

2.2

ekinex
CONTROL YOUR LIVING SPACE

Online Services

System Configuration Manual



DELÉGO SERVER

Visualisation webserver

EK-DEL-SRV01 / EK-DEL-SRV01-M

Index

1 Introduction.....	4
1.1 Scope of this manual.....	4
1.2 Conventions.....	4
1.3 Safety information.....	4
1.4 Warnings.....	5
1.5 Copyright.....	5
1.6 Open Source Licenses.....	5
1.7 More information.....	6
2 Cloud services.....	7
2.1 Product registration.....	7
2.2 Remote access.....	8
2.3 Cloud backup.....	9
2.4 Cloud sync.....	10
2.5 Voice control.....	12
2.6 Quick commands on the mobile app.....	13
3 Cloud VPN.....	17
3.1 Introduction.....	17
3.2 Cloud login.....	18
3.3 Service activation.....	19
3.4 VPN creation.....	19
3.5 Connections.....	21
3.6 Starting and stopping the VPN.....	23
3.7 Control with the mobile app.....	24
3.7.1 Requirements.....	24
3.7.2 Owner view.....	24
3.7.3 Installer view.....	26
3.7.4 Notifications.....	27
3.8 Remote VPN Connection.....	27
3.8.1 Installing the Delégo app.....	27
3.8.2 Cloud login.....	28
3.8.3 Accessing the VPNs.....	28
3.8.4 Adding projects.....	31
4 ETS remoting.....	32
4.1 Introduction.....	32
4.2 Use in local network.....	32
4.3 Remote connection.....	33
4.3.1 Cloud VPN.....	33
4.3.2 Local VPN.....	33
5 Weather services.....	34
5.1 Preliminary operations.....	34
5.2 Configuration.....	35
6 Telegram notifications.....	38
6.1 Introduction.....	38
6.2 Preliminary operations.....	38
6.2.1 Creating a BOT on Telegram.....	38

6.3 Configuration.....	38
6.3.1 Creating a BOT on DELÉGO SERVER.....	38
6.3.2 Giving permissions to chats and users.....	39
7 IFTTT.....	40
8 Revision History.....	44

1 Introduction

1.1 Scope of this manual

This document contains all the information for configuring and using the several online services that can empower the local operation of DELÉGO SERVER.

The majority of the described services are based on the EKINEX CLOUD platform, which require the registration (free of charge) of an account to be used; once created, the same account can be used for all the products and applications provided by EKINEX, not only limited to the DELÉGO suite.

The present user manual is part of the suite of application manuals dedicated to the DELÉGO SERVER, available on the section dedicated to this product in the EKINEX website. Before reading this document, it is recommended to consult the following application manuals:

REF	DOCUMENT	DESCRIPTION
[D1]	DOCUMENTATION PLAN	Overview of the application manuals of DELÉGO SERVER
[D2]	GENERAL FUNCTIONS - APPLICATION USER MANUAL	General installation manual of the webserver
[D3]	KNX - FIELDBUS CONFIGURATION MANUAL	Configuration manual for KNX technologies.

These documents are available for download in the area of the EKINEX website dedicated to the webserver.

1.2 Conventions

The following conventions are used in this manual:

[KEY]	The keyboard keys that the installer must press are shown in square brackets
<i>Courier</i>	Software messages generated by the DELÉGO SERVER configuration software are reported in the "courier" font
<i>Function name</i>	Names of buttons, table fields or other graphic elements of the user interface of the DELÉGO SERVER configuration software are shown in italics
	Information note
	Important note that requires particular attention

1.3 Safety information

DELÉGO SERVER is a product intended for trained and specialized personnel only; anyone who interacts with the device must first read this documentation, especially this safety information. This document supplements and does not replace any legislation or legal directives on safety.

The device has been developed following the safety regulations currently in force; however, it is not possible to exclude with certainty possible damage or interactions with other devices during its operation. The device complies with EMC guidelines and harmonized European standards; any modifications to the device may affect EMC compatibility.

The supply voltage must be strictly within the range indicated in the GENERAL FUNCTIONS application manual and on the device; risk of fire or explosion if powered outside this range. The CE declaration of conformity of the device can be requested from EKINEX®, at the references on the site www.ekinex-delego.com.



In compliance with Directive 2002/96/EC the DELÉGO SERVER electronic device must be disposed of in the appropriate facilities and not in the collection of solid urban waste.

1.4 Warnings

- This application manual is aimed at installers, system integrators and designers.
- The assembly, electrical connection, configuration and commissioning of the appliance can only be carried out by specialized personnel in compliance with the applicable technical standards and the laws in force in the respective countries
- Opening the appliance case causes the immediate interruption of the warranty period
- In the event of tampering, compliance with the essential requirements of the applicable directives for which the appliance has been certified is no longer guaranteed.
- EKINEX defective appliances must be returned to the manufacturer at the following address:
Ekinex S.p.A. Via Novara 37, 28010 Vaprio d'Agogna (NO)

1.5 Copyright

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This application manual, the DELÉGO SERVER software and the DELÉGO iOS and Android apps are subject to copyright; all rights are reserved. Copying, reproduction, translation and/or modification, even partial, are expressly prohibited unless approved in writing by EKINEX®.

1.6 Open Source Licenses

DELÉGO SERVER contains open source software, such as the Linux operating system and its kernel. These software components are subject to various open-source licenses, including:

- GNU General Public License (GPL), <https://www.gnu.org/licenses/gpl-2.0.html>
- GNU Lesser General Public License (LGPL), <https://www.gnu.org/licenses/lgpl-2.0.en.html>

If you own a product, for a period of 3 years from the last production date, you can request from EKINEX the source code of the software components licensed under the GNU General Public License (GPL) or the GNU Lesser General Public License (LGPL), and use, distribute and modify them in accordance with the respective licenses.

EKINEX cannot be considered responsible in any way for the source code thus distributed, which is provided without guarantees. EKINEX cannot also be held responsible for any damage or consequence resulting from modifications (additions / removals) made to this software by third parties, unless specifically authorized.

1.7 More information

- For further information on the product, you can contact EKINEX technical support® to the e-mail address: support@EKINEX.com or consult the website www.EKINEX.com
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- KNX® ed ETS® are registered trademarks of KNX Association cvba, Brussels

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2 Cloud services

2.1 Product registration

It is possible to register DELÉGO SERVER on Ekinex's cloud to have access to exclusive services (e.g., VPN).



Starting from release 2.7.0 the Ekinex cloud services have been moved to the SETUP section of the administration menu

The first step is to create a free cloud account (if not available). Navigate to

SETUP > EKINEX CLOUD > PRODUCT REGISTRATION

and click REGISTER to be redirected to a page where you can create a new account:

The image shows a screenshot of the Ekinex registration form. At the top, there is a black header with the 'ekinex' logo in white. Below the header, the form is centered on a light gray background. It contains several input fields: 'Email', 'Password', 'Nome', and 'Cognome'. Below these fields are two checkboxes with labels: 'Accetto Privacy Policy del Servizio' and 'Accetto Termini e Condizioni del Servizio'. At the bottom of the form is a blue button labeled 'Registrati'.

Once the credentials are entered, it is possible to associate the current user (the one you entered in DELÉGO SERVER) to your cloud account. It is possible to choose two types of profiles:

OWNER	You will have full rights to DELÉGO SERVER and complete management of services associated with the cloud. It will also be possible to control the functions of DELÉGO SERVER through cloud services and voice assistants
INSTALLER	You will be associated with DELÉGO SERVER as an installation and configuration technician.

It will not be possible to control objects via voice assistants and the cloud.

At this point you can access the following sections:

Cloud services	It allows you to activate cloud-based services on the server, such as remote access without opening ports on the router
Objects sync	Allows you to record graphical supervision components on the cloud, so that they can be controlled through external services, such as Alexa and Google voice assistants

2.2 Remote access

The CLOUD SERVICES page allows you to activate a remote control service, which allows you to access DELÉGO SERVER without opening IP ports on your home router.

By pressing **ACTIVATE** button, a request is made to the cloud, which after a few seconds sends a confirmation email to the requester (the same email with which the cloud section was accessed) containing:

- The address that can be accessed remotely (to be entered directly into the browser, or into the app DELÉGO)
- The expiry date of the service

The remote control service is free. Once the service is active, it is possible to see DELÉGO's SERVER remote Server Address on the following pages:

- **SETUP > NETWORK > REMOTE ACCESS**
- **SETUP > ACCESS WITH QR CODE > REMOTE SETTINGS**

On both pages, where in the absence of this service it would be possible to manually enter the references of your public IP or dynamic DNS, in this case it is not possible to make manual changes, and it is possible vice versa to copy the cloud address, to be used in the browser or in apps, or shared to other users.



Since the cloud address is made up of random characters, and therefore not easy to memorize, it is recommended to share access to DELÉGO SERVER via QR, as illustrated previously in the Setup section.



The DELÉGO SERVER exchanges information with the EKINEX cloud using port 5223. This does not pose any problem for home routers which have all outgoing ports open. If DELÉGO SERVER is used in a network with a firewall also for outgoing purposes (e.g. corporate network), port 5223 must be open for outgoing only purposes for the IP address assigned to the DELÉGO SERVER



As an alternative to the remote accessibility cloud service, you can configure a *port forwarding* in your internet router, redirecting port 443 of the webserver (on the local network) to port 443, or another port of your choice, on the public address.

In this case, it is advisable to enter the public IP address (if static) or the dynamic domain name (dyndns) in the REMOTE ACCESS section of the SETUP > NETWORK page.

Access via a direct port is however not recommended, compared to cloud access, as it is less secure, and is conveyed through so-called "self-signed" SSL certificates present within the webserver, which imply security warnings when accessed with the browser or the app, or - in certain cases - the inability to access remotely.

2.3 Cloud backup

Thanks to this service, a copy of the project's database can be exported on the cloud, and imported into the same DELÉGO SERVER or another one. Besides manual backups, a cloud backup is also saved automatically every day.

In order to use this service, you must be logged to the cloud service of EKINEX in DELÉGO SERVER, as explained in [section 2.1](#).

