HORIZONE SERVER; after a successful upload, the new images can be selected from inside the pop-up window.

ICON For each room an appropriate icon can be selected:



Simply click on the desired icon inside the appearing pop-up window to select it for the current room.

By changing to EXPERT mode in addition to the above mentioned options it is also possible to define a description and the visibility of the current room.

The following screenshots shows how the aspect of same room changes in the FRONT END with the different templates:

If the visualisation is accessed through mobile devices, the layout, in which a room is displayed, can differ from the defined template. HORIZONE SERVER does an automatic resize of the layout in dependency of the display resolution of the used device. Displays of smartphones and small tablets have too small display resolutions for showing a room in the “BACKGROUND” template, so HORIZONE SERVER automatically changes the layout to “GRID” without any image.

The image used as background image must have a format that can be shown in a browser. It is recommended to use only images in JPEG or PNG format (the latter one is often preferable because it also supports transparency). The size of the images (h x w) must be adjusted before the image is uploaded to **HORIZONE SERVER**; please consider the following points:

If you use the template "BACKGROUND" to visualize a room, then the background image will be displayed in real size (pixels) without any automatic scaling; the image is placed in the left upper corner.

If you use one of the "GRID" templates for the visualization of a room, then the image is scaled, in order to have the optimal size at the defined position.

The usage of high resolution images (e.g. HD photos) has a double disadvantage: on one side, the upload of such big sized images to **HORIZONE SERVER** takes longer and also the loading times increase when a room is opened inside the FRONT END, because of the high data volumes caused by the image. Furthermore, when the template “BACKGROUND” is used to visualize a room, on devices with smaller resolutions image itself, only a part of the background image will be visible.

INSERT OBJECTS INTO ROOMS

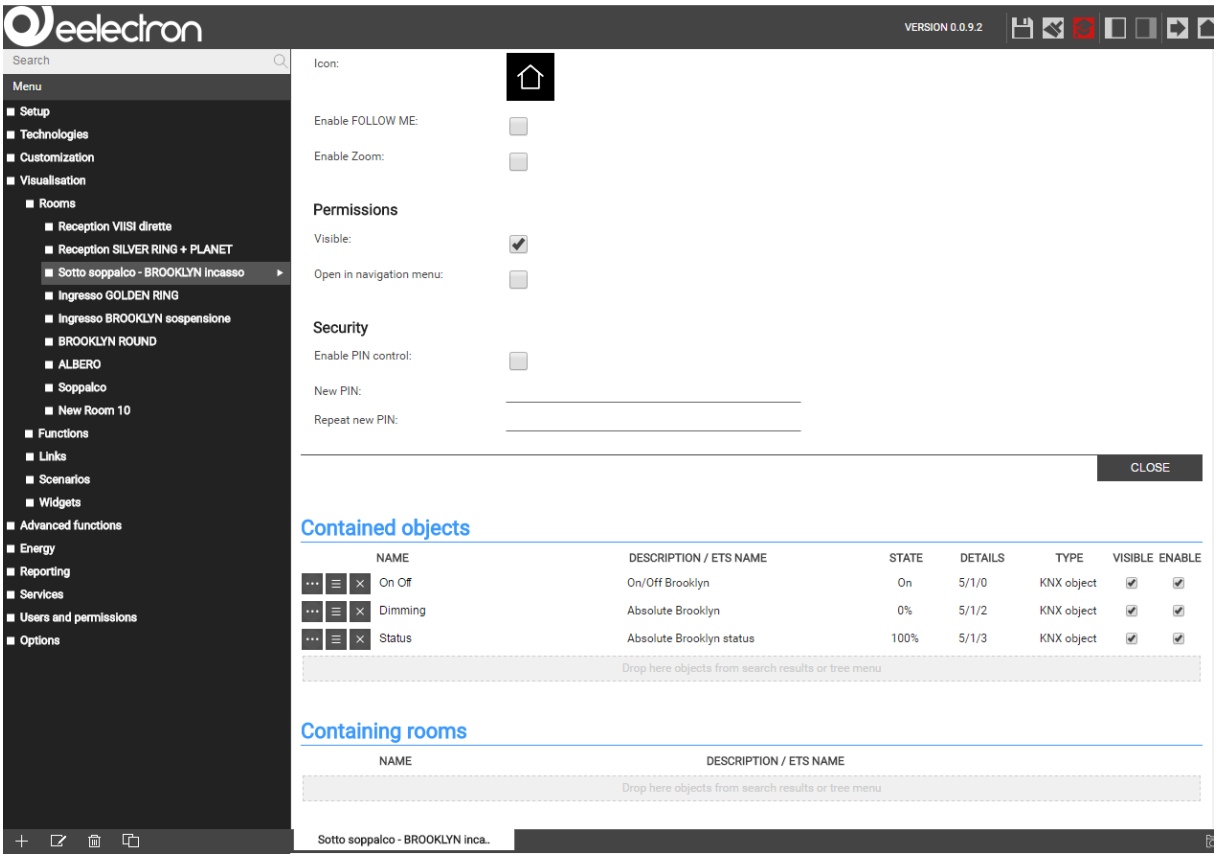
As soon as a room was created, it is possible to add objects to a room:

Open the target room in a new tab

In the area “CONTAINED OBJECTS” all the objects contained in the room are listed (initially empty)

Search the desired objects with the search function and drag them inside the area

The order of the single objects can be changed by dragging the single objects (using the MOVE-button) to the desired position (for the templates “GRID” only)



Of course it is also possible to remove objects from a room. Simply press the DELETE-button of an object in the list and the object is removed from the room; however, this DOES NOT delete the object from the project!

All sub-rooms contained in a parent room are listed in the same area as all the other objects. Such sub-rooms are not visible in the VISUALISATION of rooms displayed with a template of type “GRID” and are only shown in the navigation menu of the FRONT END.

DELETING ROOMS

To delete a room, the desired room must be selected through the search engine or the BACK END menu and then the DELETE-button must be pressed, just as any other object is deleted in **HORIZONE SERVER**.

Deleting a room does not delete the object contained in that room; they still remain available in the **HORIZONE SERVER** database for further use.

CUSTOMIZING THE BACKGROUND VIEW

The personalization of a room with the configured template "BACKGROUND" is done directly in the FRONT END. If the user has the necessary permissions, there will be an icon called "EDIT PLAN" in the toolbar, through which the user can switch into the editing mode. The editing mode permits the following actions:

The single objects can be moved to the desired position (at the beginning all the objects will be placed in the left upper corner, one over the other).

For each object can be defined, whether it should have a graphical shade or not.

For each object can be configured whether its name should be visible in the FRONT END or not.

It is also possible to place transparent areas on the background image, which are linked to the corresponding sub-rooms; when using the template “BACKGROUND”, sub-rooms will be represented through a touch sensitive, transparent rectangle, which can be placed on the background image and used for navigation.

“BUTTONS” TEMPLATE VIEW

“BUTTONS” is a particular type of template view that is available in **HORIZONE SERVER**. It can be used for rooms containing 1, 2, 4, 6 or 8 buttons (or objects) per page.

This template has been designed to create pages with only a few objects and to show them in a very simple and easily controllable form. This kind of representation does not support any kind of additional functions (like scheduling, favorites, etc.). When using this functionality in combination with the expressions to hide the navigation area (see chapter 4.5), very simple user interfaces can be created that permit to command objects just like through a keypad:

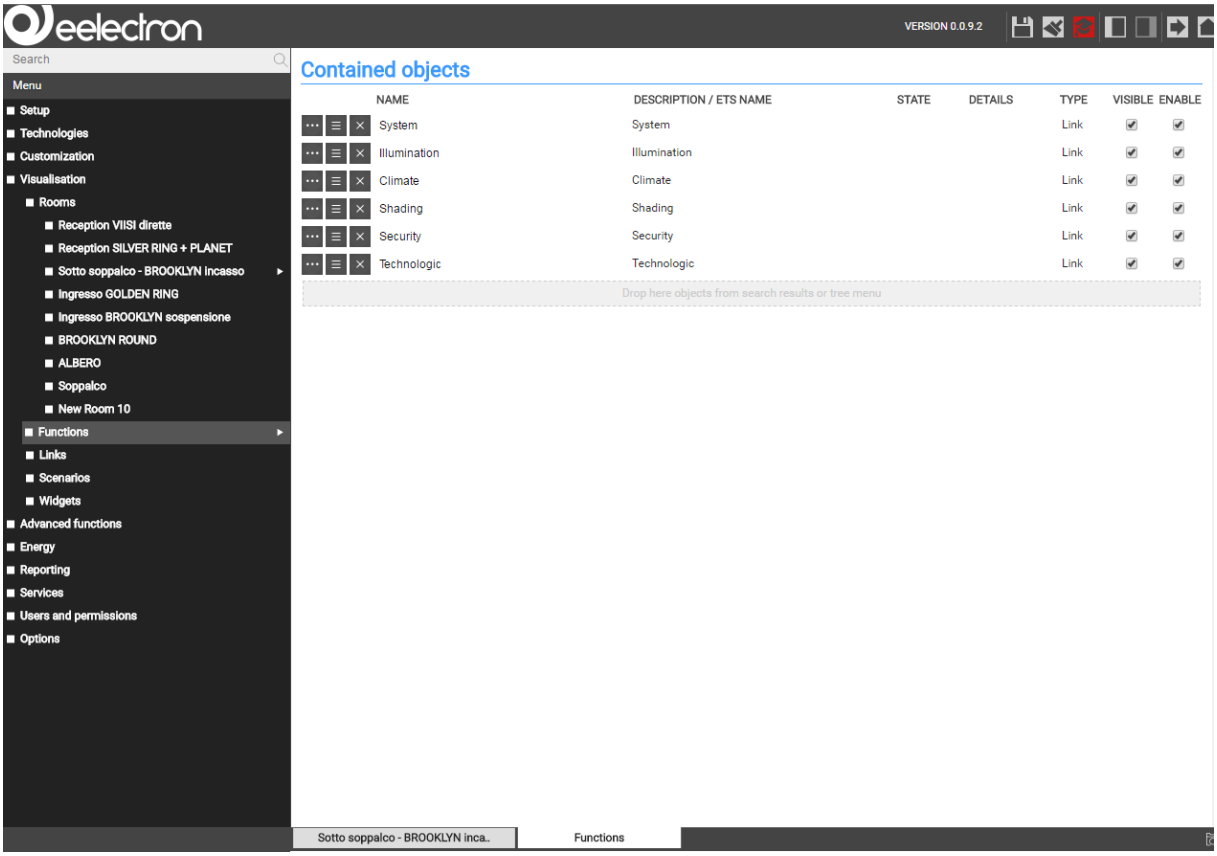
FUNCTIONS

INTRODUCTION

This chapter describes how to navigate in the FRONT END with the help of the FUNCTIONS menu and provides information on how to optimally configure objects for the navigation with the FUNCTIONS.

