Application note

Room Control and Door Entry Solution interoperability

Interoperability of homeLYnk with 2N Door Entry Solution

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Safety Information

Important Information

Read these instructions carefully before trying to install, configure, or operate this software. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER
DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING
WARNING indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

⚠ CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

NOTICE
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Safety Precautions

⚠WARNING
HAZARD OF INCORRECT INFORMATION • Do not incorrectly configure the software, as this can lead to incorrect reports and/or data results. • Do not base your maintenance or service actions solely on messages and information displayed by the software. • Do not rely solely on software messages and reports to determine if the system is functioning correctly or meeting all applicable standards and requirements. • Consider the implications of unanticipated transmission delays or failures of communications links. **Failure to follow these instructions can result in death, serious injury, or equipment damage.**

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1 Introduction

1.1 homeLYnk with 2N Door Entry Solution (DES)

Buildings' systems for direct control of light/blind/heating and metering of energy are mostly independent from installed DES. 2N Door Entry Solutions are used for audio video communication and access control for visitors and residents. Different control access to each of these systems causes mixed feeling for users, as they have to deal with different visualization for each system.

This application note describes interoperability of Schneider Electric room control system based on homeLYnk controller with door entry solution based on 2N company offer via internet protocol, supported by unified visualization. Thanks to this solution you will be able to visualize data from building automation bus systems such as KNX, Modbus, BACnet, to control door access and telephony (see chapter 4), to control Inputs/Outputs on DES products, to control time profiles and to read out DES system status (see chapter 5). All functions dedicated to room control and DES can be controlled from one intuitive and easy to understand visualization.

Note 1: U.motion Client Touch Panels support Room Control Visualization only (See table 1).

Competencies

This document is intended for readers who have basic experiences with integration of home automation systems and have been trained on homeLYnk, spaceLYnk products and have knowledge of 2N DES. Integration should not be attempted by someone who is new to the installation of either product.

System prerequisites

Product	Art. no.	SW Version	Download	
homeLYnk	LSS100100	1.3.1	http://www.schneider-electric.com	🌐
2N® Helios IP Verso	91550101	2.13.0	http://www.2n.cz/en/products/intercom-systems/ip-intercoms/helios-ip-verso/downloads/	🌐
2N® Indoor Touch	91378365	1.6.4	http://www.2n.cz/en/products/intercom-systems/smart-extensions/indoor-touch/downloads/	🌐

2 Topology

Picture 1 shows example of possible solution topology. The most of depicted devices are IP based (2N Door Entry Solution or U.motion Client Touch Panel). System is expandable with field bus systems like KNX or Modbus. Take into consideration limitation of each sub system.

Picture 1 –Solution topology

2.1.1 Limits

KNX

- Up to 15 IP areas
- Each area can have up to 15 IP lines
- Each twisted pair line can have up to 64 devices (can be extended with up to 3 repeaters to 256 KNX devices per line)

Theoretical limit of the project size results in 65535 devices.

Modbus

- Modbus RTU up to 31 slaves connected to one homeLYnk as a master
- Modbus IP up to 100 slaves connected to one homeLYnk as a master

homeLYnk

- homeLYnk doesn't have strict number of connected users at once. Its operation depends on complexity of the project and other usage of the device – gateway, scripting, visu etc.
- Always observe homeLYnk CPU/IO load what should fall below 0,7

CPU/IO: 0.00 0.01 0.05, **Memory**: 12%, **KNX/TP**: **OK**

U.motion Client Touch Panel

Number of of U.motion Client Touch Panels (U.motion CTP) is related to the limit of homeLYnk. U.motion CTP only displays homeLYnk's web server.

2N® Indoor Touch

- No limitation in units count
- 3 units of 2N® Indoor Touch per 2N® Helios IP in unicast mode
- Unlimited units of 2N® Indoor Touch per 2N® Helios IP in multicast mode (application Helios IP Mobile v.4 required)
- Gigabit (1Gb/s) network required

2N® Helios IP Verso

- No limitation in units count
- Max. 2000 users

2.2 System description

Room Control - Room control is based on homeLYnk's visualization. Visualization can be displayed in most client devices with a web browser – such as mobile phones and tablets. Thanks to them, you can control/monitor whole building installation. homeLYnk as a controller allows you to integrate more protocols and systems such as KNX, Modbus, BACnet etc.

Room control covers:

- Control of lights, shutters, dimming actuators
- Control of Heating/Ventilation/Air Condition (HVAC)
- Display of values from energy meters – data or trends
- Data from internet or IP enabled devices – Weather forecast, Streaming music players, IP cameras

Supervisor I/O – Supervisor of Inputs and Outputs is realized via transferring of information through systems - from 2N Entry Door Solution to homeLYnk. Information proceeds via scripting in homeLYnk. Obtained data can be afterwards used for Room Control.

Supervisor I/O is described in 2N Door Entry Solution API.

Voice over SIP - The Session Initiation Protocol (SIP) is an IP communications protocol for signaling and controlling multimedia communication sessions. The most common applications of SIP are in internet telephony for voice and video calls. SIP is common open IP based protocol for modern DES.

Video stream over IP network – Allow to transmit stream from IP cameras.

Video displaying – Allow to display video IP stream.

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	U.Motion Client Touch Panel	2N® Helios IP Verso	2N® Indoor Touch	2N® Helios Mobile
Room Control	✓		✓	✓
Supervisor I/O	✓	✓	✓	✓
Voice over SIP		✓	✓	✓
Video stream over IP network		✓		✓
Video displaying			✓	✓

Table 1

2.2.1 Explanation of IP Telephony Terms

Following information is useful for people setting properties of the IP network.