By accessing the section

SETUP > BACKUP / RESTORE

the following options for cloud backup are available:

EXPORT ON CLOUD	Save a copy of the current project database to the cloud. It is possible to choose between: - Creating a new backup (a max of 2 backups are available). Before exporting the backup on the cloud it must be entered a name of the backup file. - Overwrite an existing backup file.
DELETE FROM CLOUD	Removes a copy of the database from the cloud, in order to leave space for another backup
IMPORT FROM CLOUD	Loads a backup previously saved on the cloud. It is possible to: • Import a backup of the DELÉGO SERVER on which you are connected. • Import a backup of another DELÉGO SERVER associated to the same cloud account.

2.4 Cloud sync

In this section is described how to synchronize DELÉGO SERVER on the cloud and how to identify a series of graphic components that can be controlled by external services, such as Alexa and Google voice assistants.

It is advisable to identify your DELÉGO SERVER with a label and the geographical coordinates of the location where it is installed. This allows an easier identification of the server on the cloud. For any modification, the SYNCHRONIZE button must be pressed. This can be done in the following section:

SETUP > PROJECT SETTINGS

In the configuration pages of an environment, graphic components, a specific technology, a detailed sheet, it is possible to activate the cloud synchronization of one or more graphic components:

Contained objects

	NAME	TYPE	DETAILS	STATE	ENABLE	VISIBLE	CLOUD	FUNCTION
...	living light sud	KNX Widget			☒	☒	☒	Illumination
...	living light east	KNX Widget			☒	☒	☒	Illumination
...	living light strip1	KNX Widget			☒	☒	☒	Illumination
...	living light strip2	KNX Widget			☒	☒	☒	Illumination
...	living light rgb	KNX Widget			☒	☒	☒	Illumination
...	living shutter east	KNX Widget			☒	☒	☒	Shading
...	living shutter sud	KNX Widget			☒	☒	☒	Shading
...	living clima	KNX Widget			☒	☒	☒	Climate
...	generic control	KNX Widget			☒	☒		Technologic
...	kitchen on	Scenarios			☒			Scenarios
...	Living on	Scenarios			☒		☒	Scenarios
...	Living off	Scenarios			☒	☒	☒	Scenarios
...	All shutter Up	Scenarios			☒	☒	☒	Scenarios
...	All shutter off	Scenarios			☒	☒	☒	Scenarios

Drop here objects from search results or tree menu

Living room

</

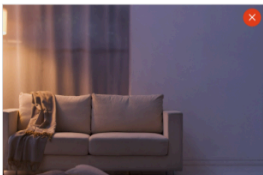
Initially the CLOUD selector is orange, indicating that synchronization with the cloud has not yet occurred.

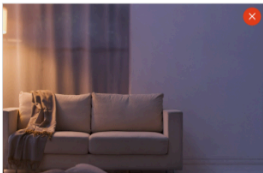
General information

Name: Room 1

Appearance

Template: List

Preview:


Background image:


Enable auto-sizing:
☐

Permissions

Visible: ☒

CLOSE

Objects

	NAME	DETAILS	STATE	VISIBLE CLOUD	FUNCTION
	Lighting 1				Lighting
	Lighting 2				Lighting

Once you have selected all the objects to synchronize, by pressing the cloud indicator in the toolbar again, you can review the summary of the objects, and start the procedure with the SYNC button.

Generic settings

General information

Project name: Delégo Server

SYNC

Remotable objects

	NAME	VOICE	SYNC
	Lighting 1		
	Lighting 2		

At the end of the procedure, all objects will be marked in green, until a new change to their configuration occurs; in the latter case, it will be necessary to perform a synchronization again. The status of the CLOUD indicator in the toolbar – green  or red  – indicates whether or not there are objects to synchronize.

If an object continues to be orange after a synchronization, you need to check its configuration; in the case of composite graphic components, for example, the minimum number of sub-objects essential for its correct management via the cloud may be missing.

2.5 Voice control

Once the graphic components have been correctly synchronized, it is possible to control them via the voice assistants Alexa and Google Assistant, through the management of the smart home of the respective

systems ("Alexa" app in the case of Amazon, "Home" for Google). This chapter will describe the procedure for Alexa.

The first step is to activate the EKINEX option in Alexa or Google Home apps; during the procedure, you are asked to associate the EKINEX cloud account. Then it is necessary to execute a scan to search for new devices. Once the procedure has been completed, it is possible to associate each device to a group, to identify it easily and be able to issue group commands, or refer to it verbally using the name of the group.

At this point, it is possible to control the new functions with your voice, or with the graphics of the Alexa / Google Home app. For a list of specific keywords, please refer to the Alexa and Google Assistant documentation; Here are some examples of the most common requests using Alexa:

Alexa, turn on the light in the kitchen

Alexa, set the living room light to 70%

Alexa, increase the light in the room by 20%

Alexa, tell me the temperature in the living room

Alexa, set the kitchen temperature to 21 degrees

Alexa, run turn everything off

Please note that not all DELÉGO SERVER features can be managed with Alexa and Google Assistant, because the models of these systems are extremely simplified and reductive, compared to the features offered by a KNX system. For this purpose, an indicator has been introduced in DELÉGO SERVER, which highlights whether a specific graphic component / object (or which sub-objects are, in the case of composite graphic components) can be controlled by voice.

Object properties

General information

ID

970

Name:

living clima

Room:

Living room

Function:

Climate

Permissions

Visible:

☒

Cloud

Enable cloud sync:

☒

Voice control:

☒

CLOSE

RESTART

CLONE

KNX addresses

FUNCTIONALITY	VOICE	MAIN	FEEDBACK	ETS ENCODING	MIN	MAX	WRITE	READ	SCHED.	SCEN.	STATE	ICON
Measured temperature			3/1/0	Float value (2 byte)			☒	☒			25.9°	
Thermostat ON/OFF			3/1/12	Switching (1 bit)			☒	☒			Off	
Operating mode			3/1/14	Numeric value 0-255 (1 byte)			☒	☒			Com	
Setpoint - current			3/1/1	Float value (2 byte)			☒	☒			24.0°	
Base setpoint			3/1/2	Float value (2 byte)			☒	☒			24	
Offset			3/1/12	Float value (2 byte)			☒	☒			0	
Setpoint Heating - Comfort			3/1/4	Float value (2 byte)			☒	☒			21	
Setpoint Heating - Precomfort			3/1/6	Float value (2 byte)			☒	☒			18	
Setpoint Heating - Economy			3/1/8	Float value (2 byte)			☒	☒			16	
Setpoint Heating - Off			3/1/10	Float value (2 byte)			☒	☒			7	
Setpoint Cooling - Comfort			3/1/5	Float value (2 byte)			☒	☒			23	
Setpoint Cooling - Precomfort			3/1/7	Float value (2 byte)			☒	☒			26	

living clima



The use of DELEGO SERVER with Amazon or Google voice assistants requires the use of port 8883 for updating states and commands. This is not a problem for home routers with all outgoing ports open. If DELEGO SERVER is used in a network with a firewall (e.g. company network), port 8883 must be open only for the IP address assigned to the DELEGO SERVER.

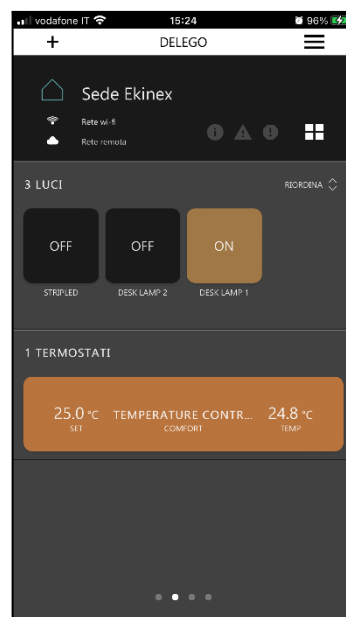


In applications that require the use of voice assistants, the graphic components of type *Other* (*Single value* and *Generic*) cannot be synchronized on the cloud: use only graphics components from *Lighting*, *Climate* and *Motorisation*.

2.6 Quick commands on the mobile app

The DELEGO app for mobile devices provides a set of quick commands accessible directly on the initial graphic page of the app, convenient for multi-system management.

In fact, it is possible to carry out commands and view the most frequently used and/or most important states (for example garage opening and closing) to manage a system without directly accessing the complete graphic interface.



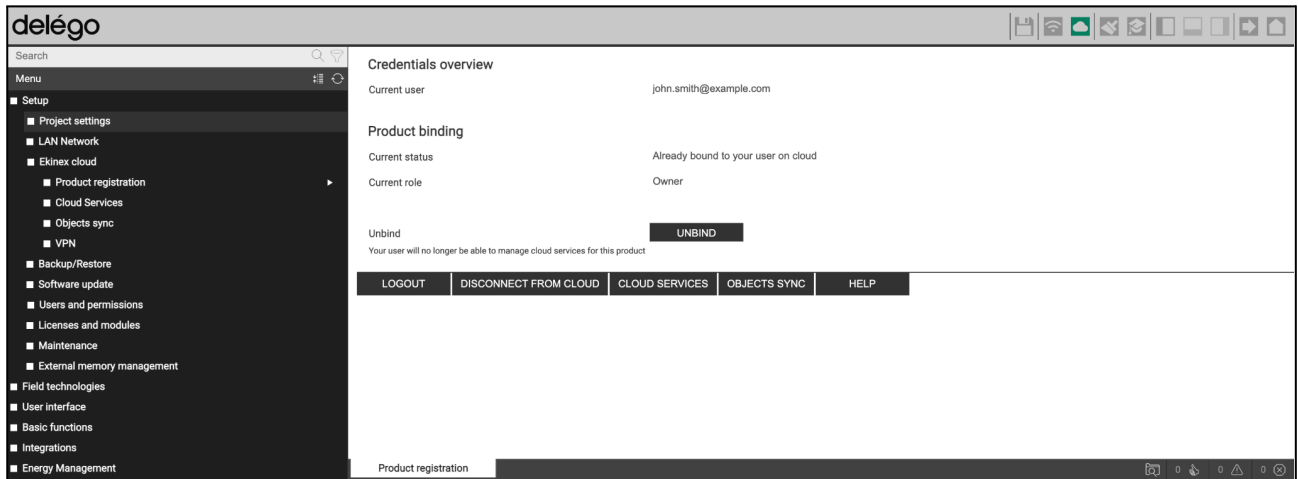
The procedure for configuring shortcuts on the app requires you to follow these steps:

1. On DELEGO SERVER create an EKINEX cloud account to associate all the servers with the DELEGO app that must display the plant or multi-plant configuration. The account must be unique for all servers that belong to a multi-plant configuration. The account may not necessarily be the account with which the remote access service is associated. To create an account, open the Administration view on the DELEGO SERVER, and navigate in the menu bar to

SETUP > EKINEX CLOUD > PRODUCT REGISTRATION

Once the account has been created, the same account can be used to associate other servers.