FUNCTIONS SETTINGS

The FUNCTIONS can be configured in the BACK END environment under “VISUALISATION” → “FUNTIONS“:



	It is recommended to switch to EXPERT mode for being able to see also hidden settings.

In the displayed list the following options are available:

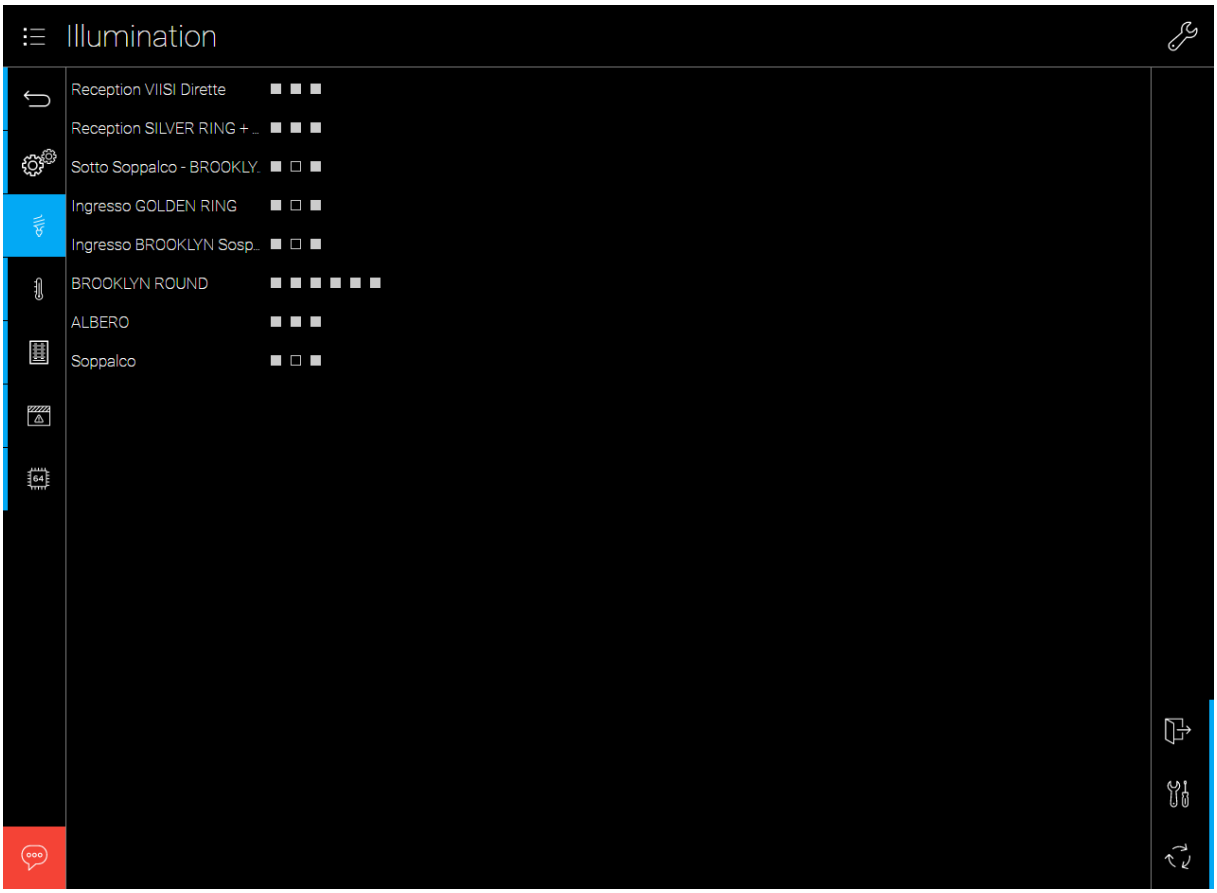
- The names of the single functions can be changed
- The order of the functions can be changed via drag and drop, pulling the single functions to the desired position (which will also be used in the FRONT END).
- Unused functions can be hidden, so that they are not visible in the navigation menu in the FRONT END.

FUNCTIONS IN THE FRONT END

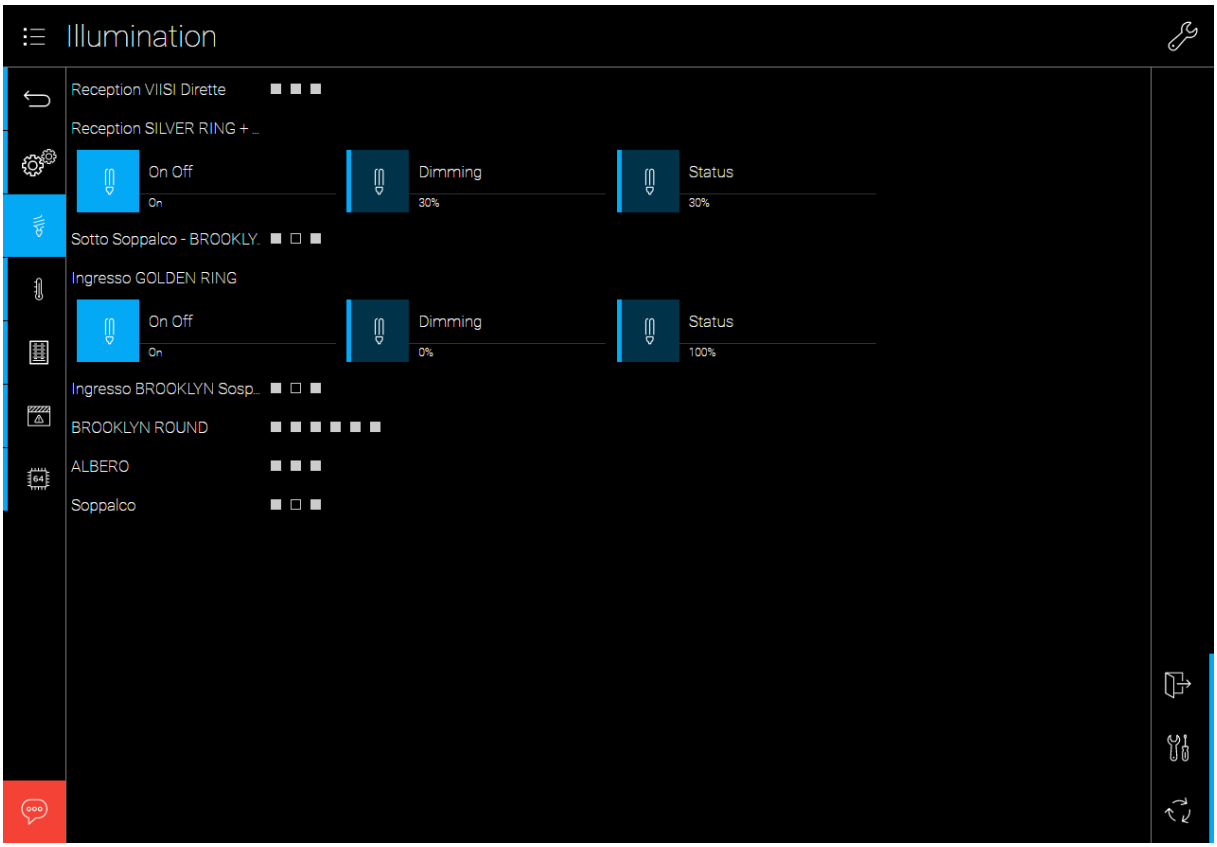
Clicking on “FUNCTIONS” in the navigation menu in the FRONT END, all visible FUNCTIONS are listed inside the navigation menu. Clicking on one of the FUNCTIONS, a list of all rooms containing at least one object associated with the selected FUNCTION is displayed. For each room a row of dots is displayed. Each dot, through it’s colour represents the status of an object in the room.

Each page of the FUNCTIONS menu, therefore, allows the user to have a complete view of the status of all objects associated to the selected FUNCTION in the building. The user can check what is the real time update status, with a single glimpse of the eye, without having to navigate throughout the rooms tree.

Summarizing, the FUNCTIONS view in the FRONT END, is a very comfortable way for the user to manage all objects collecting them according to their functionality, without having to search for them going through the rooms structure.



Clicking on the name of a room, a panel showing the control icons for any contained object is displayed. The user, therefore, has direct and full access to each single object.



Functions that contain many objects easily result in complex pages in the VISUALISATION and especially on mobile devices their operation could become impractical. Therefore, you should take care about what kind of objects will be assigned to a function, in order to keep the number of objects per function at a comfortable level.

An alternative are WIDGETS, which allow grouping multiple objects in one object (e.g., all objects of a thermostat); for more information please see the related chapter.

WIDGETS

INTRODUCTION

This chapter deals with COMPLEX OBJECTS, which allow grouping different objects in a single object. Different objects, related to different controls and statuses of the same device, can be collected into a single object with a customizable layout. COMPLEX OBJECTS, therefore, are a very effective way to display and control more sophisticated devices.

COMPLEX OBJECTS are handled inside the FRONT END just like any other object.