- **SIP (Session Initiation Protocol)** – is a phone call signaling transmission protocol used in IP telephony. It is primarily used for setting up, terminating and forwarding calls between two SIP devices (the intercom and another IP phone in this case). SIP devices can establish connections directly with each other (Direct SIP Call) or, typically, via one or more servers: SIP Proxy and SIP Registrar.

- **SIP Proxy** – is an IP network server responsible for call routing (call transfer to another entity closer to the destination). There can be one or more SIP Proxy units between the users.

- **SIP Registrar** – is an IP network server responsible for user registration in a certain network section. As a rule, SIP device registration is necessary for a user to be accessible to the others on a certain phone number. SIP Registrar and SIP Proxy are often installed on one and the same server.

- **RTP (Real-Time Transport Protocol)** – is a protocol defining the standard packet format for audio and video transmission in IP networks. **2N Helios IP** Intercoms uses the RTP for audio and video stream transmission during a call. The stream parameters (port numbers, protocols and codec) are defined and negotiated via the SDP (Session Description Protocol).

The **2N Helios IP** intercoms support three ways of SIP signaling:

- via the **User Datagram Protocol** (**UDP**), which is the most frequently used unsecured signaling method
- via the **Transmission Control Protocol (TCP)**, which is less frequent, yet recommended unsecured signaling method
- via the **Transaction Layer Security (TLS)** protocol, where SIP messages are secured against third party monitoring and modification

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2.3 2N Portfolio introduction

2N IP intercom portfolio consists from different intercom units that are made to provide audio and video communication together with access control. Wide portfolio enables to cover requirements from residential installations through office buildings up to areas with need for anti vandal solutions.

In combination with 2N indoor answering unit 2N® Indoor Touch it offers complete solution for door communication.

Please consider, that some solutions will need additional 2N licenses:

- **Advanced Integration License** - Extended lock control (call activation, quick dial button activation, time profiles for locks), picture to email, auto updates (TFTP), HTTP commands for lock control
- **Advanced Video License** - RTSP streaming server

2.3.1 IP Intercoms

2N® Helios IP Verso

The 2N® Helios IP Verso is a security intercom that, thanks to its modularity, can be used everywhere you need to choose a specific function and purpose of use. For example, you can choose an HD camera with an infrared light and night vision or a smart card reader. It can not only be easily integrated into your current camera and monitoring system, but thanks to programmable scripts, also with KNX installation. Furthermore, the whole system can be also used as a security component to protect the building

2N® Helios IP Force

The 2N® Helios IP Force is an exceptionally sturdy IP intercom that will ensure you effortless communication with the people coming to your door, in combination with reliable security for your building entrance. It supports voice and video communication using the SIP protocol and can deal with the most demanding conditions.

2N® Helios IP Vario

The 2N® Helios IP Vario is a door intercom that perfectly combines the most advanced technology with a unique design. It is a variable communication system supporting both voice and video transmission. And all that in an IP environment using the SIP protocol.

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2.3.2 2N® Indoor Touch

Together with the portfolio of intercoms in the 2N Helios IP range, the elegant 2N® Indoor Touch internal touch panel constitutes an integrated, professional door communication system. The 2N® Indoor Touch has highly intuitive control – by merely looking at the display, you can see who is standing at your door. It's just as easy to display missed calls, and when you want to rest, all you have to do is set the status to "Do not disturb". Using the buttons on the touch screen, you can not only initiate a conversation with your visitor or neighbor, but you can even unlock the door or turn on the lights in the corridor or entry hall.

2.4 homeLYnk introduction

homeLYnk is the key brick to provide a complete solution in the field of home automation delivering flexibility, simplicity and efficiency.

homeLYnk provides an interface to control all building functions. It can be used from local and mobile devices such as smart phones, tablets, PCs and touch panels.

It also enables to monitor and control of:

- Lights, blinds, heating, and cooling
- Energy metering
- Schedulers
- Trends
- IP cameras

Benefits

homeLYnk's GUI is a comprehensive application for home automation which can easily achieve the relevant energy awareness required by the new building regulations.

The control functions improve comfort, security and flexibility for the residents and owners. The system is complete, open, and scalable. Installation and programming is easy thanks to repetitive configuration.

 The GUI can be designed to customers' individual needs – a real differentiation factor and added value to residential programs.

2.4.1 homeLYnk interfaces and usage

1. Gateway between systems – KNX, BACnet, Modbus, IP world, HVAC, etc.
2. Visualization on PC/Tablets and Smart phones (via web server)
3. Logic controller (LUA scripting, Logic, Date and time, …)
4. KNX commissioning, KNX Line coupler both for Twisted Pair (TP)/IP
5. Build-in web server no additional software needed

KNX

- KNX is a standardized, worldwide used (EN 50090, ISO/IEC 14543), OSI-based network communications protocol for intelligent buildings. The KNX standard is administered by the KNX Association
- homeLYnk is able to operate with TP BUS and IP telegrams for big installations

BACnet

- BACnet is a communications protocol for building automation and control networks. It is an ASHRAE, ANSI, and ISO 16484-5 standard protocol
- BACnet was designed to allow communication of building automation and control systems for applications such as heating, ventilating, and air-conditioning control, lighting control, access control, and fire detection systems and their associated equipment. Proper communication between building automation devices is critical for maximizing building energy efficiency, indoor air quality, and other aspects of "green" buildings
- homeLYnk serves like a BACnet server with up 150 BACnet points

Modbus

- Modbus is a serial communications protocol originally published by Modicon (now Schneider Electric) in 1979 for use with its programmable logic controllers (PLCs). Simple and robust, it has since become a de facto industrial standard communication protocol, and it is now a commonly available for connecting industrial electronic devices such as power meters, RTCU, HVAC devices etc.
- homeLYnk serves either as a Modbus slave or master

IP world

homeLYnk is able to communicate with standard IP devices.