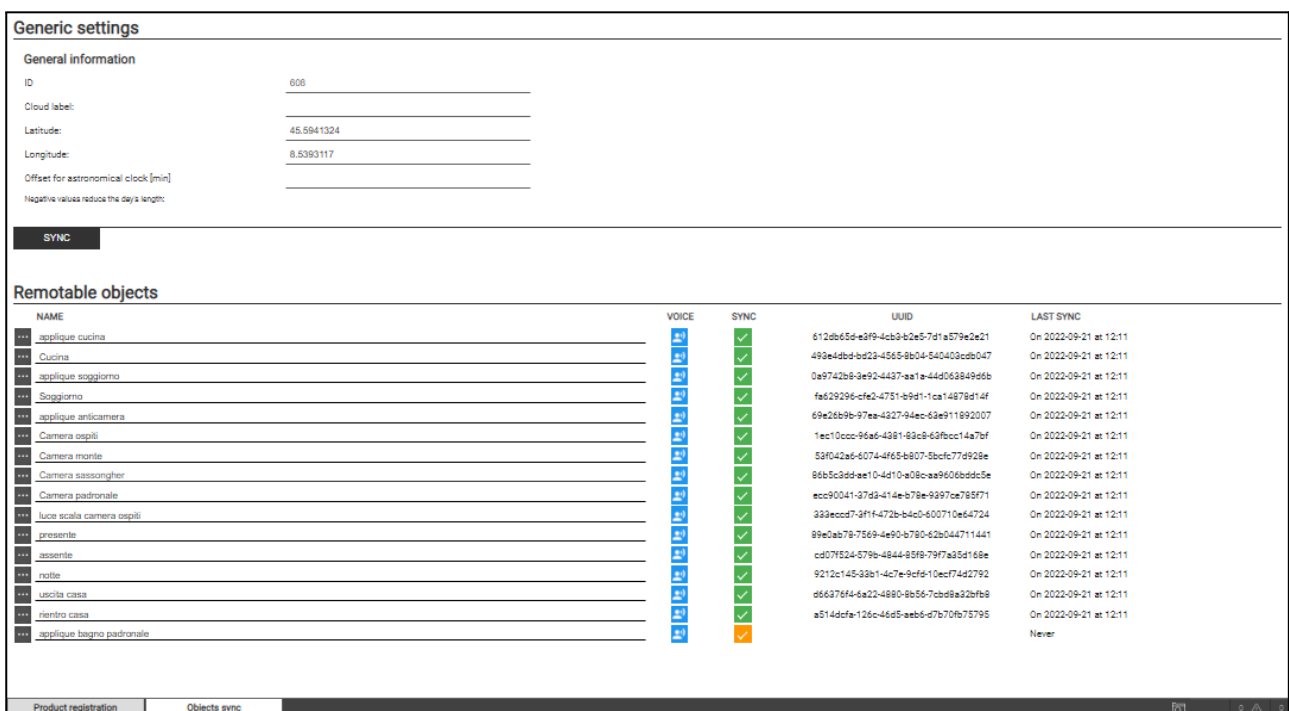
- On DELÉGO SERVER, bind the created account with each of the servers for which DELÉGO app must display the shortcuts on the app. Binding must be done in mode **OWNER**.



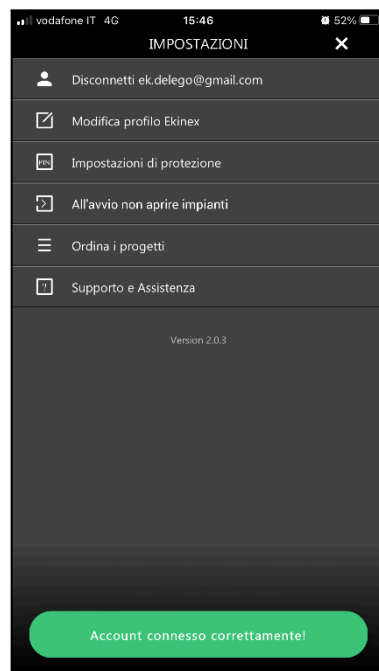
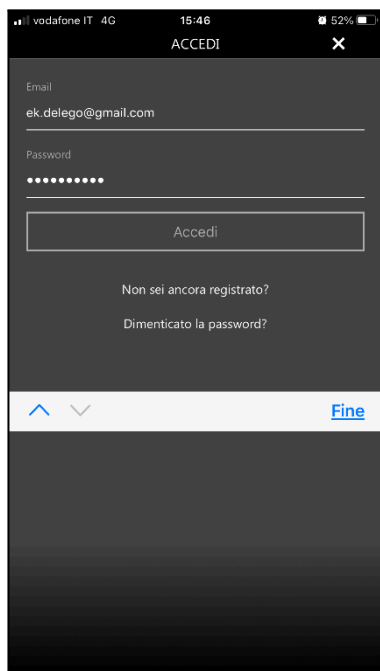
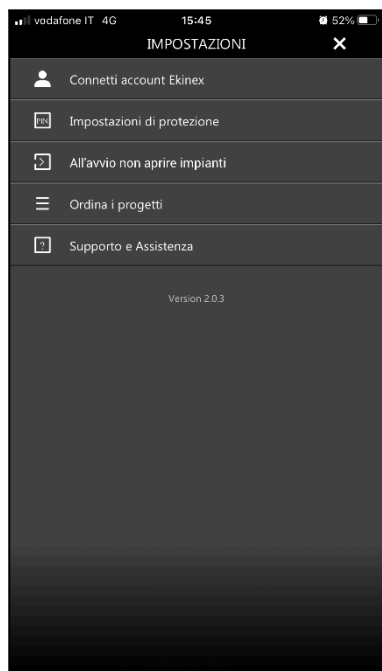
- On DELÉGO SERVER activate the cloud synchronization checkbox for each of the widgets you intend to expose in the shortcuts.
- On DELÉGO SERVER synchronize all the widgets for which the cloud check-box has been activated to the cloud. To carry out this operation, in the Administration view navigate to

SERVICES > CLOUD > OBJECTS SYNC

Press the SYNC button and wait for all the checkboxes to turn green with the field updated *last sync* at the current time



- On the DELÉGO app, open the contextual menu at the top right of the app title bar and select the *Connect item* option: enter the credentials of the account created in point 1. Once connected, the configured quick commands will appear on the main page of the app for each system.



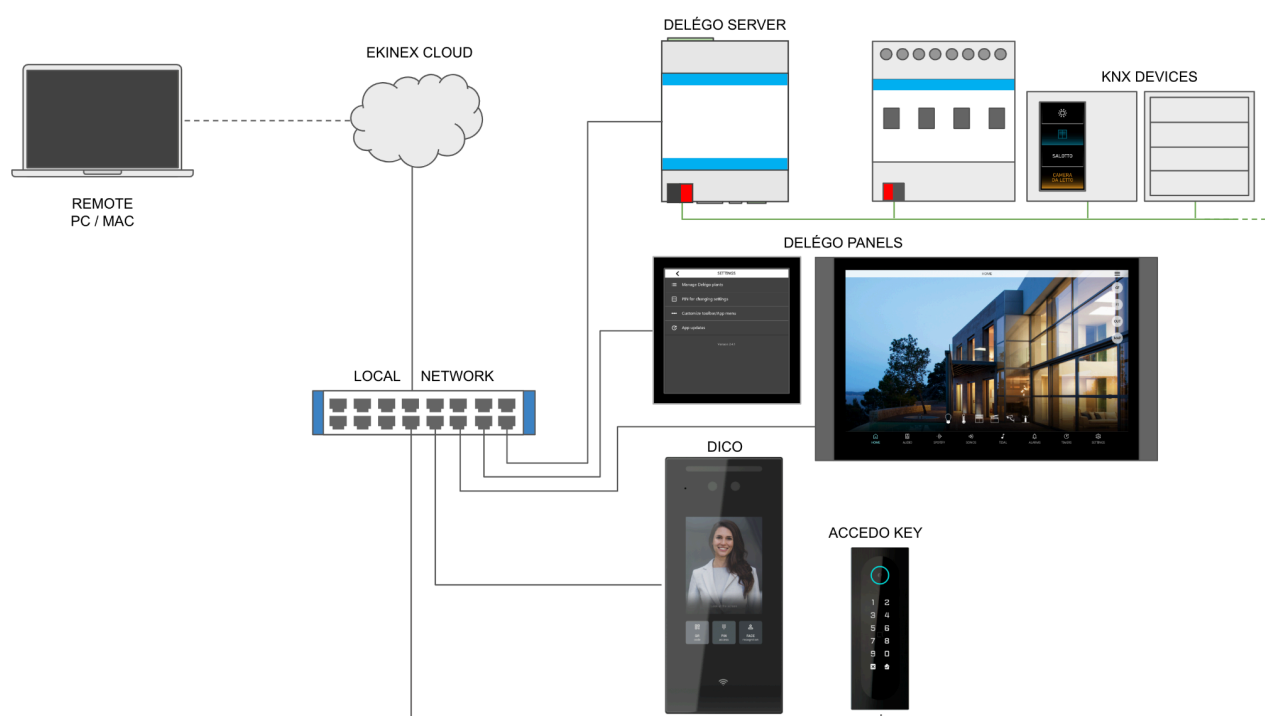
3 Cloud VPN

3.1 Introduction

Starting from version 2.5.2, it is possible to connect directly to the home network where DELÉGO SERVER is installed, from a PC / Mac, through a VPN connection based on the Ekinex cloud.

This connection is useful to remotely:

- Program KNX devices or do diagnostics with ETS PROFESSIONAL.
- Change the configuration of Ekinex connected devices (DICO intercom, Delégo Panels etc...).
- Access any other network-based device, in the same way it would be possible being physically attached to the LAN.