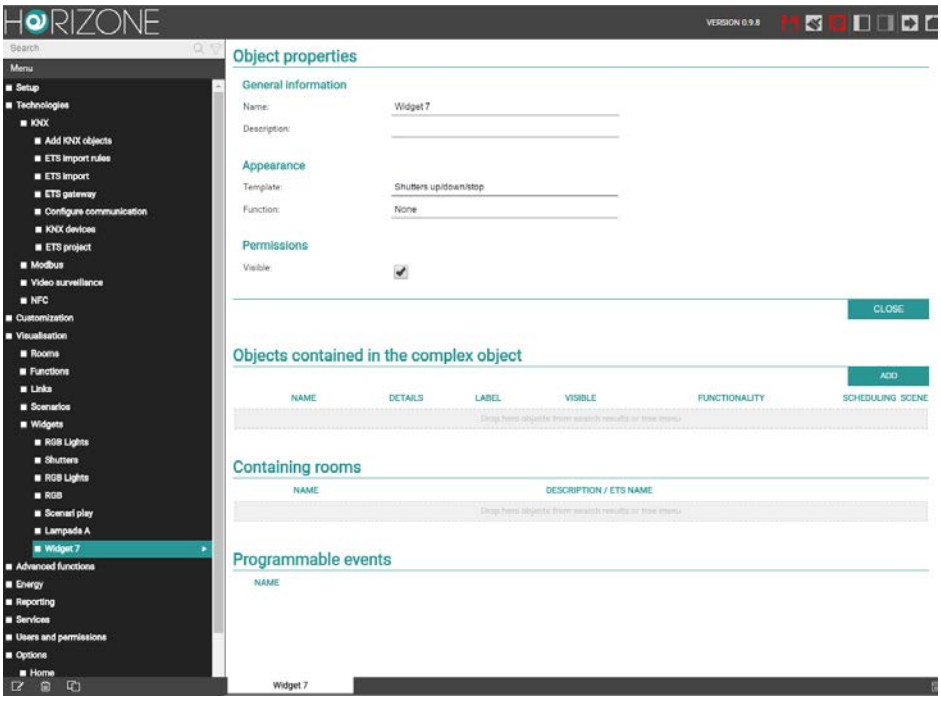
CREATE WIDGETS

To create a WIDGETS, the procedure is identical as the creation of any other object in the software:
Open the BACK END environment and select “VISUALISATION” -> “WIDGETS“.
Press the ADD button.

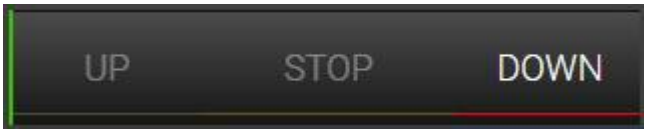
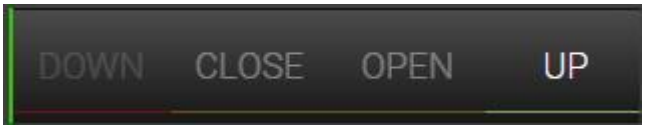
Afterwards click on the “EDIT” button to open the configuration page of the newly created WIDGETS.

The following settings will be available:

NAME	Name of the WIDGETS
TEMPLATE	Graphical icon, used to display the WIDGETS inside the VISUALISATION
FUNCTION	Function assigned to the WIDGETS (optional)



The chosen TEMPLATE defines not only which icon the object should use for representation inside the VISUALISATION, but also which kind of sub-objects it can contain; the following TEMPLATES are available:

DIMMER	With this TEMPLATE the command “ON/OFF” and the percent value of a KNX dimming actuator can be controlled.
SHUTTERS	With this TEMPLATE the commands “UP”, “DOWN” and “STOP” of a shutters actuators channel can be controlled in the same object. 
SHUTTERS UP/DOWN/PERCENTUAL	Similar to the previous object, instead of the STOP function it provides a percentage control of the shutter position.
SHUTTERS WITH BLINDS	Permits to control the shutter position as well as the opening / closing of its blinds 
THERMOSTAT	Allows grouping of different commands and status feedbacks from KNX thermostats into one object; in the FRON END itself only a small icon with the key information is shown.

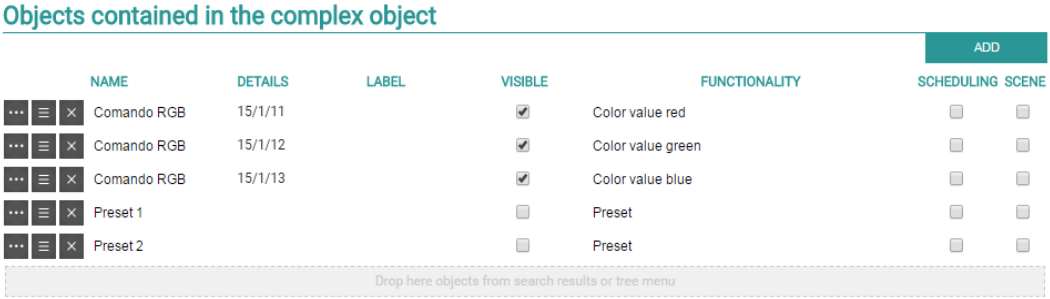
THERMOSTAT pop-up window	By clicking on the corresponding icon of such an object, a popup window containing all objects defined as visible in the WIDGETS will appear. For different types of thermostats different templates / options are available

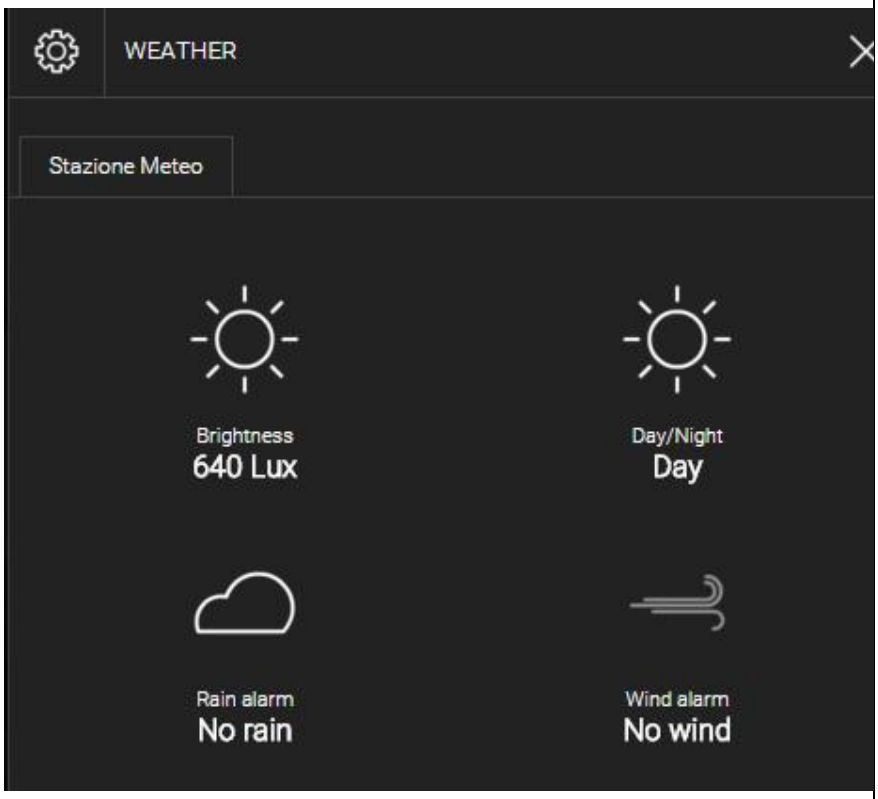
RGB	Allows grouping all necessary objects for the control of RGB lights in one object (control of the individual colour channels, "ON / OFF" commands, colour intensity, etc.)

RGB CONTROL pop-up window	By clicking on the corresponding icon of such an object, a popup window con taining all objects defined as visible in the WIDGETS will appear. The pop-up window contains all options necessary for the full control of all features of the RGB lamp. Through the FAVOURITES section on the bottom of the window, the user will be able to create as many colour PRESETS as needed.

WHITE COLOUR TEMPERATURE CONTROL	This control is designed to allow the user to regulate the colour temperature of white lamps through 2 dimming objects, one for warm colour and one for cold colour. By clicking on the corresponding icon of such an object, a popup window containing all objects defined as visible in the WIDGETS will appear. pop-up window

Besides the 2 objects for the dimmer control it is also possible to connect other 2 objects (typically virtual objects, check out the corresponding chapter in this manual) in order to label the maximum and minimum temperature; in this case you can just insert the values in the “LABEL” column of the administration page of the complex object:



WEATHER STATION	Allows to group all objects related to a weather station into one object. 

EMERGENCY LAMP	Designed for the configured a KNX emergency lamp and to connect the necessary functions. Note: the sub-objects – in order to be operated correctly – must use the special symbols defined for emergency lamps, which make part of the function “SECURITY”.

AUDIO CONTROL	Designed to combine into a single pop-up all control objects of a Multiroom audio zone, connected either via KNX or via custom scripting (e.g.: SONOS, DUNE)

GENERIC	Allows grouping several objects into a pop-up window, where the structure and the objects to be shown can be freely chosen (refer to the appropriate chapter of this manual)

Depending on the selected TEMPLATE, only compatible objects can be added, since the COMPLEX OBJECT needs to understand where each object must be positioned and which functionality they will have to assume; for the available functions of a COMPLEX OBJECT, only compatible objects can be used.