This feature can be used with 3rd party products or services such as:

- Sonos audio system
- Phillips HUE RGB Lamps
- Yahoo Weather forecast
- Sending emails

Picture 2- Sonos IP Audio System

All available information can be found in released

Application Notes on the web www.schneider-electric.com:

- AN011_Email SMS and FTP in homeLYnk
- AN012_homeLYnk and SONOS icons and project
- AN013_Fetch weather forecast to homeLYnk
- AN020_Philips Hue Lamp controlled from homeLYnk

RS232

Standard RS 232 interface is also available on homeLYnk. RS232 is mostly used in control of AV and HVAC.

All available information can be found in released Application Note:

- AN010_RS232 control with homeLYnk

Picture 3 - RS232 Controlled Barco beamer

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2.5 U.motion Client Touch Panel introduction

U.motion Client Touch is a client touch panel for the supervision and visualization of home & building automation systems, which have been realized on the basis of the worldwide KNX standard with homeLYnk. U.motion Client Touch connects itself via network with a homeLYnk and represents its graphical contents. The configuration and control of the U.motion Client Touch can be done locally on the device or remotely through its web interface, which can be displayed within a common browser (from all supported devices / operating systems)

Benefits of U.motion CTP with homeLYnk:

- Reliable wired connection
- One, easy to find location for control of your house/building
- Unified visualization design from Smart phone to Touch Panel.
- Make the energy savings visible
- Scalable to your needs 10" or 15" screen
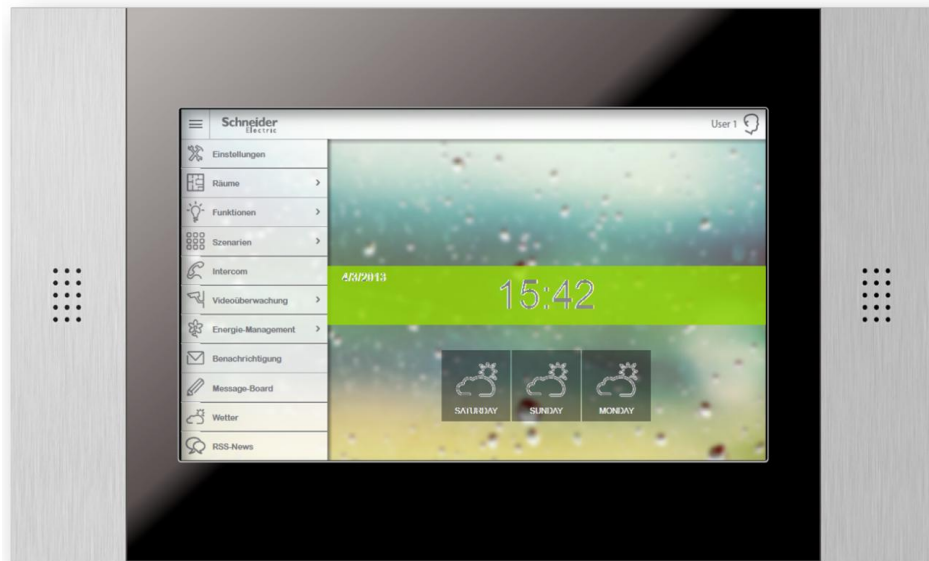
3 SW upgrade

We recommend firmware upgrade to latest firmware version in all devices to avoid any operational issues.

3.1 Upgrade of homeLYnk

For homeLYnk upgrade we recommend to read the

AN028_homeLYnk_ugrade_procedure – homeLYnk upgrade procedure downloadable from www.schneider-electric.com

Note: Please consider possible backward compatibility issues mentioned in above AN.

3.2 Upgrade of 2N devices

3.2.1 Upgrade of 2N® Helios IP Verso

Upgrade of 2N® Helios IP Verso consists of two steps:

1) Login to the device
2) Upgrade of the device

Step 1: Login to the device

a) Open your web browser
b) Connect to device, fill device's IP and login

Step 2: Upgrade of the device

a) Click to **Maintenance**
b) Click to **Upgrade Firmware**
c) Select actual firmware file
d) Click to **Upload**
e) **Wait** until device reboot (The whole upgrading process takes less than one minute)
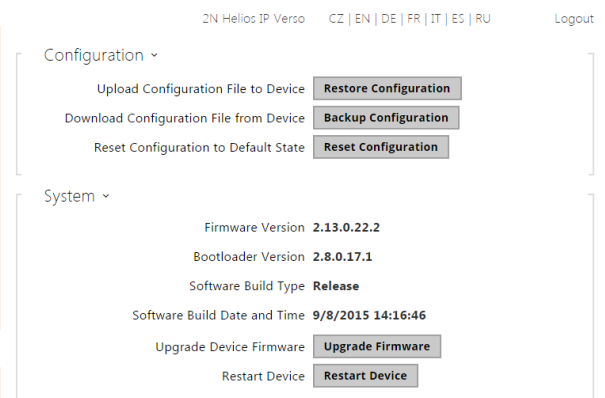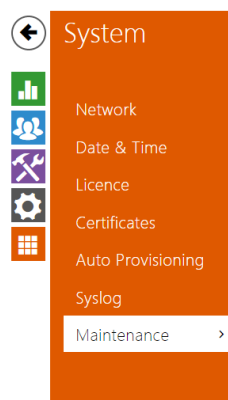
NOTE: FW upgrade does not affect configuration as the intercom checks the FW file to prevent upload of a wrong or corrupted file.

2N® Helios IP Verso is now upgraded.