Each DELÉGO SERVER has its own dedicated VPN, isolated from the others, and uses the Wireguard tunnel technology, to ensure the maximum degree of robustness and security. No configuration is required on the internet router / firewall.



The cloud VPN service is available only on the 4 DIN rail module hardware version of DELÉGO SERVER. The older version of 2 DIN rail modules does not support it.



The “old” local VPN, based on an internal server and requiring a *port forwarding* rule on the router, is no longer available starting from release 2.7.0.

3.2 Cloud login

Before doing any configuration on the cloud VPN, at least one cloud account must be enabled and associated with the DELÉGO SERVER (see [section 2.1](#)).

Being the cloud VPN a way to access the IP home network of the building, for security reasons, it is strongly recommended to differentiate the users by doing the following configuration:

- Create (at least) one DELÉGO SERVER user for the “property manager” of the building (e.g. the home holder) and bind it as OWNER to his / her cloud account.
- Dedicate a different DELÉGO SERVER user to the installer / system integrator, binding it as INSTALLER to the corresponding cloud account



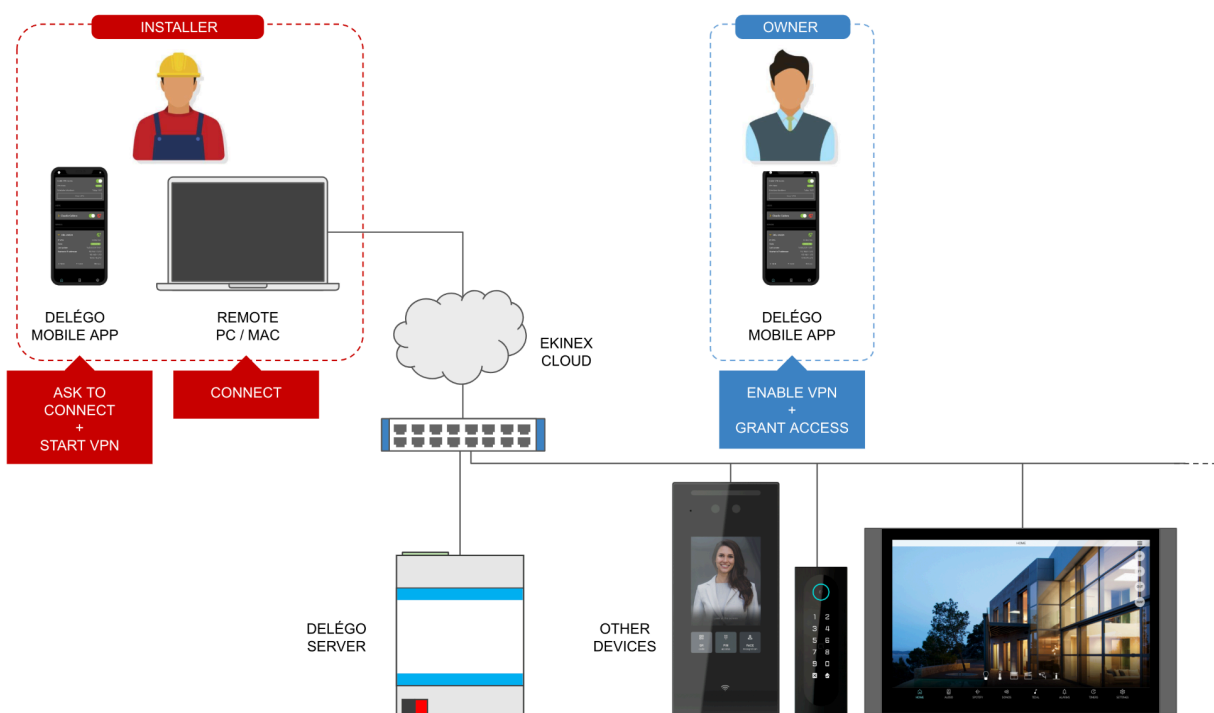
Only the cloud accounts associated to local users of the DELÉGO SERVER, are entitled to control / connect to the VPN
On the mobile app, the cloud account must be entered in the app settings, in order to see and manage the VPN associated to the servers

In this way:

- The owner can (with the DELÉGO mobile app)
 - enable or disable the VPN at any moment.
 - grant the access for the installer(s).
- The installer can (with the DELÉGO mobile app)
 - ask to connect (if the VPN is disabled, or the account is not granted).
 - start and stop the VPN.

(with the PC / Mac)

- connect to the home network.



3.3 Service activation

In the administration area, after having done a cloud login with a valid Ekinex cloud account, select the following item in the tree menu

SETUP > EKINEX CLOUD > CLOUD SERVICES

and identify the VPN service, like in the following screenshot:

Services list							
NAME	PROVIDER	STATUS	EXPIRATION	ACTIONS	ACTIVATED BY	CREDITS	ACTIVATE
Remote accessibility	---	Active	--			---	DEACTIVATE
VPN	---	Not subscribed yet	--		---	---	ACTIVATE

SYNC

Press the ACTIVATE button and wait until the list reloads, and the service becomes active.



The VPN service will “belong” to the cloud account used to activate it. It is your choice to associate it to the installer account, or the property manager (owner) one.

3.4 VPN creation

Once the VPN service has been activated, enter the section

SETUP > EKINEX CLOUD > VPN

and enter a name, to be associated with the VPN. This name will be reported in email and push messages, therefore it is suggested to give a name reminding the building / installation.

VPN Network

VPN Name

VPN Name

Configuration

☒ Do not expose the home network in VPN

☐ Expose specific local networks and IP addresses in VPN

CREATE

By default, for security reasons, DELÉGO SERVER does not allow access to any other device in the home network (LAN) except itself.

It is possible to optionally expose one or more devices, or network subnets, by entering the following informations:

- To expose a single IP address, enter it in the text fields, and press ADD.

- To expose a subnet, enter only the first parts of the address, by leaving empty the last part(s)
In this case, all the IP devices matching the entered numbers, will be reachable remotely

VPN Network

VPN Name

My Home

Configuration

☐ Do not expose the home network in VPN
☒ Expose specific local networks and IP addresses in VPN

192.168.1.12 x

192.168.1.1 x

192

168

XXX

XXX

Fill in the 4 fields to specify the allowed network. The first two are mandatory, while the last two, if left empty, will be automatically completed to include the entire subnet

ADD

CREATE

In some sections of the webserver, mobile app and client for the VPN connection, the so-called “CIDR” notation is used to represent the exposed addresses.

Please refer to the following table, containing some examples, to clarify the different notations:

DELEGO SETTING	CIDR NOTATION	REACHABLE IP ADDRESS(ES)
192.168.1.1	192.168.1.1/32	192.168.1.1
192.168.1.XXX	192.168.1.0/24	192.168.1.1 192.168.1.2 [...] 192.168.1.254
192.168.XXX.XXX	192.168.0.0/16	192.168.1.1 192.168.1.2 [...] 192.168.1.254 192.168.2.1 [...] 192.168.254.254

Press the CREATE button and wait until the VPN information will appear in the page, like in the following example:

VPN Network

VPN Name

My Home

Configuration

☐ Do not expose the home network in VPN
☒ Expose specific local networks and IP addresses in VPN

192.168.1.12

192.168.1.1

XXX

XXX

XXX

XXX

Fill in the 4 fields to specify the allowed network. The first two are mandatory, while the last two, if left empty, will be automatically completed to include the entire subnet

ADD

☒ Enable VPN

UPDATE
DELETE

Status

VPN Status
Stopped

Connection Status
Disconnected

IP Address
10.56.210.2

START

Connections

ADD
SAVE

VPN



If you want to reach the DELÉGO SERVER with its IP address in the home network (LAN), this address must be added to the exposed IP addresses list.

Otherwise, the DELÉGO SERVER will be only reachable with its VPN address, as shown below.



The new VPN is enabled by default; it means that all the cloud accounts, entitled to have a connection, will be able to connect.

Deselect the corresponding flag and press the UPDATE button to make it disabled by default; the owner(s) will enable it with the DELÉGO mobile app, as described below.

After any change of the configuration, press the UPDATE button to apply them. To completely erase an existing VPN, press the DELETE button.

3.5 Connections

In order to connect to the VPN, installers must own one or more CONNECTION(s) for each PC / Mac they will use to remotely access the home network.

Press the ADD button and enter the following information:

- A label that identifies the PC / Mac used for the connection.
- The cloud account associated with the connection.
- The enable (grant) status of the connection.

Only the cloud accounts associated with the DELÉGO SERVER can be selected for the connections. In order to grant access to new accounts:



1. Create a new local user in DELÉGO SERVER in the USERS AND PERMISSIONS section
2. Enter with these credentials and login with the desired cloud account in the SERVICES > CLOUD > PRODUCT REGISTRATION
3. Bind the cloud account as OWNER or INSTALLER by pressing the corresponding button (once the cloud login has been done)

Once pressed the SAVE button, two buttons will be enabled:

- The DOWNLOAD button is used to download the configuration file, necessary to set up the VPN connection on the PC/Mac of the installer that needs to connect to the DELÉGO SERVER.
- The QR CODE button is used to download the QR code that can be used on a VPN tool to set up automatically the VPN connection to the DELÉGO SERVER.

VPN Network

VPN Name

VPN Test

VPN Network IP

10.56.210.1

VPN Client IP

10.56.210.2

Configuration

☒ Do not expose the home network in VPN
 ☐ Expose specific local networks and IP addresses in VPN

☐ Enable VPN

UPDATE

DELETE

Status ●

VPN Status

Stopped

Connection Status

Disconnected

IP Address

10.56.210.2

START

Connections

Macbook Pro

sviluppo@domoticalabs.com

☒ Enable

QR CODE

DOWNLOAD

ADD

SAVE



Any time a change is done on the configuration of the VPN (e.g. changing the exposed IP addresses) it is necessary to download a new configuration file or QR code.

In that situation, a yellow warning indicator blinks close to the connections to be downloaded again.

3.6 Starting and stopping the VPN

The default state of a VPN is stopped and must be manually started when there is the need to remotely connect to the home network. This can be done by pressing the START button in the VPN configuration page in DELÉGO SERVER, or with the mobile app (as described in the dedicated section later). A VPN connection will stay active for 2 hours; after 2 hours it will stop. To stop it manually, press the STOP button, when it is no longer needed.