OBJECT FUNCTIONALITY DEFINITION

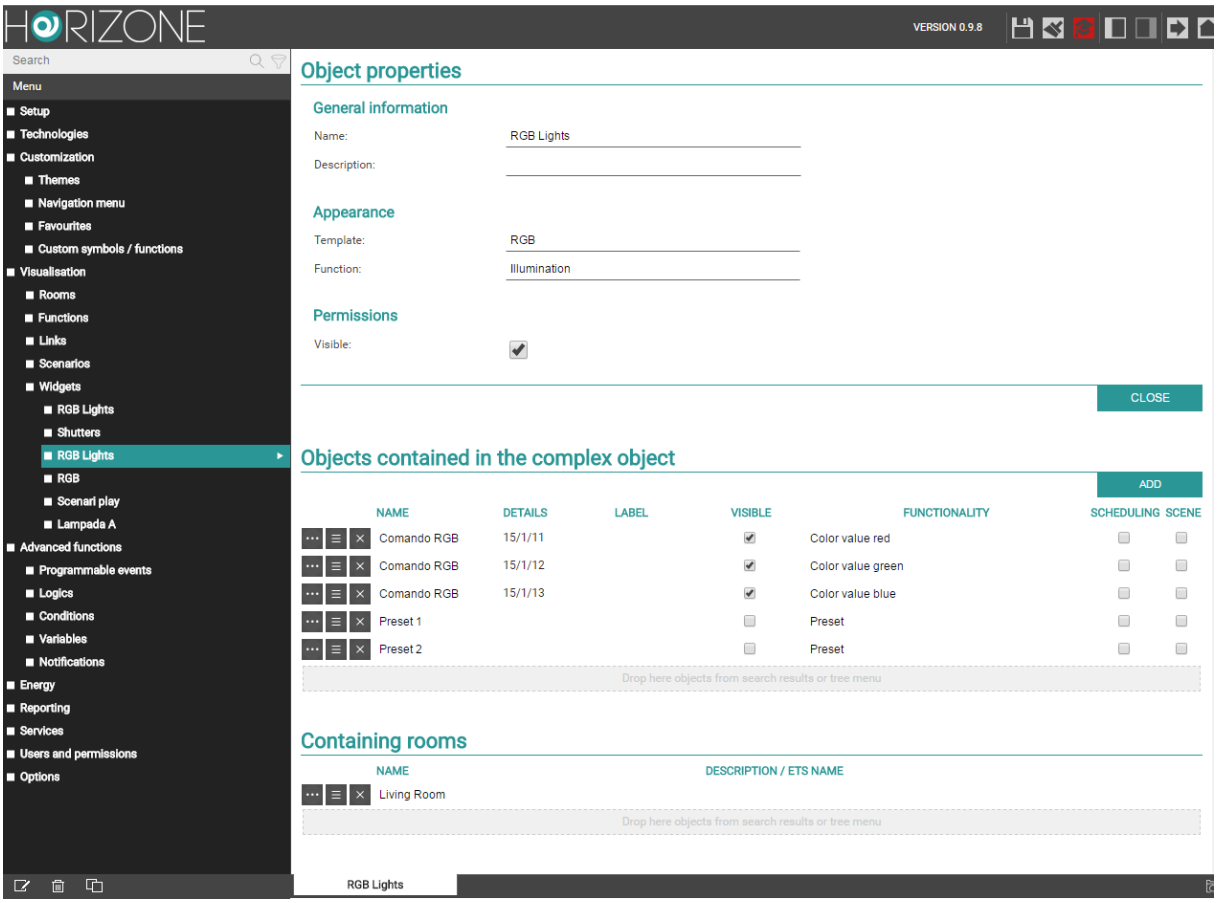
Once a WIDGETS is defined, the desired objects can be inserted into the area "OBJECTS CONTAINED IN THE WIDGETS" for being assigned to one of the functions the WIDGETS offers. Search for the desired objects with the search function and pull them inside the area ("drag and drop"). Each object must be assigned to the corresponding function of the WIDGETS. In the parameter "FUNCTIONALITY" the corresponding function for an object can be selected. Available functionalities will depend on the objects type; for example if a 2byte temperature value was added, you could select only between the functionality "Measured temperature" or one of the "set point" functionalities (but not the operating mode, since it is either a 1byte or different 1bit objects).

the entry in the column “FUNCTIONALITY” also defines the graphical aspect of the related sub-object. In past versions the graphical aspect was depending directly on the configured function of the sub-object and therefore needed to be adapted manually by the user.

Of course it is still possible to change the function of the sub-object also in a second mo-ment; in this case also the visualization within the WIDGETS will change. By re-changing the entry of the column “FUNCTIONALITY” of the selected sub-object, also the graphical aspect of the sub-object will change again.

it is also possible to add sub-objects to a WIDGETS directly through an ADD button in the section of the contained objects. This will create a VIRTUAL OBJECT (check out chapter 11.4 for details) and connect it with the WIDGETS. The graphical aspect of the new sub-object can be defined directly through the entry within the column “FUNCTIONALITY”.

Since this objects are virtual objects, they will not send any commands to the system (like for example KNX objects), but are primary used for labeling or demonstration purposes.



Through the option "VISIBLE" it is possible to hide objects, which have been inserted in the WIDGETS, in the rest of the VISUALISATION. Since the individual objects are now grouped in a WIDGETS, it could be desired that they should not be visible in other pages of the FRONT END (this concerns mainly the FUNCTIONS page).

Finally, through the last column, it is possible to configure one of the objects of a WIDGETS for being scheduled. When the user configures a scheduling for the WIDGETS, in fact the object enabled for scheduling will be scheduled; only one object can be enabled for scheduling inside a WIDGETS. For example a WIDGETS with the TEMPLATE "Thermostat" could be configured to enable scheduling for the operation mode of the thermostat (time based switching between comfort- and standby-mode). If one of the objects of a WIDGETS is enabled for scheduling, the icon of the WIDGETS will show the related symbol on it in the VISUALI-SATION; if the related symbol is not shown on the icon of a COMPLEX SYMBOL, no time scheduling is possible.

GENERIC WIDGETS

The TEMPLATE “GENERIC” for widgets permits to group different objects into a definable structure, which in the FRONT END will be shown inside a pop-up window; structure and objects can be chosen freely.

The TEMPLATE “GENERIC“ allows displaying different objects organized graphically in a pop-up window:

The pop-up window, as shown in the picture above, is divided into three main areas:

- The “DISPLAY AREA” is an area for showing status and feedback information. It is divided

in the following sections:

DISPLAY-VALUE CENTRE	Value shown in the centre of the display area
DISPLAY-VALUE UP/LEFT	Value displayed in the configured corner of the display area.
DISPLAY-VALUE UP/RIGHT	Each value can be displayed in combination with a selectable label.
DISPLAY-VALUE DOWN/LEFT	
DISPLAY-VALUE DOWN/RIGHT	

- The “MAIN AREA” can contain up to 10 objects, which will be positioned one under the other. If a label is defined for one of these objects, it will be displayed above the

corresponding object in the main area. All objects of the main area are all visible and reachable by the user at any time.

- The “TAB AREA” is made of 3 tabs, identified by a TAB LABEL. Each tab can contain up to 10 objects. This means a total of 30 objects. If a label for an object is defined, this label will be shown above the corresponding object. Switching between the various tabs is done by clicking on the label of the corresponding tab. Tabs not containing any objects will not be displayed. Each TAB is displayed clicking on the corresponding label. Only one tab is visible at a time.

Also widgets with the TEMPLATE "GENERIC" always the procedure for adding objects is the same: search the desired objects with the search function and pull them into the sub-object area. Once done, select functionality, define the label (optional) and, if desired, enable the scheduling option. The selection of functionality determines where the object is displayed in the WIDGETS: e.g. an object with the functionality "Display - Value centre" will be displayed in the centre of the DISPLAY area of the WIDGETS..

For each added object a label can be defined, which will be displayed above the corresponding object in the WIDGETS.

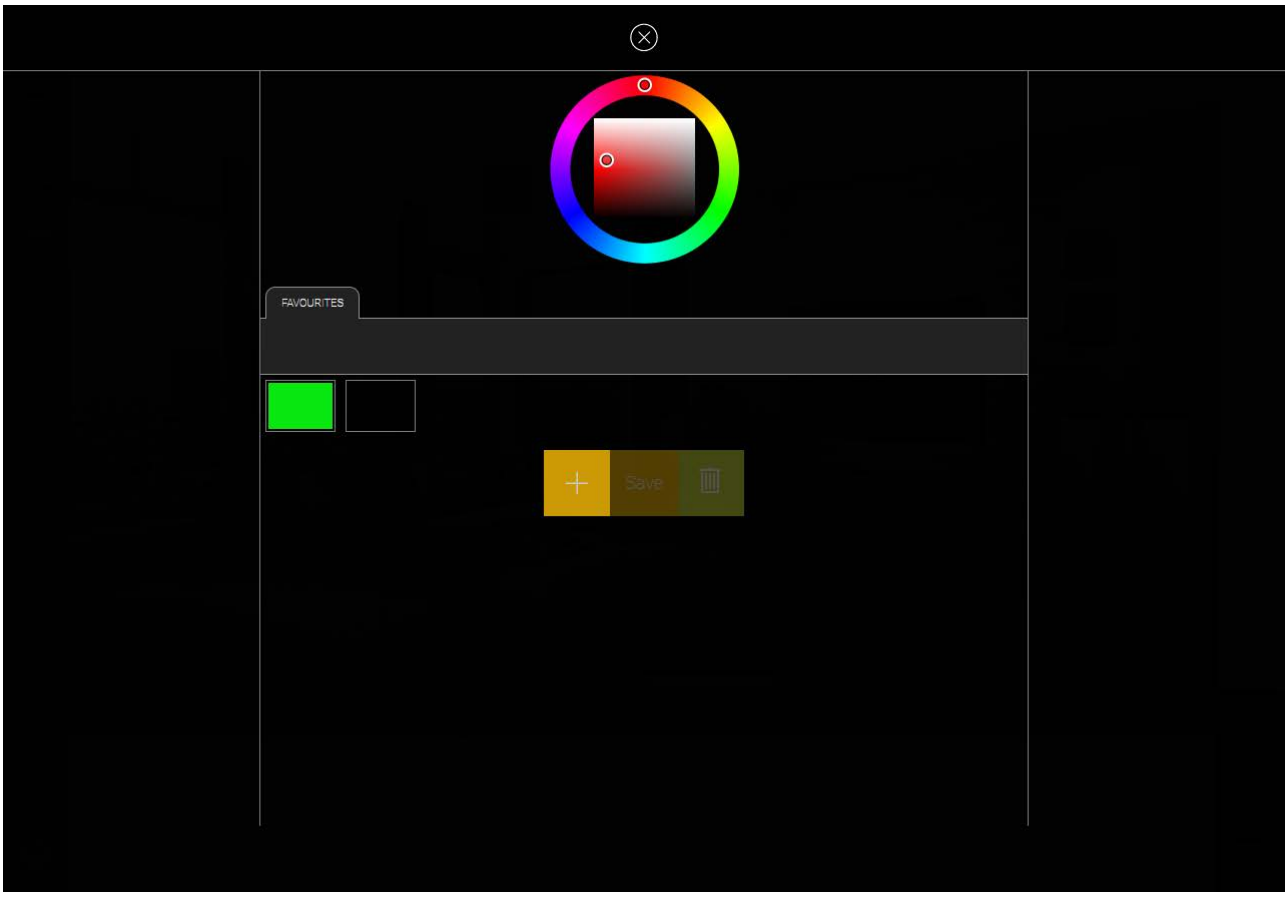
Attention: If for more than one object the same functionality has been selected, it is possible that the objects are not being displayed correctly in the VISUALISATION!