3.2.2 Upgrade of 2N® Indoor Touch

2N® Indoor Touch can be upgraded via an SD card only. The firmware packet always includes the latest OS version, a Launcher and 2N® Helios IP Mobile application.

Upgrade of 2N® Indoor Touch consists of two steps:

1) Upload firmware to SD card
2) Reset the device

Step 1: Upload firmware to SD card

a) Get a **microSD** (SDHC) card with maximum capacity of 16 GB and with the FAT32 file system
b) **Unpack and save** the *.ZIP download (actual firmware package**) into the SD** card root directory.
c) **Insert the SD card** in the SD card slot on the left side of 2N® Indoor Touch

Step 2: Reset the device

a) Press the backside Reset button shortly **OR** click the Reboot button in the configuration section of the introductory screen
b) Having detected correct firmware files, 2N® Indoor Touch invites you to **confirm upgrade via a touch screen**. The upgrade process is also indicated by an RGB LED on the device front
c) Having completed upgrade, remove the SD card and click on the display to restart the system.

Caution:

- The device upgrade takes approximately 10 minutes or more.
- The first startup after successful upgrade may take a few minutes.
- The factory values can be reset automatically in some upgrade types.

2N® Indoor Touch is now upgraded.

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4 Elementary configuration

This chapter describes configuration of homeLYnk, U.motion and 2N devices for their elementary interoperability. At the end of this chapter you will be able to call from Helios to Indoor Touch and vice versa and have consistent visualization displayed on Indoor Touch for SIP telephony and Room Control.

4.1 Configuration of homeLYnk

Before you start with configuration of homeLYnk related to 2N, check that following steps were done:

- Set of IP address
- Set of IP/TP mode
- Import of KNX objects

File archive delivered with this Application Note contains complete Demo project, which can be imported. This Demo project is based on virtual KNX addresses and serves as an illustration of graphical interface and sample of 2N API interoperability script.

4.1.1 "Visualization configuration" of homeLYnk

Custom font

Assigning of Roboto Regular like custom font will change graphic design of font in Visualization – consistent with 2N Indoor Touch.

Change of custom font consists of two steps:

1) Import Roboto Regular font
2) Change custom font

Step 1: Import Roboto Regular font

a) Open your web browser
b) Connect to device, fill device's IP address (Default IP: 192.168.0.10)
c) Login to **Configurator** (Default login: admin, Default password: admin)
d) Click to **Vis. Graphics** and choose **Fonts** tab
e) Click to **Add font**
f) Choose Roboto-Regular.ttf
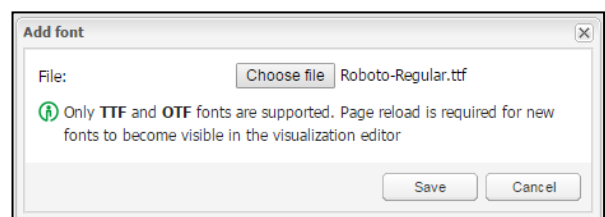
g) Click **Save**

Step 2: Change custom font

a) Go to **Configurator**

b) Click to **Vis. Configuration** icon

c) Set **custom font** as Roboto-regular

Custom font:	Roboto	▼

Custom font for Visualization is now changed.

PC/Tablet view

Change of PC/Tablet view:

a) Go to **Configurator**

b) Click to **Vis. Configuration** icon

c) Set **PC/Tablet view** as Align to top left

PC/Tablet view:	Align plans to top left, no size limit	▼

Visualization can be now displayed without borders on Indoor Touch.

Use dark theme

Change of color theme for visualization:

a) Go to **Configurator**

b) Click to **Vis. Configuration** icon

c) Check **Use dark theme** as Align to top left

Use dark theme:	☑
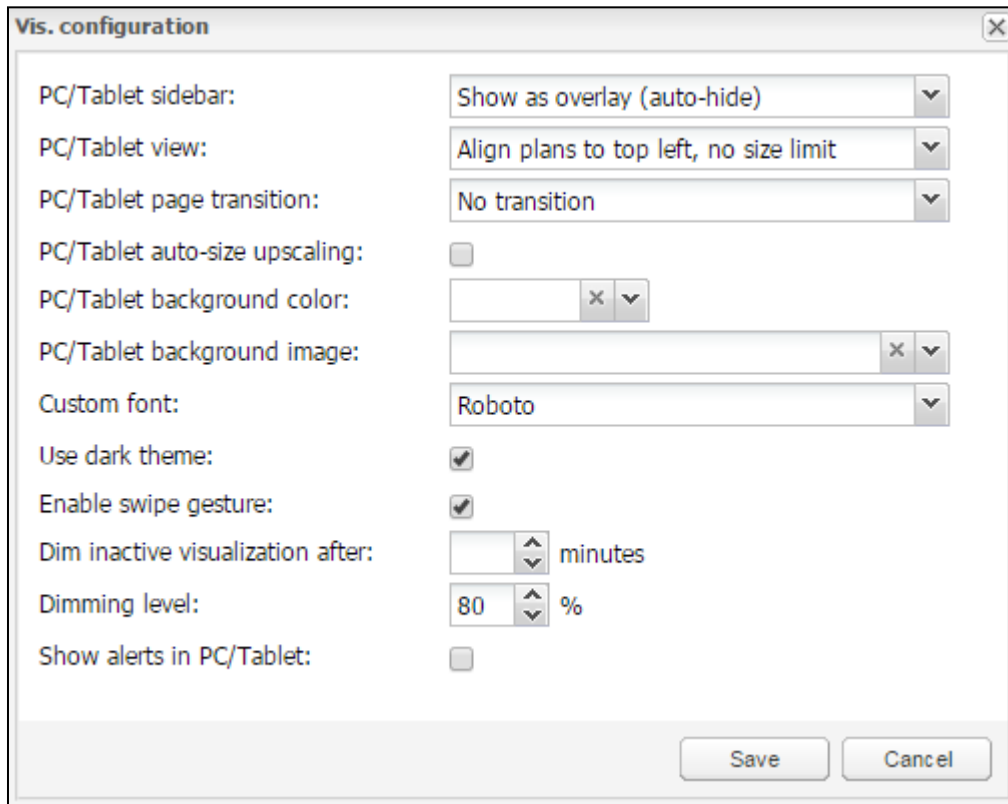
Visualization is now displayed in dark colors, which are more suitable for black touch panels.