If a longer connection is needed, the VPN can be simply stopped / started again, any desired number of times.

The STATUS section contains also the IP address of the DELÉGO SERVER in the VPN:

VPN Network

VPN Name

My Home

Configuration

☐ Do not expose the home network in VPN

☒ Expose specific local networks and IP addresses in VPN

192.168.1.12

192.168.1.1

XXX

XXX

XXX

XXX

Fill in the 4 fields to specify the allowed network. The first two are mandatory, while the last two, if left empty, will be automatically completed to include the entire subnet

ADD

☒ Enable VPN

UPDATE

DELETE

Status

VPN Status

Running

Connection Status

Connected

IP Address

10.56.210.2

STOP

Connections

Macbook Pro

mario.rossi@example.com

☒ Enable

DOWNLOAD

✓

ADD

SAVE

VPN

0

0

0

0

Use this IP address to “point” to the webserver, in order to:

- Access its web pages .
- Use it as an IP interface for ETS PROFESSIONAL.

Revision 2.8.0 - Update: 15/04/2026
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System Configuration Manual
Pag. 22

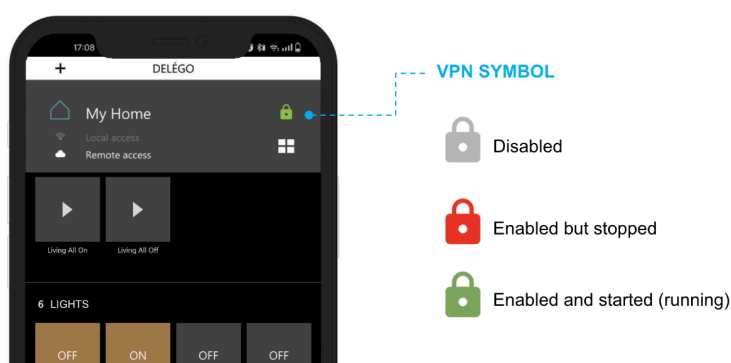
3.7 Control with the mobile app

3.7.1 Requirements

The Delégo mobile app can be used to control the VPN associated with a DELÉGO SERVER. In order to do so, the following requirements must be met:

- An Ekinex cloud account must be entered in the settings area of the app
- At least one DELÉGO SERVER must be configured with a valid cloud remote address
- The DELÉGO SERVER(s) must be associated with the entered cloud account, with OWNER or INSTALLER rights

The VPN enabled projects show a “lock” symbol on the right in the title:



When pressed, this symbol opens the VPN control screen, as better illustrated in the following paragraphs.

3.7.2 Owner view

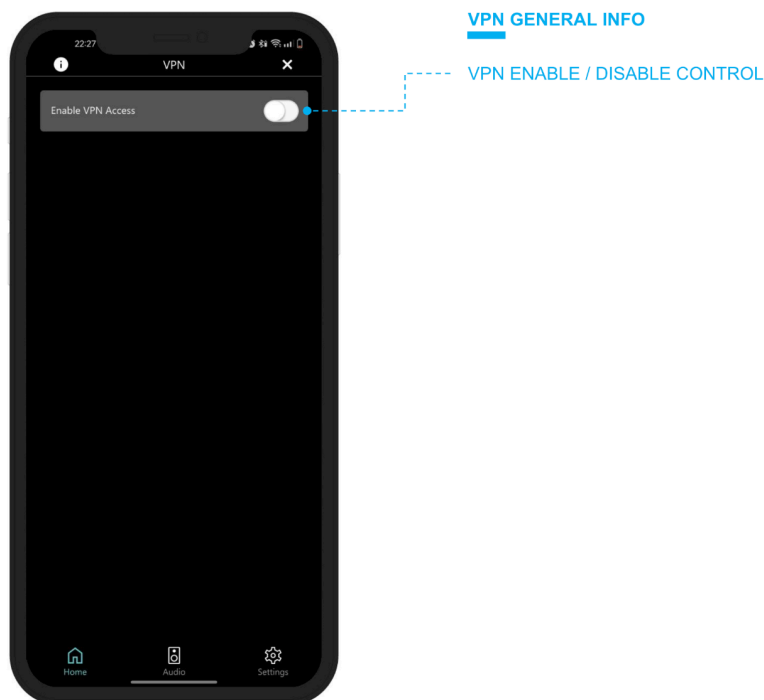
The following picture shows the typical VPN section content for an owner account:





If the owner is not associated with a connection, the START / STOP button is not visible; this action, in fact, is useful only to users who need to connect from their PC / Mac.

If the VPN is not enabled, all the contents are hidden, and the only possible action is to enable it:



Each account with an associated connection, can be enabled or not, by acting on the corresponding control: in general, a VPN can be enabled (green indicator in the initial part of the screen) but the single users can be disabled. In this case, they cannot connect. When a user connects through one of these connections, the state goes to *green*.

The server info section contains details about the connection of the webserver to the VPN, its IP address, and all the other reachable IP addresses.



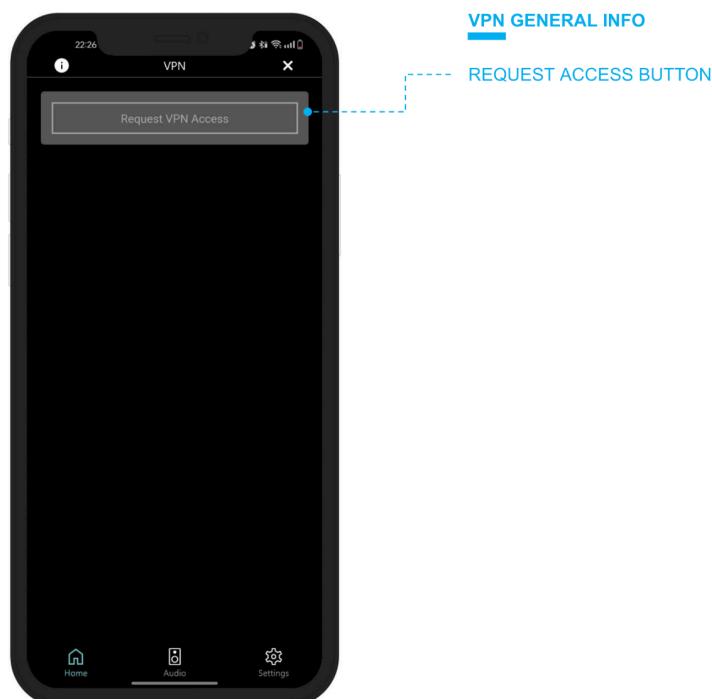
After any operation of ENABLE, START / STOP or GRANT of users, it might be needed up to a minute, for the connection to be established again, and the status indicator in the app to synchronize with the webserver and the connected computers

3.7.3 Installer view

The VPN section view for an installer, contains fewer information, like in the following example:



If the VPN is disabled, or the installer is not granted to connect, the only allowed action is to send a request to connect:



3.7.4 Notifications

When an installer asks to connect, a push notification and an email message are immediately sent to all the owners of the webserver. By pressing on the notification, the DELÉGO mobile app is opened directly in the section of the interested VPN: it is just needed to act on the ENABLE controller.

Push notifications and email messages are also sent when:

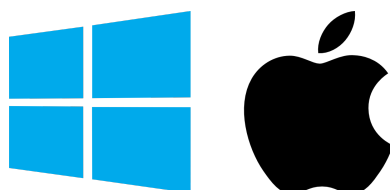
- A VPN is enabled or disabled.
- A VPN is started or stopped.
- A connection (user) is granted or not.

3.8 Remote VPN Connection

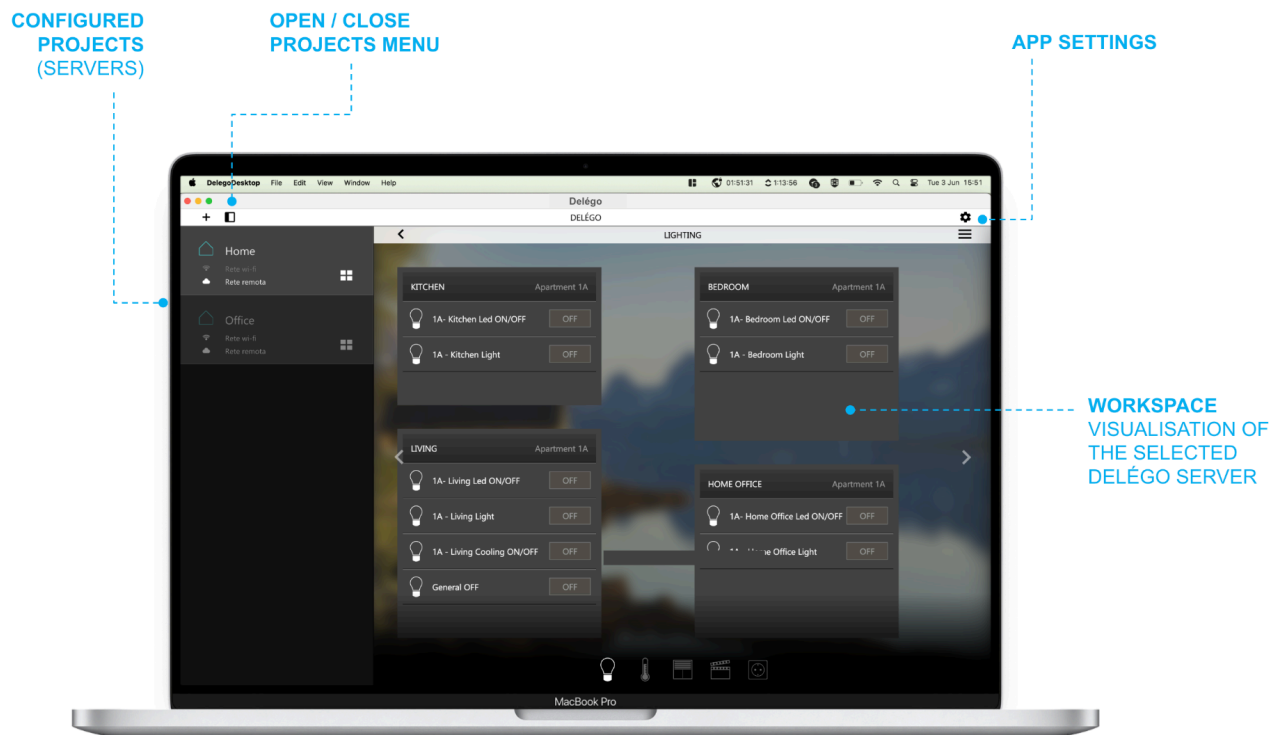
3.8.1 Installing the Delégo app

To connect remotely to the home network, you need to use the desktop version of the Delégo app, which can be downloaded for free from the Delégo Server web page on the Ekinex website:

<https://www.ekinex.com/en/delego-server/new-delego-server.html>



Once installed, open the app and enter your computer's administrator password when prompted (this is required to have the necessary permissions to open VPN connections). The app's main screen looks like the following figure:



3.8.2 Cloud login

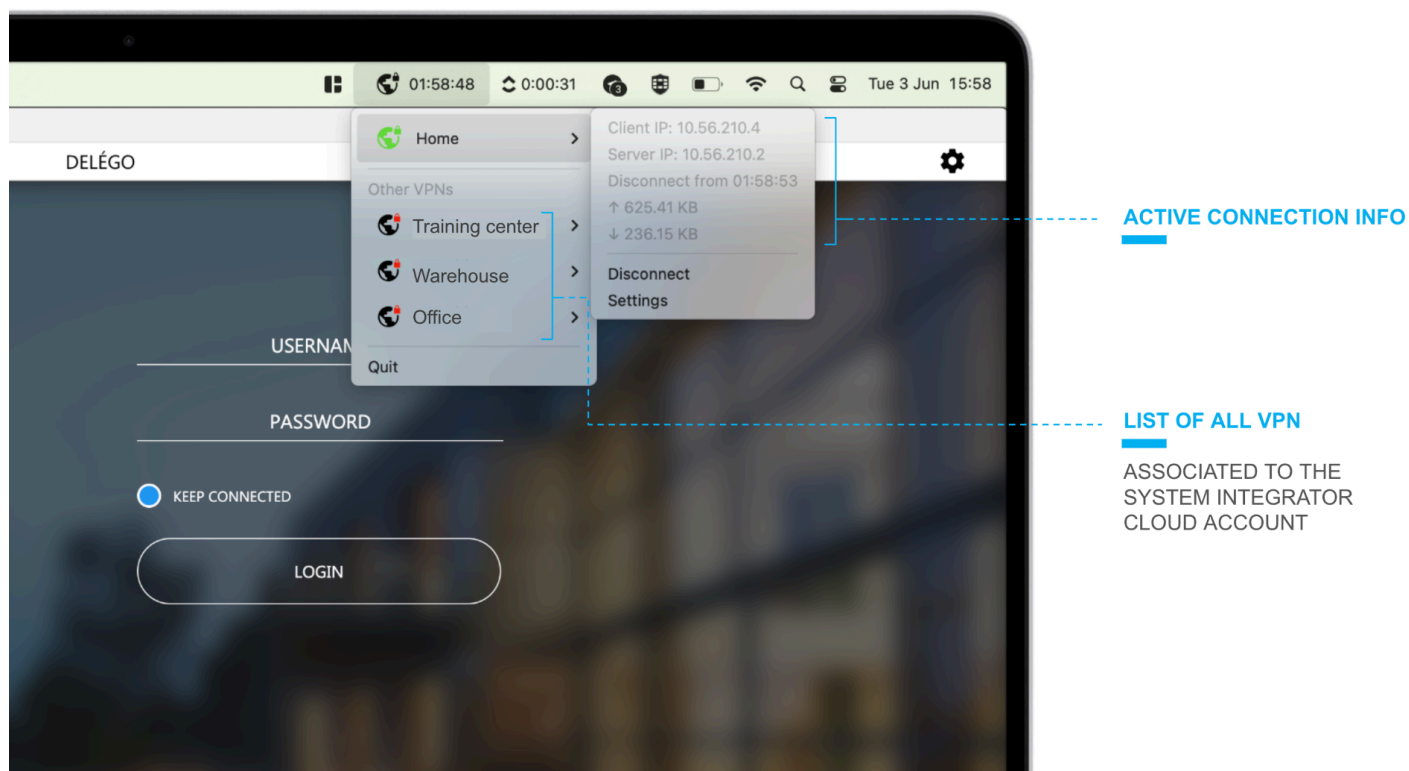
Connecting to your systems via VPN requires authentication with your EKINEX cloud account.

To do this, press the settings access button, then select the “CONNECT EKINEX ACCOUNT” item and enter your email and password.

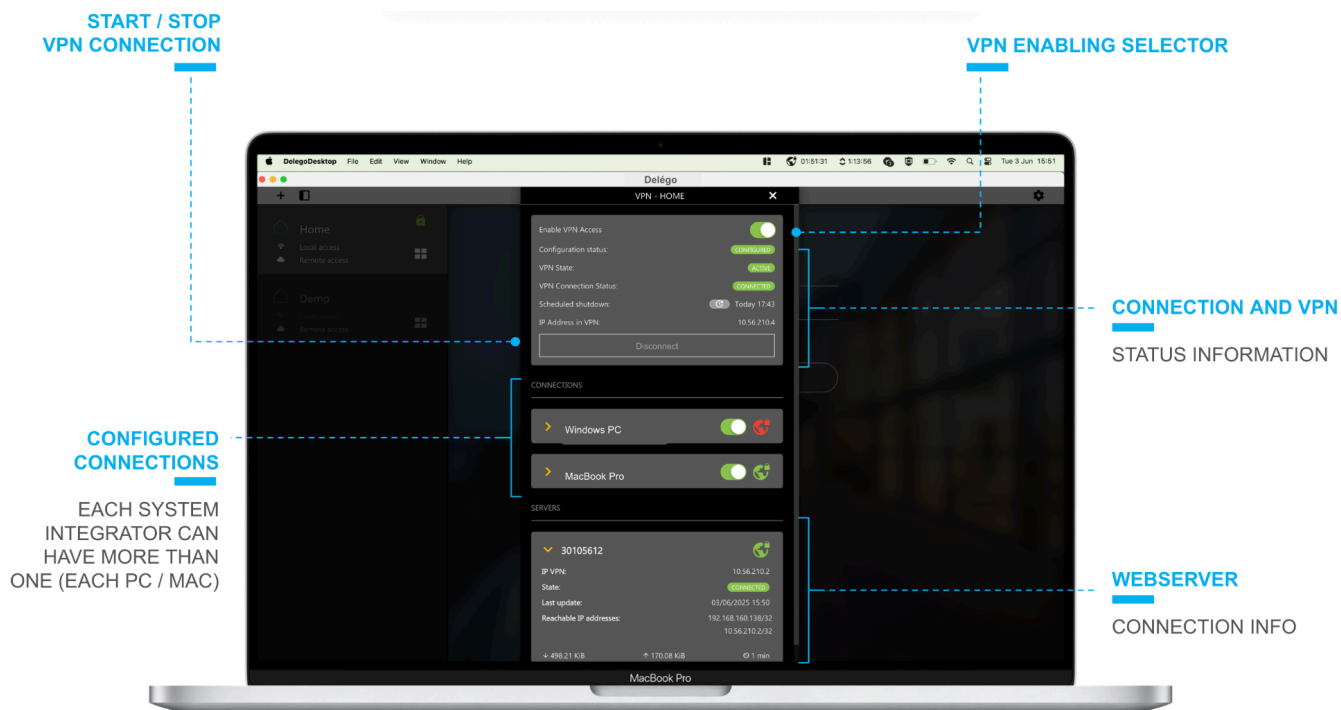
3.8.3 Accessing the VPNs

If the connection to the cloud is successful, a menu appears in the system bar containing the list of CLOUD VPNs to which your account has access.

If one or more web servers have also been configured as systems (see next point) they appear at the beginning of the list, vice versa they are listed in the “OTHER VPNs” section as in the following example (which shows the MAC version):



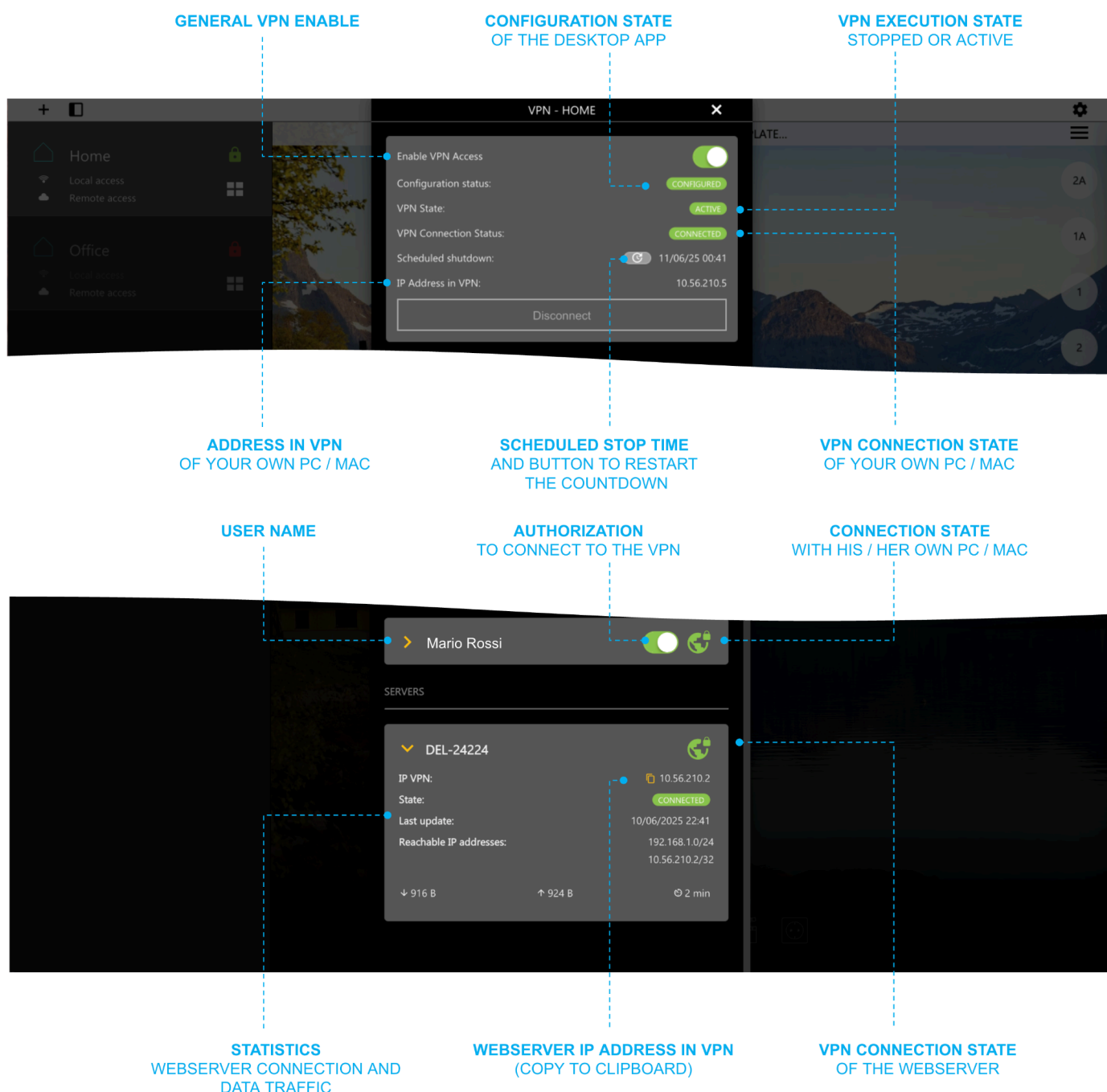
The first time you connect to a VPN, you need to press the SETTINGS item; a screen similar to the following is displayed:



In the CONNECTIONS section, a new connection is automatically created for your PC / MAC, associated with your cloud account. This connection is initially disabled; if you have an installer profile, you must request access via the appropriate button at the top of the popup, and wait for the building owner to authorize your user to connect.

If, on the other hand, you are the owner, you can enable the connection, with the appropriate selector.

By pressing the CONNECT button, you can establish a connection to the building's local network through the CLOUD VPN; after a few seconds, the status indicators turn green, and the statistics on connection time and exchanged data traffic begin to update.



The IP address of the web server in the VPN is shown in the section below, containing the server data; you can copy it to the clipboard with the appropriate button, to be able to easily insert it into other applications (e.g.: ETS professional).

After the first connection, you can monitor connection statistics, start or stop the connection, directly from the system tray. It also displays¹also the time remaining before the connection automatically stops, and it is possible (via the dedicated button, by opening the settings) to reset the countdown, if the maintenance intervention requires more than 2 hours.

3.8.4 Adding projects

If you want to navigate the Delégo Server supervision pages, you need to add it as a facility; for this purpose:

- Press the [+] button
- Please enter the following information:
 - a name
 - the login credentials
 - the IP address and port for local network access
 - the cloud address (XXXXXXXXX.ekinex.cloud)
- Save the configuration (the server is listed in the left menu)

The configured projects are listed in the left menu; by clicking on them, the corresponding supervision interface opens in the main workspace, in a completely analogous way as a web browser. The app automatically discriminates between the local IP address and access via cloud



In order for the web server to be recognized and correctly paired with its VPN (if present), it is necessary to enter the cloud address for remote access, and not a public IP address. Otherwise, it is possible to navigate in supervision, but you cannot use cloud services (such as VPN).

¹Function available only on MAC OS

4 ETS remoting

4.1 Introduction

DELÉGO SERVER can be used as an IP interface for the commissioning of KNX devices and the diagnostics with ETS PROFESSIONAL.

This functionality requires the selection of a COMMUNICATION DRIVER with the ETS REMOTE support, as explained in [D3].



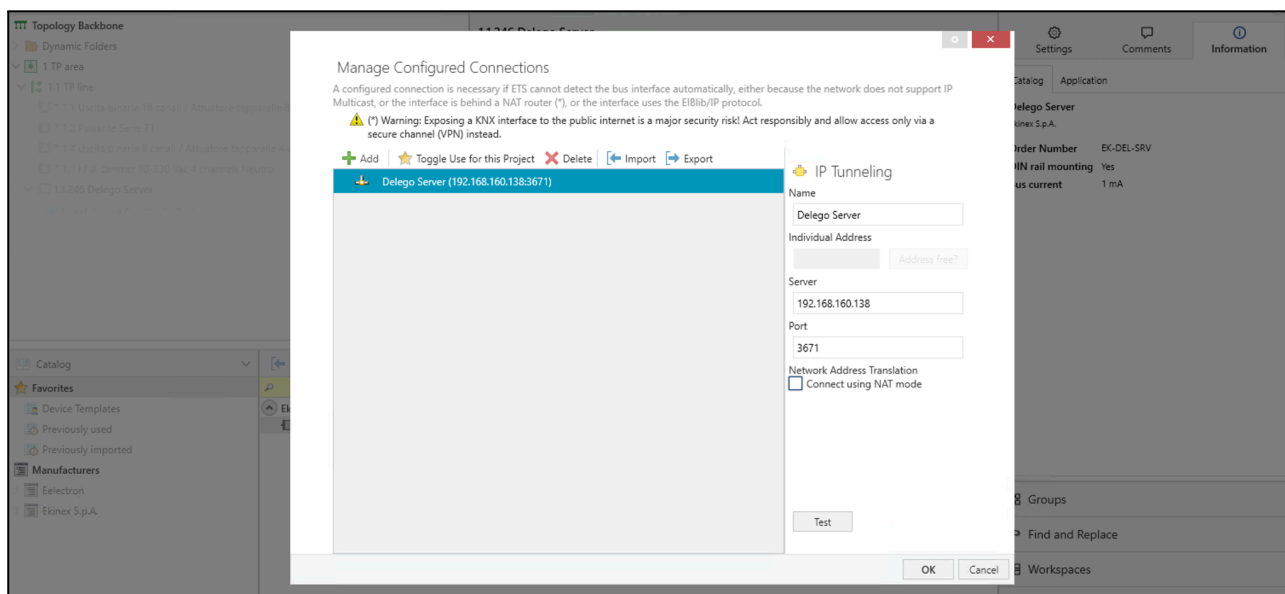
The instruction contained in this chapter is also reported in the KNX technology manual of DELÉGO SERVER [D3].

Le istruzioni riportate in questo capitolo, sono presenti anche nel manuale dedicato alla tecnologia KNX.

4.2 Use in local network

When the PC with ETS PROFESSIONAL is in the same local network of DELÉGO SERVER, it is required to:

- Open the MANAGE CONFIGURED CONNECTIONS window.
- Press the ADD button.
- Enter the following information:
 - Server → IP address of DELÉGO SERVER.
 - Port → leave default value (3671).
 - Connect using NAT mode → Select in case of difficulties in starting the communication.
- Check the communication with the TEST button.
- If the TEST is OK, save with the OK button, and ensure the new connection is selected as the active one for the following download / diagnostic operations.



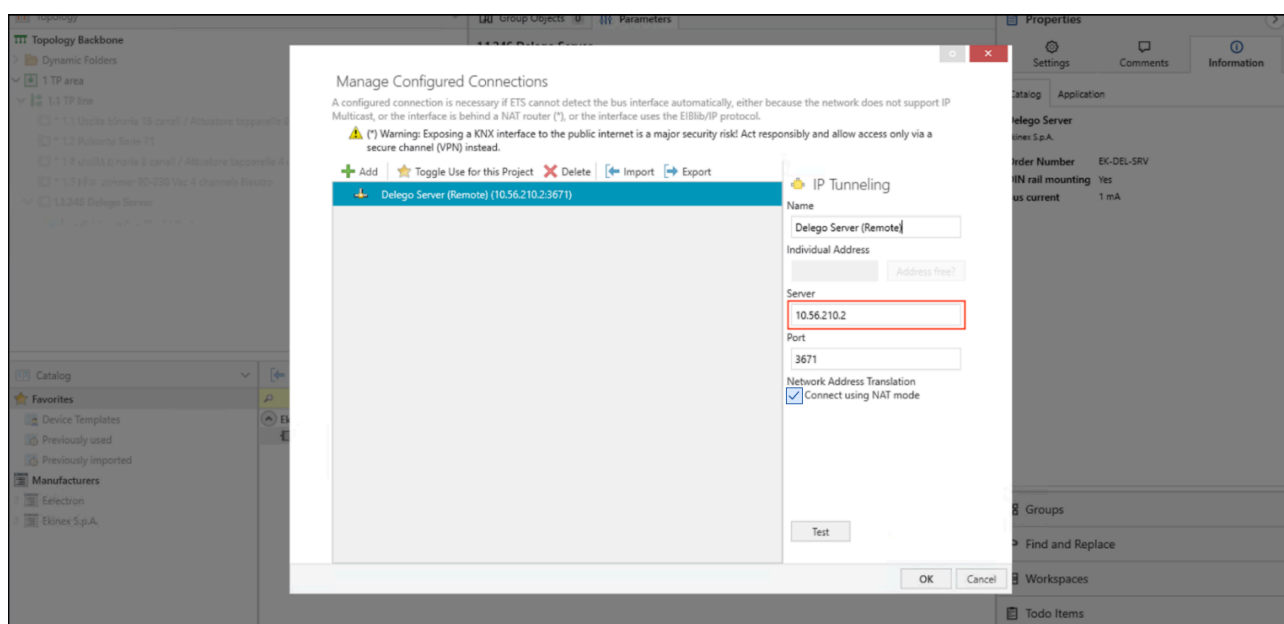
4.3 Remote connection

In order to remotely use DELÉGO SERVER as an IP interface for ETS PROFESSIONAL, a VPN must be established.

4.3.1 Cloud VPN

This approach is strongly recommended, being easier to be configured, more flexible and more secure. In order to configure the CLOUD VPN, please refer to [section 3](#) of this manual.

When using the CLOUD VPN for the ETS remoting, it is necessary to enter the webserver VPN IP address (typically **10.56.210.2**) in the ETS connection (after having started the VPN connection), like in the following example:



4.3.2 Local VPN

On older versions of DELÉGO SERVER, it is possible to run a VPN server locally on the webserver, as described in [D2]. This approach requires a *port forwarding* configuration in the internet router, of the location where the webserver is installed. As soon as the VPN connection is established, enter the IP address of the webserver (in the local network where it is installed) in ETS, and enable the NAT mode.