Vice versa, it is possible to add the same object several times into the WIDGETS and assign different functionalities (e.g.: display an object on one side in the DISPLAY AREA as status and on the other side add it to the MAIN AREA to permit also operation of the object).

The object, which is configured with the functionality "DISPLAY – VALUE CENTRE", will also determine the symbol / icon of the WIDGETS shown inside the VISUALISATION (“BACK-GROUND", "GRID"); furthermore, also the state of this object will be shown in the reduced widgets, on the left side of the button intended to open the popup window of the WIDGETS.

RGB Control

Version 1.1 enhances the widget for the control of RGB lights and permits to create one or more FAVOURITES (or “PRESETS”), which can be saved and used also in a second moment:



In order to create a new favourite colour, just click on the “+” button to create a new favourites box; then select the desired colour using the colour wheel in the upper area. By clicking on the SAVE button the selected colour will be stored. In order to set the saved colour in a second moment, just open the widgets again and click on the desired favourite box. The DELETE button on the right can be used to remove unused favourites.

The favourite colours are handled by **HORIZONE SERVER** just like other objects; therefore, you will also see them in the administration when accessing the properties page of the widgets (as objects of type “PRESET”):

These objects can be used also for other purposes and for example inserted into scenarios, events or logics, just like all other objects of the software, too.

SCENARIOS

INTRODUCTION

This chapter describes the extensive possibilities offered by the SCENARIOS in **HORIZONE SERVER**. With SCENARIOS, different sequences can be created, which can be launched manually, through a scheduling or depending on events.

SCENARIOS must not be confused with “KNX SCENARIOS”. “KNX SCENARIOS” are basically KNX objects that write a numeric value to the KNX bus and are already created in the ETS-project. The SCENARIOS of HORIZONE SERVER are part of the software and are not integrated in the ETS project; they are stored on HORIZONE SERVER and also operate from HORIZONE SERVER. Those SCENARIOS are much more flexible than the “KNX SCENARIOS” because the software offers more possibilities for the SCENARIOS as only writing a numeric value on the KNX bus.

CREATE A NEW SCENARIO

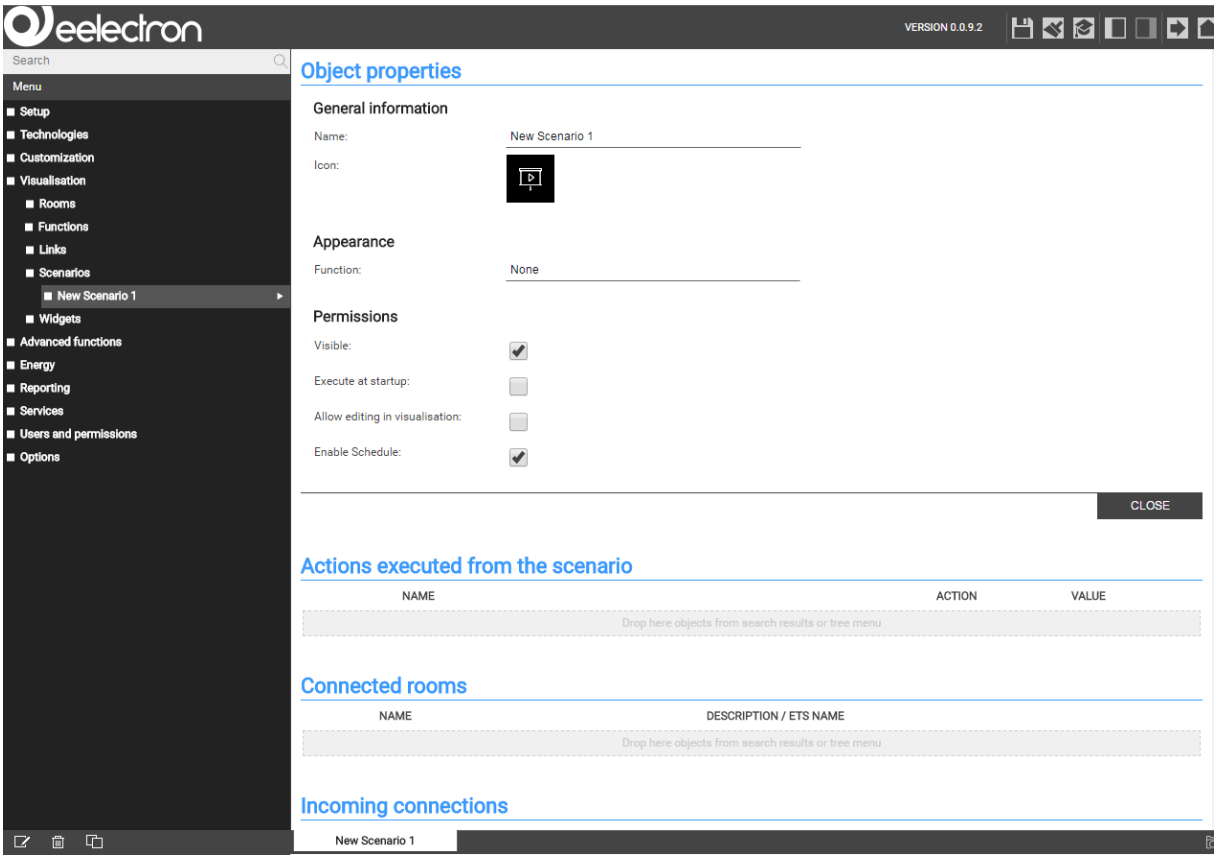
To create a new scenario:
Open the ADMINISTRATION area of HORIZONE SERVER

In the navigation menu choose “VISUALISATION“ -> “SCENARIOS“
Press the ADD-button

The new created SCENARIO will appear in the navigation menu and can be opened in a new tab for configuration:

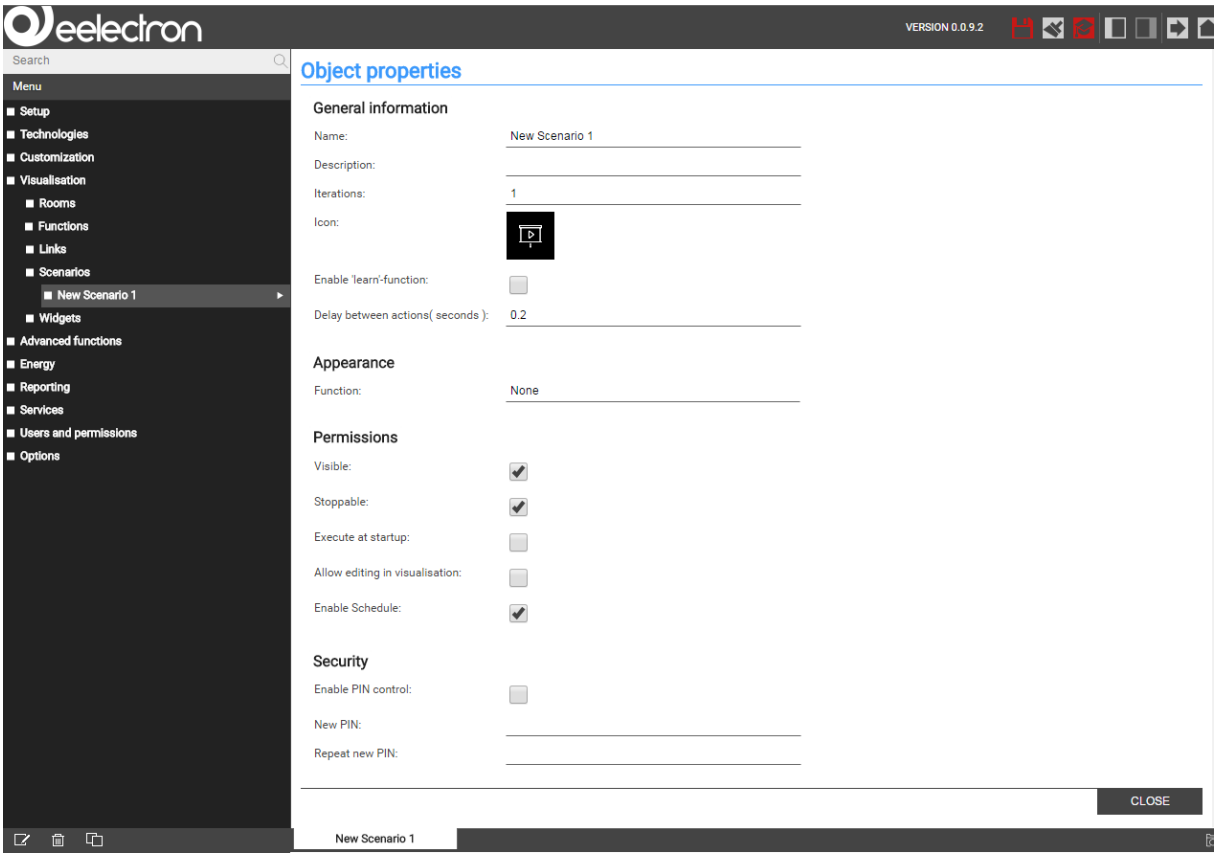
In the BASE mode the following settings are available:

NAME	Name of the SCENARIO inside the VISUALISATION
ICON	Graphical icon, through which the SCENARIO is displayed inside the FRONT END.
VISIBLE	Defines whether the scenario should be visible or not within the visualisation
EXECUTE AT STARTUP	If enabled, the scenario will be started after the startup of the software (available since version 1.0.2). NOTE: the execution takes place only after **HORIZONE SERVER** has terminated its internal function routines and controls)



By switching to EXPERT mode, the following additional options will be shown:

ITERATIONS	Number of repetitions. This number will indicate how often the SCENARIO will be repeated. Normally, this parameter is set to "1"; if the scenario shall be repeated several times, the desired repeat value can be configured here.
STOPPABLE	If you activate this option, the SCENARIO can be stopped again after it has been started; this only applies to scenarios with wait commands.



All SCENARIOS will be automatically included in the corresponding page of the FRONT END, which is accessible from the navigation menu; of course the single SCE-NARIOS can also be inserted into different rooms.