How to move between plans

There are two possibilities how to navigate between created Plans.

- Via Swipe gesture – This feature have to be enabled in Vis. Configuration.
- Via Sidebar – We recommend to set sidebar as "Show as overlay (auto-hide)"

Recommended setting of Vis. configuration

4.1.2 Import of SE pre-made 2N graphic for visualization

Pre-made SE 2N graphic packages are useful for visualization, which will be displayed on 2N® Indoor Touch.

Pre-made SE graphic and build-in 2N® Indoor Touch graphic have matching design.

Import of pre-made SE 2N graphic consists of two steps:

1) Import of Icons
2) Import of Images

Step 1: Import of Icons

a) Open your web browser
b) Connect to device, fill device's IP address (Default IP: 192.168.0.10)
c) Login to **Configurator** (Default login: admin, Default password: admin)
d) Click to **Vis. Graphics**
e) Click to **Icons** tab
f) Click to **Add icons**
g) Choose Icons_BB_Graphic_pack.zip
h) Click **Save**

Step 2: Import of Images

a) Go to **Configurator**
b) Click to **Vis. Graphics**
c) Click to **Images / Backgrounds** tab
d) Click to **Add images**
e) Choose Images_BB_Graphic_pack.zip
f) Click **Save**

SE 2N graphic is now available in the device.

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4.1.3 Create visualization

Visualization suitable for 2N® Indoor Touch needs specific settings:

Resolution of the plan

1024 x 534

Background color of the plan

We recommend using Black as Background color, as SE 2N graphic

packages are tuned for black background.

Recommendation Vis. Structure: Sorted by rooms

We recommend creating plans, which have structure based on Rooms.
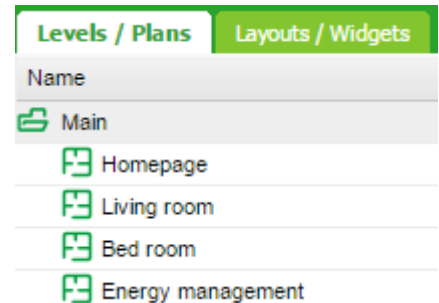
Creation of Visualization

Creation of Visualization consists of two steps:

1) Create Vis. structure
2) Create Visualization

Step 1: Create Visualization structure

a) Open your web browser
b) Connect to device, fill device's IP address
   (Default IP: 192.168.0.10)
c) Login to **Configurator** (Default login: admin,
   Default password: admin)
d) Click to "**plus**" symbol and **add plan**
e) Edit setting to your needs, but take into
   consider points above (resolution, background)
f) Click to **Save**
g) Repeat steps d)-f) if needed
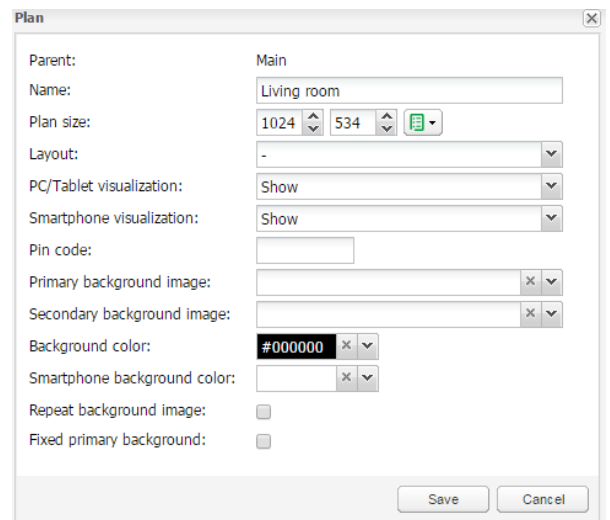
Step 2: Create Visualization

     a) Go to **Visualization tab**

     b) Select **Plan** you want to edit

     c) Click to **Unlock current plan for editing**

     d) **Add objects** you want to use in Visu

     e) Click to **Save and reload plan**

Visualization for 2N® Indoor Touch is now prepared.

Example of Homepage:
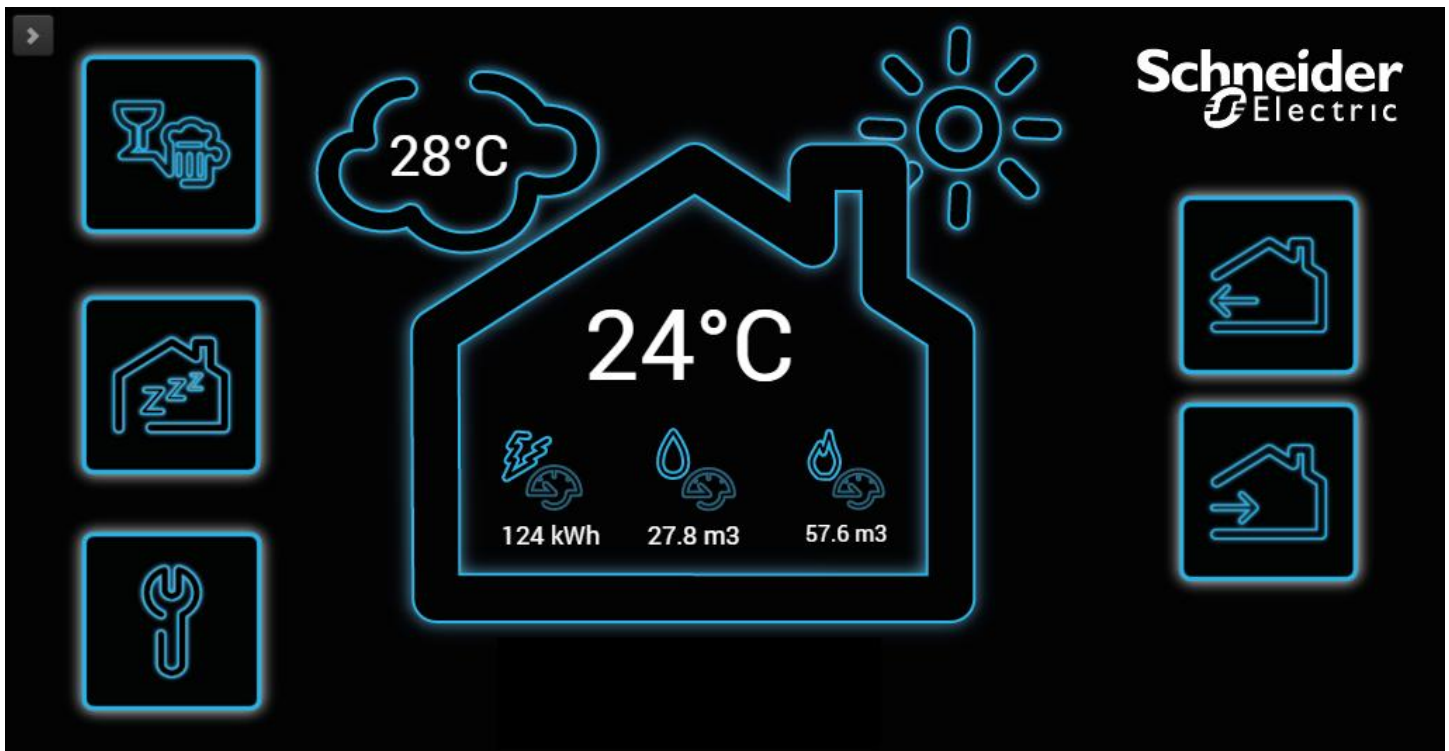
Example of Room Visualization:

Example of Facility page:

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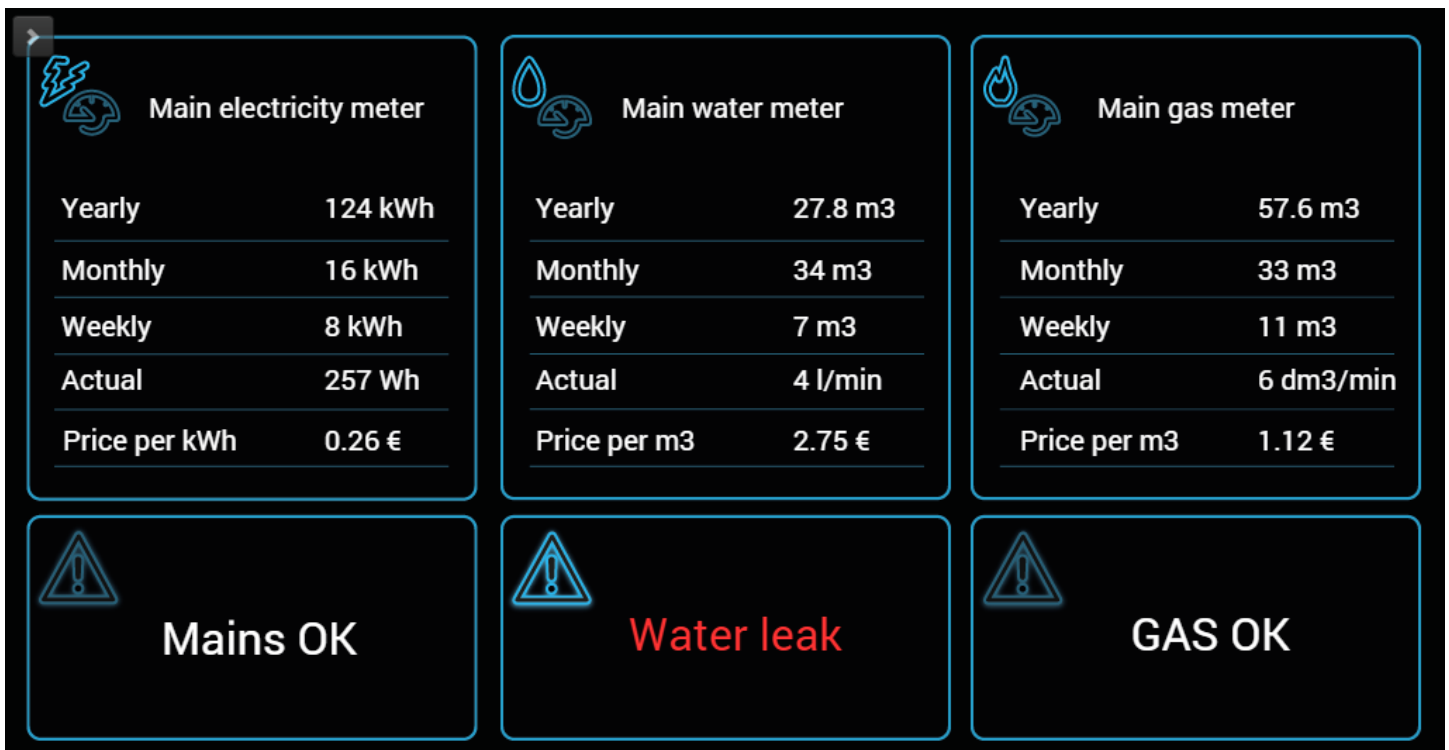
4.2 Configuration of 2N Devices