ADD ACTIONS TO A SCENARIO

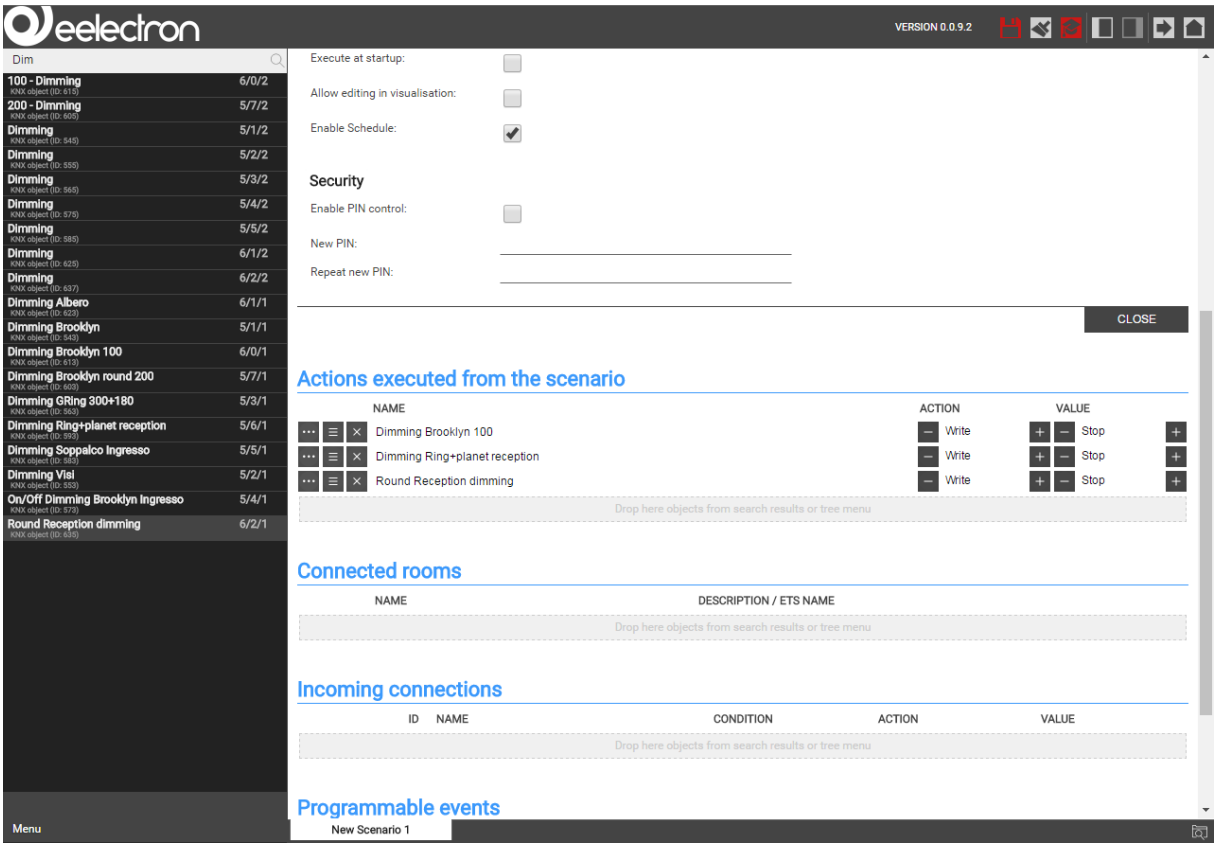
In order to add actions to a created SCENARIO, proceed as follows:

Open the area “ACTIONS EXECUTED FROM THE SCENARIO”

Search the desired objects with the search function and pull them inside the list (“drag & drop“)

For each object dragged in the list the appropriate “ACTION” and if necessary the corresponding “VALUE” can be defined. For KNX objects as “ACTION” can be chosen between “Read” and Write“; “Read” will send a status request for the corresponding group address on the KNX bus, “Write” sends the configured “VALUE” as command on the corresponding group address on the KNX bus.

An example of a SCENARIO with defined actions can be seen in the following screenshot:



SCENARIOS WITH WAIT COMMANDS

It is possible to create a delay between the individual actions of a SCENARIO using WAIT COMMANDS, which cause the SCENARIO to pause for a certain period of time. Thus makes it is possible to shift the various actions of a SCENARIO in time.

The WAIT COMMANDS are objects, which are added to the area "ACTIONS EXECUTED FROM THE SCENARIO" just like KNX objects. For adding a WAIT COMMAND, search for the keyword "wait" with the search function and pull the desired WAIT COMMAND into the desired position of the area ("drag and drop"). In **HORIZONE SERVER** the following waiting times are available:

1 second	10 minutes
2 seconds	15 minutes
5 seconds	20 minutes
10 seconds	30 minutes
15 seconds	1 hour
20 seconds	2 hours
30 seconds	3 hours
1 minute	6 hours
2 minutes	12 hours
5 minutes	24 hours

The WAIT COMMANDS can be found through the search function, by searching for the keyword "wait".

The WAIT COMMANDS can be found only through the search function, because they are directly integrated inside the HORIZONE SERVER software with the English name "wait". If WAIT COMMANDS should be filtered by time in the results of the search function, the time unit "sec", "min" or "hour" must be added to the keyword "wait", separated by a blank space.

Scenarios with built-in WAIT COMMANDS can be stopped after they once have been started; for this purpose the graphic icon of the SCENARIOS includes a STOP-button. If this STOP-button is pressed, the SCENARIO is interrupted. The states of the object contained in the SCENARIO, which were already changed when starting the SCENARIO, will not be restored, just the further execution of the SCENARIO will be stopped.

Stopping a SCENARIO can also be triggered by an event, in dependence of the status change of another object (e.g. a KNX object):

CUSTOMIZATION OF WAIT COMMANDS

Objects of the type “WAIT COMMAND”, which allow to insert delays into SCENARIOS, can be customized in the following way:

Locate the desired WAIT COMMAND using the search function

Before modifying the WAIT COMMAND, create a clone using the corresponding button in the TOOLBAR (by modifying the original WAIT COMMAND there is the risk that other functionalities using this WAIT COMMAND could stop working as desired)

Access the configuration window of the cloned WAIT COMMAND

The configuration window of a WAIT COMMAND permits to configure HOURS, MINUTES and SECONDS, through which the desired delay can be created. Please fill in only integer values; furthermore the overall time must be between 1 second (minimum delay) and 23 hours, 59 minutes, 59 seconds (maximum delay).

The configuration window also gives you an overview in which scenarios the current WAIT COMMAND is included. Please do not use this area to add the command to further scenarios. Instead, always drag the WAIT COMMAND into the configuration page of the scenario.

The WAIT COMMANDS can also be integrated into the visualisation (into rooms as well as into widgetss). This has the advantage that also the final user will be able to change the value of the WAIT COMMAND, without needing the permission to access the ADMINISTRATION. The following screenshot shows the representation of a WAIT COMMAND in a room with GRID view:

When WAIT COMMANDS are added to the FRONT END, it is even more important that you only work with CLONED objects. Otherwise there is the risk that the final user unintentionally changes also the way other functions / scenarios work.

LINKS

INTRODUCTION

Objects of type LINK permit to create page jumps within the visualization of **HORIZONE SERVER**. It is possible to call as well pages of the visualization (rooms) as also links to other web servers or web pages, which are in the connection directly accessible (without having to use the navigation menu).

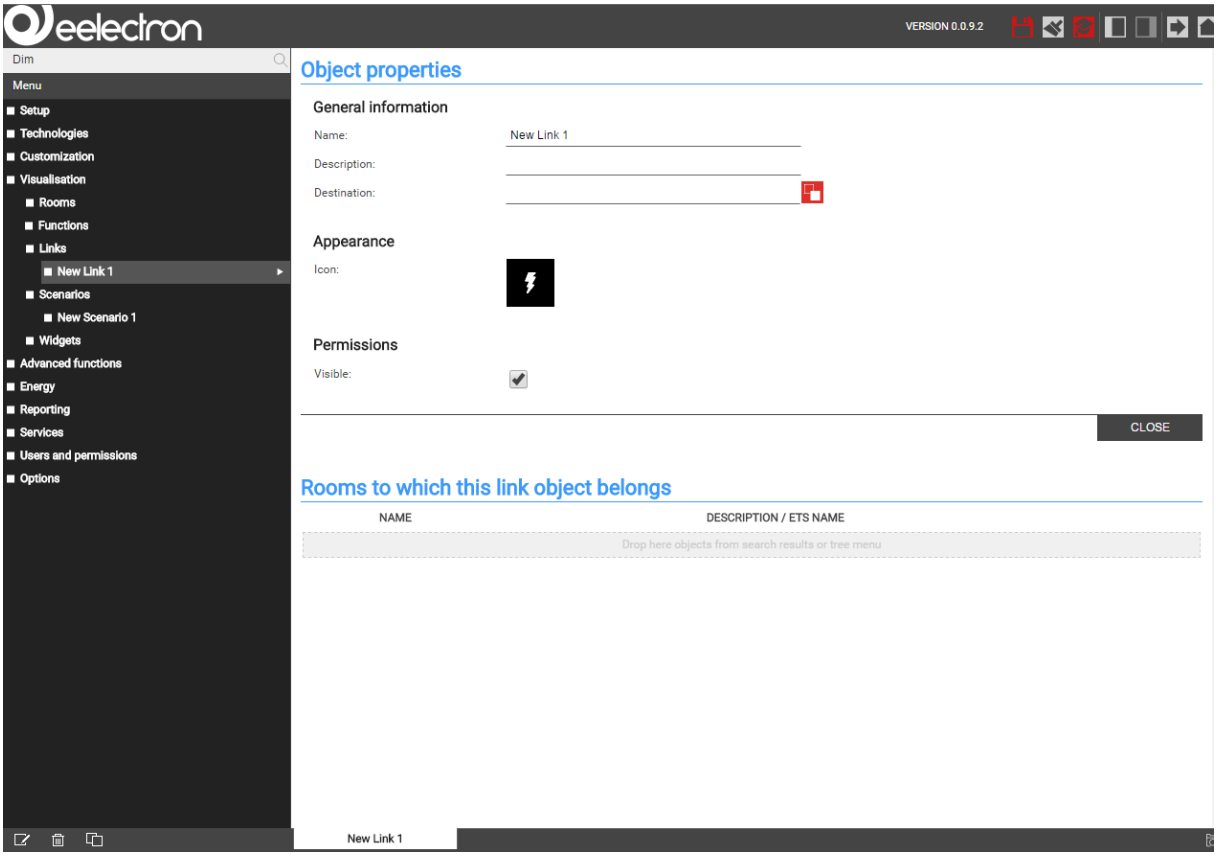
CREATION OF LINKS

In order to create a new link:

Open the ADMINISTRATION area of HORIZONE SERVER

In the navigation menu choose “VISUALISATION“ -> “LINKS“
Press the ADD-button

The new created LINK will appear in the navigation menu and can be opened in a new tab for configuration:



Now the following properties can be changed:

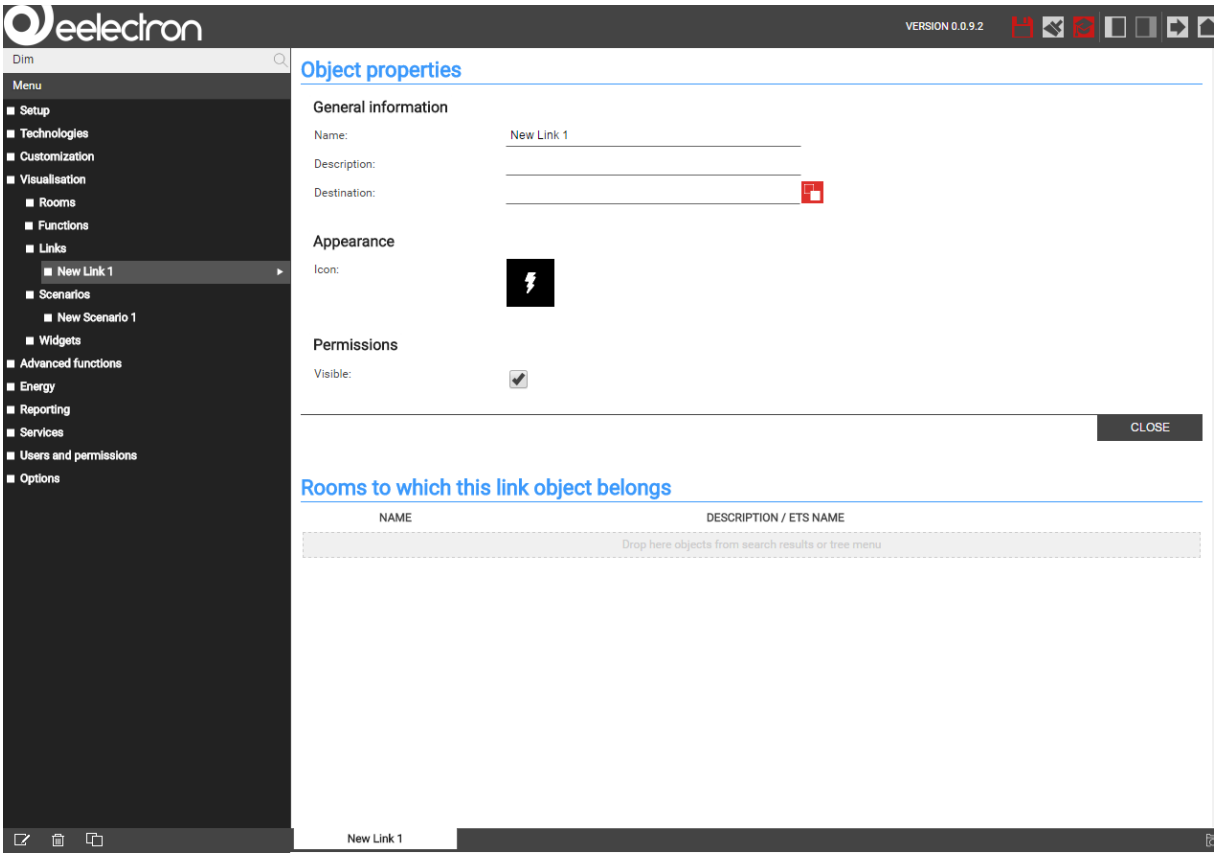
NAME	Name of the LINK inside the FRONT END.
DESTINATION	Page that is shown as soon as the LINK is clicked; can either be a URL or a page of the visualisation, as explained below.
ICON	Graphical icon, through which the LINK is displayed inside the FRONT END.

The DESTINATION can be configured in 2 ways:

Either a path (URL) to an IP address or a web page: in this case, just insert the address in the field

Or a room of the visualization: in this case just use the search function to drag the desired room into this field

In order to switch between the 2 methods, you can just click on the red button next to the destination field; it can either be a input field or a drop area (for connecting an object):



INTEGRATION IN THE FRONT END

Once the link object has been created, it can be connected via Drag & Drop (using the search function) in the following ways:

LINK TO A ROOM:

Open the properties window of the room.

Locate the link object through the search function.

Drag the link object to the section “CONTAINED OBJECTS”.

Or in alternative:

Open the properties window of the link.

Locate the room through the search function.

Drag the room into the section “ROOMS CONTAINING THE LINK”.

CONNECTION TO THE NAVIGATION MENU:

Open the entry „NAVIGATION MENU” in the menu “CUSTOMIZATION”.

Locate the link object through the search function.

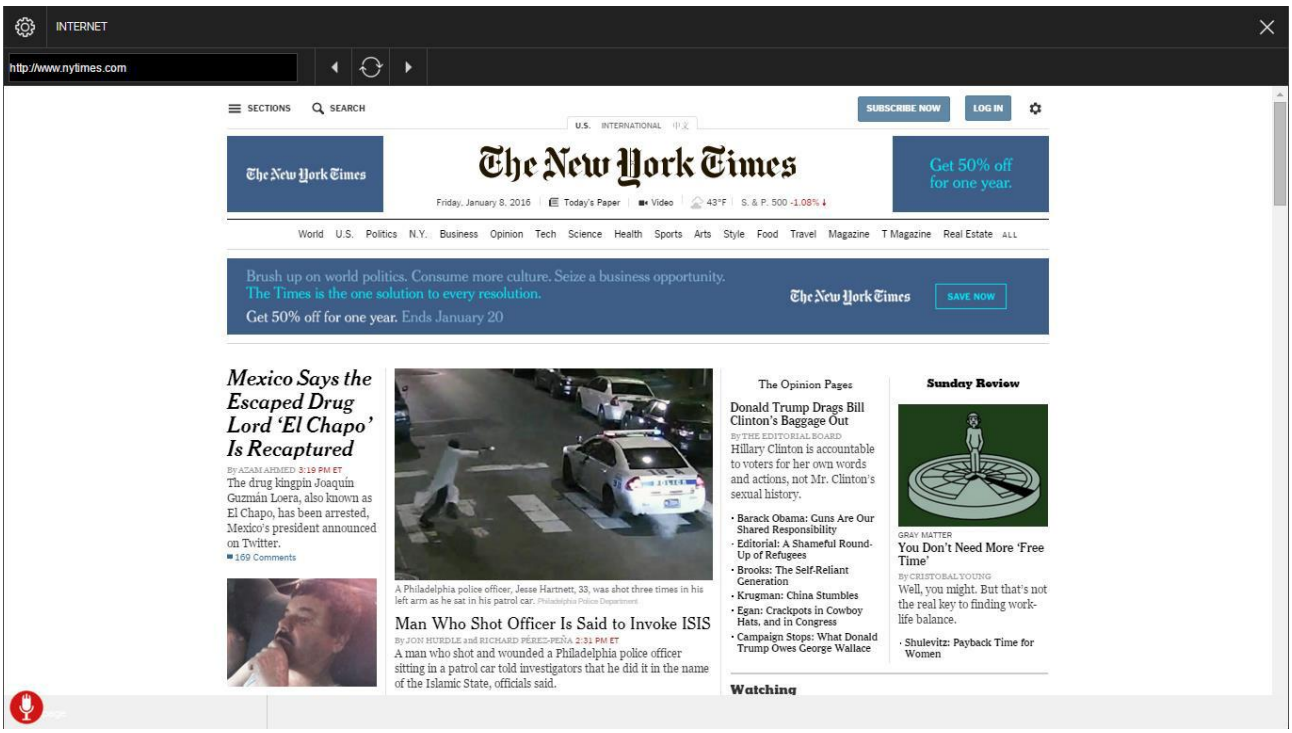
Drag the link object to the desired position within the list of elements of the navigation menu.

CONNECTION TO THE “FAVOURITES”:

Open the entry “FAVOURITES” in the menu “CUSTOMIZATION”. Locate the link object through the search function.
Drag the link object to the desired position within the list of elements of the favourites.

HANDLING INSIDE THE FRONTEND

After connecting the link object to one or more places of the visualization, you can access it through the corresponding page (e.g. directly from the navigation menu or the HOME page). If the destination of the link object is a room, it will be opened as soon the link is clicked; URLs instead are opened using the browser plug-in, as shown in the following screenshot:



USERS

INTRODUCTION

In this chapter the user management of **HORIZONE SERVER** is explained and the possibilities of personalization of each user are presented, which allow a safe and convenient use of the VISUALISATION.

USERS AND USERS GROUPS

The authentication on **HORIZONE SERVER** is defined through 2 different object types:

USER: these objects represent the accounts for accessing the VISUALISATION; the authentication is done by entering user name and password, configured for each USER in HORIZONE SERVER. Every USER must belong to a USER GROUP, so that they get certain access permissions (for example: see the whole VISUALISATION, but no access to the ADMINISTRATION area);

USER GROUP: A USER GROUP has several access permissions assigned. Each USER of a USER GROUP automatically gets the access permissions defined for the USER GROUP.

CREATE NEW USERS

In order to create a new user, proceed as listed below:

Open the ADMINISTRATION area

Select “USERS AND PERMISSIONS” -> “USERS”
Click the ADD button

The following settings will be available for each USER:

NAME	Identifies the USER inside the HORIZONE SERVER database (not used for the login)
USERNAME	Username for the authentication on the system – must consist of alphanumeric characters only
PASSWORD	Password for the authentication on the system – must consist of alphanumeric characters only
TRUSTED IP	Optional – enables the automatic authentication on the system when the VISUALISATION is accessed on a PC with the IP address specified here.

Once you have created a new USER, it must be assigned to a USER GROUP to receive the desired access permissions. Simply drag the desired USER GROUP into the area "USER GROUPS TO WHICH THE USER BELONGS".