4.2.1 How to configure 2N® Helios IP intercom

Configuration of 2N® Helios IP intercom consists of five steps:

1) Create "Phone Number"
2) Activate "Automatic Answer"
3) Change SIP 1 Domain and set SIP Proxy
4) Enable HTTP API
5) Create API Account

Step 1: Create "Phone number"

a) Open your web browser
b) Connect to device, fill device's IP address and login
c) Go to **Directory**
d) Enable position by ticking **checkbox**
e) Fill name and Phone Number (For pop-up help hold mouse cursor in the entry field)

Step 2: Activate "Automatic Answer"

a) Go to **Services**
b) Click **Phone**
c) Go to **Calls** tab
d) Tick **Automatic Pickup** checkbox (SIP1)

Step 3: Change SIP 1 Domain and set SIP proxy

a) Go to **Services**
b) Click **Phone**
c) Go to **SIP 1** tab
d) Fill **Domain** entry field with IP address of IP intercom
e) Enter **Proxy address** of IP intercom and fill Proxy **port** (5060 by default)

Step 4: Enable HTTP API

a) Go to **Services** ⚒

b) Click **HTTP API**

c) Go to **Services** tab

d) Enable **API** which you want to use

Step 5: Create API account

a) Go to **Services** ⚒

b) Click **HTTP API**

c) Go to **Account 1** tab

d) Fill **User name and Password for API** access

e) Set **User Privileges** which you want to use

2N® Helios IP intercom is now prepared for SIP calls and API interface is enabled.

4.2.2 How to configure 2N® Indoor Touch

For correct SIP communication with 2N® Helios IP Intercom no specific settings are required if you respect Helios settings described in chapter 4.2.1.
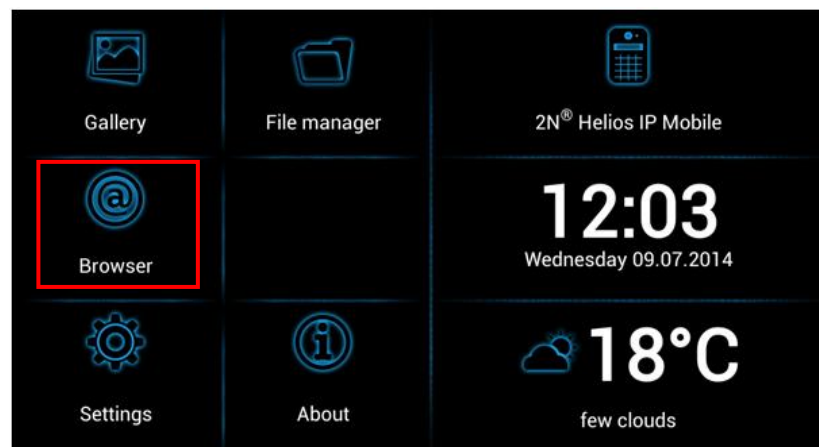
Open 2N® IP Mobile APP in Indoor Touch. All available devices are already listed.

4.3 How to display Room Control in 2N® Indoor Touch

Open browser and fill IP address of the homeLYnk and activate full screen mode of the browser by pressing

symbol on bottom right of the screen.

2N app will automatically pop-up in case of SIP call.

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4.4 Configuration of U.motion Client Touch Panel

For more details see AN029_U.motion Client Touch Panels 10" and 15".

U.motion Client Touch Panel 15"
MTN6260-0315

U.motion Client Touch Panel 10"
MTN6260-0310
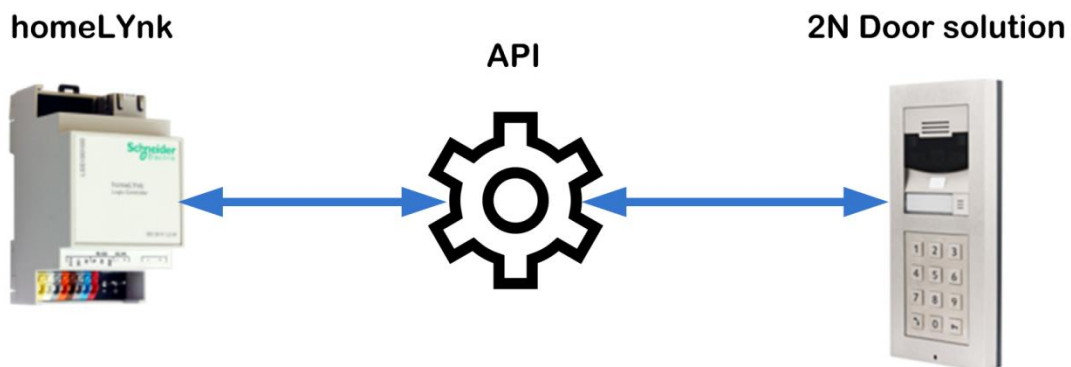
5 Advanced 2N functions

5.1 API (Application Programming Interface) Commands

API serves for communication with variety of IP devices using simple commands.

5.2 Verified API Commands in this document v1.0

In attached Demo project or 2N API scripting backup verified API commands are used:

- System info
- System status
- Switch status
- IO status
- Phone status
- Call status

5.3 How to use API Commands

All API commands scripts are attached in "2N API scripting backup".

**They are deployed in following script tabs:**

- Event-based (script "2N API Trigger")
- User libraries (script "user.2NAPI")

API configuration consists of four steps:

1) Restoring scripts
2) Setting of user libraries script
3) Editing of "2N API Trigger" script
4) Creating objects for visualization

Step 1: Restoring scripts

a) Open your web browser
b) Type IP address of your homeLYnk
c) Click **Configurator**
d) Click **Scripting**
e) Click **Tools**
f) Select **Restore scripts**
g) Choose "scripting-backup-2N-API.tar.gz"
h) Click Save
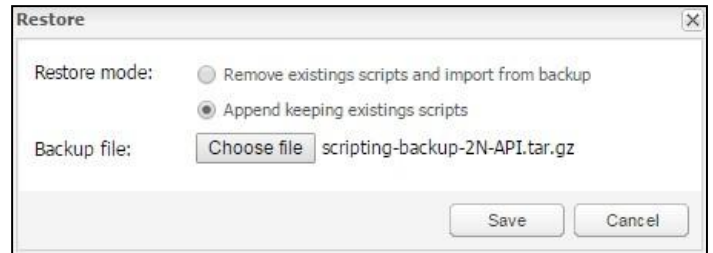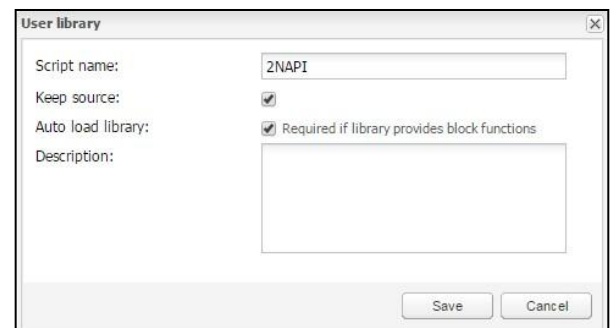
Note: Choose "Append keeping existing scripts" to preserve existing scripts in your homeLYnk

Scripts are now restored.

Step 2: Setting of user libraries script

a) Click **Scripting** (*Configurator ›› Scripting*)
b) Click **User libraries**
c) Click **user.2NAPI** script
   - **User library** pop up window opens
d) Check if "**Auto load library**" function is enabled

Step 3: Editing of 2N API Trigger script

a) Click **Scripting** (*Configurator ›› Scripting*)

b) Click **Event - based**

c) Click **2N API Trigger** script

d) Modify user and psw for API communication matching with API account (See chapter 4.2.1)

e) Modify script if needed

```
Event-based: 2N API Trigger
 1  command = event.getvalue()
 2
 3  params = {
 4      host = "192.168.0.248",
 5      user = "2N",
 6    password = "password",
 7  }
 8
 9  if 10 == command then
10      result, err = Helios2NAPI.system.info{ host = params.host }
11  elseif 11 == command then
12      result, err = Helios2NAPI.system.status(params)
13  elseif 40 == command then
14      result, err = Helios2NAPI.switch.status(params)
15  elseif 50 == command then
16      result, err = Helios2NAPI.io.status(params)
17  elseif 60 == command then
18      result, err = Helios2NAPI.phone.status(params)
19  elseif 70 == command then
20      result, err = Helios2NAPI.call.status(params)
21  end
22
23  if err then
24      error(err)
25  else
26      log(result)
27  end
```

Step 4: Creating objects for visualization

a) Click **Visualization** (*Configurator ›› Scripting*)

b) Click to **Plan** containing "Trigger objects"

c) Create Object sending relevant **fix value** (from script above) to group address with 2N API trigger Event – based script

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5.3.1 Available API Commands for commissioning

system.restart – tool for restart system remotely

- Use case: Remote restart of system especially in case of nonstandard behavior of IP intercom

switch.status – status of relays built-in in the IP intercom

- Use Case: Check proper response of relays in the IP intercom

switch.ctrl - control of relays built-in in the IP intercom

- Use case: Check proper function of relays by switching them ON/OFF

io.status – status of built-in digital inputs/outputs

- Use case: Check proper function of digital I/O

io.ctrl – control of built-in digital inputs/outputs

- Use case: Check proper function of digital I/O

call.dial – call SIP number XXX

- Use case: Check proper function of SIP telephony by dialing SIP number

call.answer – answer SIP call

- Use case: Check proper function of SIP telephony by establish SIP session

call.hangup – end SIP call

- Use case: Check possibility to end ongoing SIP session

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5.3.2 Available API Commands for Facility manager

system.status – [systemTime][upTime]

- Use case: Get knowledge of real system time and uptime of IP intercom

switch.status – status of relays built-in in the IP intercom

- Use Case: Check status and response of IP intercom relays

switch.ctrl - control of relays built-in in the IP intercom

- Use case: Remote control of relays build-in in the IP intercom

io.status – status of built-in digital inputs/outputs

- Use case: Check actual status of digital I/O

io.ctrl – control of built-in digitail inputs/outputs

- Use case: Remote control of build-in I/O

call.dial – call SIP number XXX

- Use case: Dial SIP number

call.answer – answer SIP call

- Use case: Establish SIP Session by answering incoming call

call.hangup – end SIP call

- Use case: End SIP Session by hangup proceeding call

6 Appendix

6.1 Glossary

The following table describes the acronyms and defines the specific terms used in this document.

Abbreviation	Description
SE	Schneider Electric
FW	Firmware
SW	Software
TP	Touch Panel
API	Application Programming Interface
Unicast mode	In computer networking, unicast transmission is the sending of messages to a single network destination identified by a unique address
Multicast mode	In computer networking, multicast (one-to-many or many-to-many distribution[1]) is group communication[2] where information is addressed to a group of destination computers simultaneously

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