Furthermore, it is possible to connect the user to EVENTS. They permits to execute the following actions on every client device that is currently logged in with the selected user:

PAGE JUMP: permits to create a page jump to a certain page on all client devices currently running with the selected user (page jump within the browser on default clients and within the app on mobile clients).

VOIP CALL: permits to start a VoIP call towards all devices currently running with the selected user

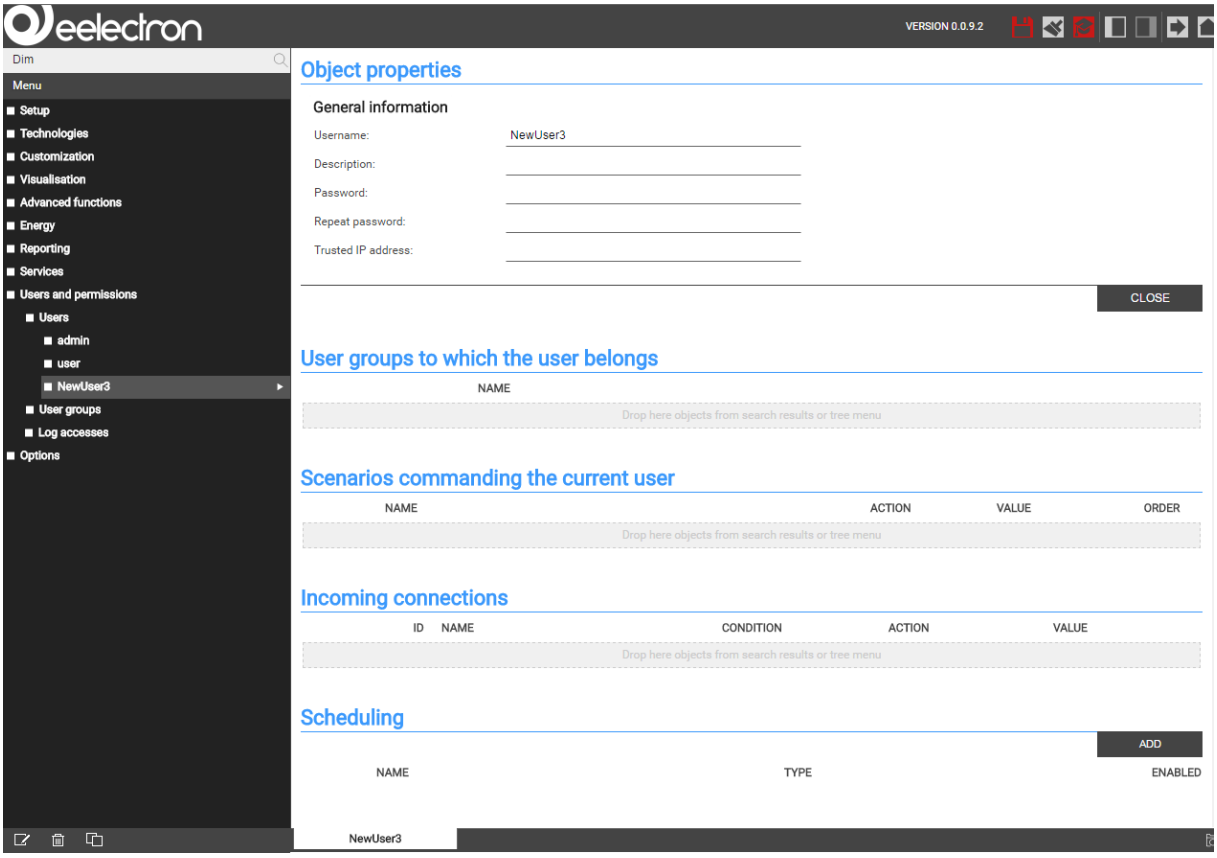
In order to configure a PAGE JUMP, please follow the instructions below:

- Drag the object that should cause the page jump (e.g. a KNX object) into the section “PASSIVE EVENTS“.
- Define the CONDITION that should trigger the page jump (the available options depend on the previously selected object).
- Please select “REDIRECT” as ACTION.

Now use the column VALUE in order to define the target page, which could be:

- Either an external web page (homepage, web server, etc.)
- Or a ROOM of the software

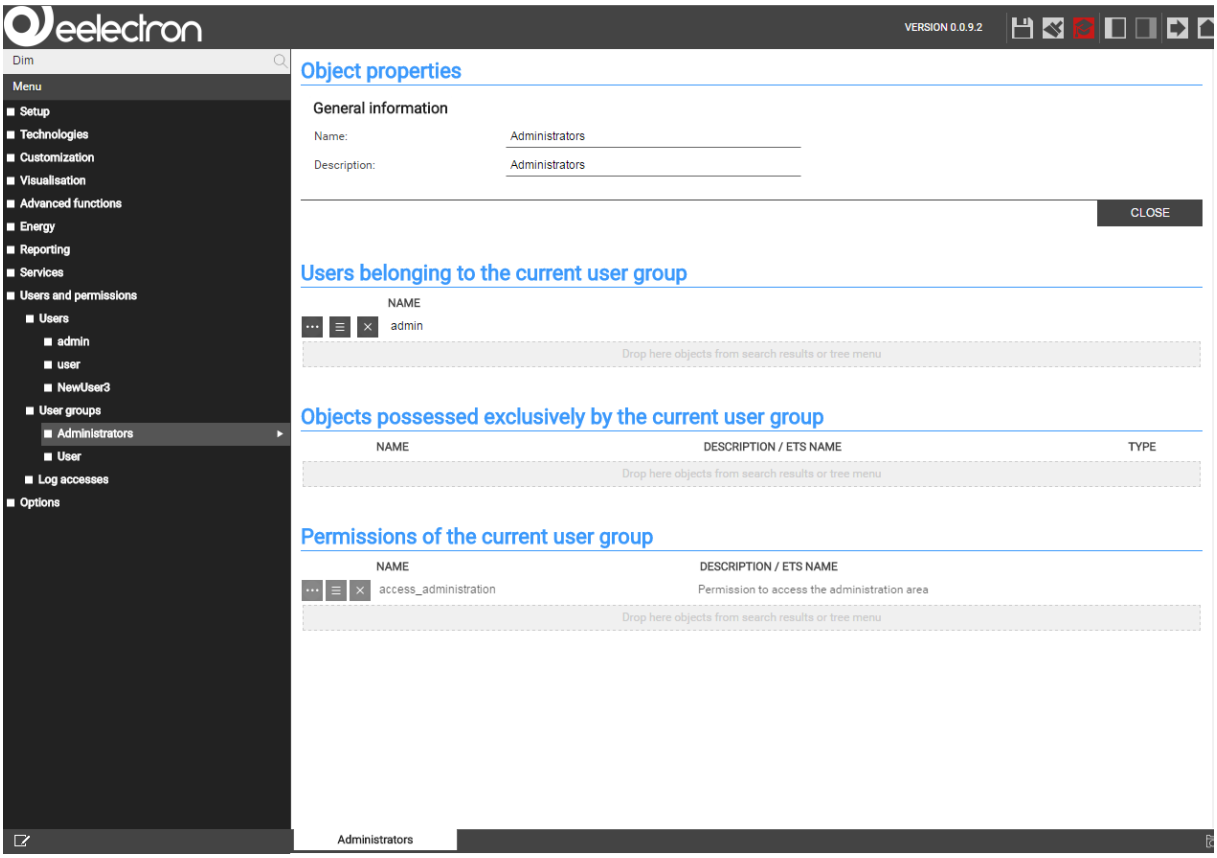
In the first case it is sufficient to insert the URL of the desired page into the text box. In the second case instead, the text box can be changed into a drop zone using the red button; now a ROOM can be selected using the search function and can be dragged into the drop zone. The following screen-shot shows an example configuration, in which the room "ALARM CENTRAL" should be opened at every condition change of the object "ALARM", in fact exclusively on the client devices that are currently running with the chosen user:



The configuration of EVENTS for single USERS is very similar to the configuration of EVENTS for objects of type CLIENT (please refer to chapter 11.7 of this manual); meanwhile in that case events are limited to one client device, in case of the user the events are executed on all client devices on which the user is currently logged in..

USER GROUPS AND PERMISSIONS

Through the properties window of an USER GROUP it is possible to define - beside its name - the different users that should belong the group; even here the users can be localized over the search function and then connected to the section "USERS BELONGING TO THE CURRENT USER GROUP" via drag & drop:



Furthermore, each USER GROUP can be connected to one or several objects of the VISUALISATION; this has to the consequence that these objects from now on belong to the USER GROUP and consequently can only be seen by users that belong to the chosen group. The allocation of objects takes place over the search function, using drag & drop into the section "OBJECTS POSSESSED EXCLUSIVELY BY THE CURRENT USER GROUP".

After the allocation of an object to a USER GROUP, the object won't be visible / accessible to users of other groups any longer. Therefore is very important to pay attention on how objects are assigned to groups, in order to avoid situations in which certain objects or even rooms become inaccessible.

REMOTE ACCESS

INTRODUCTION

This chapter explains how to configure the network for allowing remote access to **HORIZONE SERVER** and therefore be able to check out the VISUALISATION also from outside of the building.

REMOTE ACCESS THROUGH INTERNET

To enable the remote access to **HORIZONE SERVER** through internet, please follow the steps below:

The parameter “GATEWAY” in the network settings of **HORIZONE SERVER** must be set to the IP address of the installed internet router.

On the installed internet router “Port Forwarding” rules must be created. Ports 443 and 22 (protocol type “TCP“) must be forwarded to the IP address given to **HORIZONE SERVER** in the local network.

If the ports 443 or 22 are already used for other remote accesses, then the port forwarding rules can be created using other ports.

Example: desired access through URL https://www.myurl.com:1443

Rule to be created: External port 1443 Internal port: 443 Protocol: TCP
Target IP address: IP address given to **HORIZONE SERVER** in the local network

For detailed information on setting up a Port Forwarding rule, please refer to the documentation of the installed internet router.

Symbols

	Hint
	Warning

Index revisions

Date	Document ref	Comments
06/04/2017	IN00B02WEBFI00070101	First issue
06/06/2017	IN00B02WEBFI00070102	Add new screenshot, minor corrections
10/11/2017	IN00B02WEBFI00070102	Minor corrections

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