This methodology is no longer supported starting from release 2.7.0, having been substituted by the cloud VPN.

5 Weather services

DELÉGO SERVER allows you to interact with an internet weather service to acquire information relating to current weather conditions and those of the days to come, which can be used within supervision and within logics, to carry out actions conditioned by weather conditions.

5.1 Preliminary operations

Starting from release 2.5.1 the DELÉGO SERVER automatically connects to the weather services through the EKinex CLOUD. **In such a case, it is possible to jump directly to the next paragraph.**

In older versions, it is necessary to enter manually an API key, that must be obtained by accessing the following web page

www.openweathermap.org

To obtain an API key you must first register (free of charge) for the service, and select the "SIGN UP" item in the menu at the top right to register:

The screenshot shows the OpenWeatherMap registration page. At the top, there's a dark header with 'Support Center' and a search bar. Below that, the 'OpenWeatherMap' logo is followed by navigation links: Weather, Maps, API, Price, Partners, Stations, News, and About. The main content area is titled 'Sign Up' and features a 'Create New Account' form. The form includes input fields for Username, Enter email, Password, and Repeat Password, along with a checkbox for 'I agree to the Terms of Service and Privacy Policy' and a 'Create Account' button. The footer contains several sections: 'Weather in your city', 'Map layers', 'Weather station network', 'Weather APIs', and 'About', each with a list of links.

Once you have entered the required data and confirmed your registration via the email message received in the email address indicated during registration, you will access your dashboard. By selecting the "API KEYS" item it is possible to generate one or more keys:

The key thus obtained must be inserted into DELÉGO SERVER as illustrated below.



Each API key typically allows a maximum number of calls per hour, based on the type of service you choose.

DELÉGO SERVER optimizes the number of calls to the service, however it is recommended not to use the same API key on multiple installations, as you could run the risk of exceeding the limits imposed by the service, and invalidating the weather services on all web-servers who use that key.

5.2 Configuration

You can configure the weather service integrated within DELÉGO SERVER. To this end:

- Expand the SERVICES section in the menu administration
- Enter the WEATHER SERVICES section and select the VIRTUAL WEATHER STATION item
- Access your card using the "three dots" on the side or the EDIT button on the bottom toolbar

A form is proposed, in the initial section of which the following service configuration parameters are required:

WEATHER SERVICE	Select which service you want to use
CITY	Indicate the reference city for which to obtain weather data Preferably indicate larger centers and also specify the country (in English format) separated by a comma, for example: Roma,Italy In case of problems, check that the city indicated is valid directly on the web page of the chosen service

API KEY	Enter the API key previously obtained by registering for the service <i>Note: only for versions older than 2.5.1</i>
API VERSION	Specify the version of your API key. Currently supported versions: - Open Weather Map: 2.5 - World Weather Online: 1 o 2 <i>Note: only for versions older than 2.5.1</i>

Furthermore, by activating the EXPERT mode , you can specify the following:

STATUS OF EXECUTION	Allows you to view the status of the functionality
RUN AT STARTUP LOOP	Keep the default (selected) values unless you have special needs
API CALL FREQUENCY	Time between one request to the weather services and the next
WIND ALARM THRESHOLD	Wind speed (expressed in m/s) above which the wind alarm is set to 1

Object properties

General information

ID: 383

Name: Weather service

Communication

Execution state: Play

Execute on startup: ☒

Execute in loop: ☒

Loop time: 30 Minutes

Weather service: Open Weather Map

City: Milan

Longitude:

Latitude:

API key: cdba3d0e3e05c1edc1b61990277f18e9

API version: 2.5

API call frequency: 30 Minutes

Wind alarm threshold [m/s]: 6

Offset for astronomical clock [min]:

Negative values reduce the day's length:

CLOSE START STOP

Astronomical clock

NAME	STATE
 Weather station - Today - Day	Day

Data today

NAME	STATE
Weather service	

At the bottom of the page, the data offered by the weather service is shown; in particular:

ASTRONOMICAL CLOCK

TODAY – DAY / NIGHT	Day or night status of the current day, calculated based on sunrise/sunset time with any offset. Possible values:
---------------------	--

	0 → day 1 → night
--	----------------------

DATA TODAY / DATA TOMORROW

WEATHER FORECAST	Brief information on weather conditions
TEMPERATURE	External temperature, expressed in different units of measurement
TEMP MIN TEMP MAX	Minimum and maximum temperature forecast for the current / next day, in different units of measurement
WIND ALARM	Wind alarm, if the speed exceeds the set threshold Possible values: 0 → No wind alarm 1 → Wind alarm
WIND DIRECTION	Wind direction, expressed in readable form, as an abbreviation and as degrees (relative to the North)
WIND SPEED	Wind speed, expressed in different units of measurement
RAIN ALARM	Rain alarm Possible values: 0 → No rain 1 → Rain
RAIN	Expected quantity of water, expressed in mm
PRESSURE	Atmospheric pressure
HUMIDITY'	Relative humidity

SUBSEQUENT DAYS DATA

WEATHER FORECAST	Brief information on the weather conditions of the following day
TEMP MIN TEMP MAX	Minimum and maximum temperatures forecast for the following day, in different units of measurement

All this information can be used both in the LOGICS and as TRIGGERS for other objects in the project.

6 Telegram notifications

6.1 Introduction

DELÉGO SERVER allows you to receive notifications on the popular TELEGRAM instant messaging service.

6.2 Preliminary operations

6.2.1 Creating a BOT on Telegram

Once the Telegram app has been installed on your device, you need to create a new bot, which will be associated with DELÉGO SERVER.

To create a new bot, you need to search for the [@BotFather](#) (the “father” of all bots) in the Telegram app, which will allow you to create and manage new ones, whenever you want.

Then type [/newbot](#) and follow the interactive instructions. First you will need to give your bot a name, for example



Home

and then choose a username, which must be unique and must end with Bot; for example

DelegoBot

At this point your personal bot is ready to be used; the [@BotFather](#) will provide an **API key** and you can use them with DELÉGO SERVER.

Copy the code you just received for configuration with DELÉGO, and use it in the next steps.

6.3 Configuration

6.3.1 Creating a BOT on DELÉGO SERVER

Access the section in the menu administration

NOTIFICATIONS > TELEGRAM NOTIFICATIONS

and press the [+] button to create a new bot. Enter the **API key** previously released by [@BotFather](#) in the section API KEY and give a name to the bot.

Then start the service clicking the START button; from this moment DELÉGO SERVER and your personal bot will be connected. It is necessary to open the Telegram application again and search for the newly created bot by inserting the @ before the chosen name.

6.3.2 Giving permissions to chats and users

It is possible to interact directly with the bot, or add it to a group on Telegram. In both cases, in order to authorize the user and the chat for the interaction with the bot is needed to start a conversation (simply send an "Hello" in the chat).

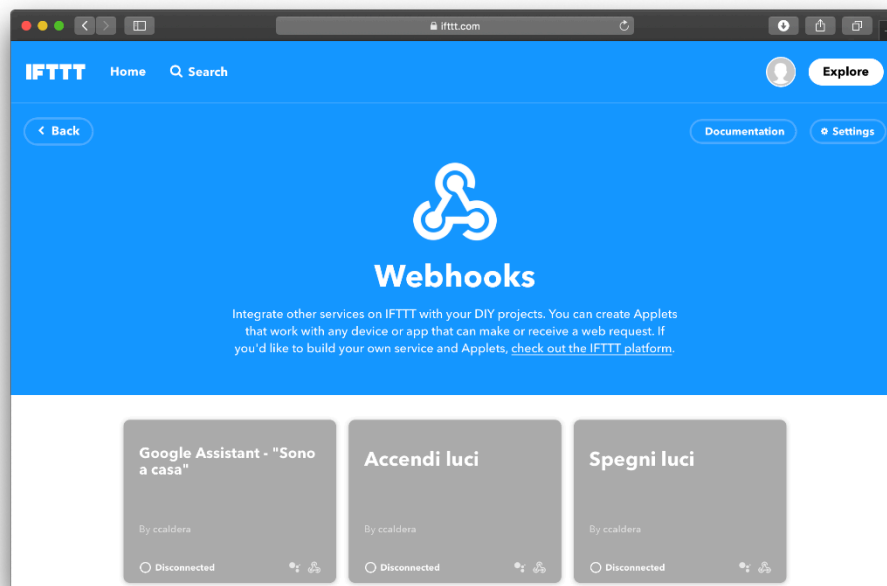
After pressing the REFRESH button, a new row will appear in the CHATS and the USERS lists. In both the lists, the chat and the user must be approved for the interaction with the bot; additionally, the chat can be enabled also to receive notifications from the DELÉGO SERVER, by setting the corresponding NOTIFICATIONS flag.

7 IFTTT

DELÉGO SERVER is compatible with the IFTTT cloud platform, which allows you to create free association rules between compatible devices and services (called “applets” or “recipes”) according to the logic

if this happens (IF This) then do something (Then That)

hence the acronym IFTTT. To use this service, you must first register for free on ifttt.com and then associate the "webhooks" service with your account:



On the “documentation” page you will see your personal API key, which must be pasted into the DELÉGO SERVER section

INTEGRATIONS > OTHER > IFTTT > WEBHOOKS

To call an applet when the status of a DELÉGO SERVER object changes, you need to drag it from the side menu, or from the search engine, into the "EVENTS TO BE SENT TO IFTTT" section. In the case of composite graphic components it is necessary to drag the sub-object whose change of state must determine the event, searching for it in the search engine:

Generic settings

General information

ID

471

Name:

Webhooks

IFTTT key:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CLOSE

LOG

Events to be sent to IFTTT

OBJECT	EVENT	CONDITION
... X Light_ONOFF_St_Kitchen_Est	test	- Every status change +
Drop here objects from search results or tree menu		

Events received from IFTTT

OBJECT	EVENT	ACTION	VALUE
... X + Light_ONOFF_Cmd_Garden_Est	garden light		- Off +
Drop here objects from search results or tree menu			

For each object that is dragged in the list, it is necessary to indicate the name of the IFTTT event to be recalled; this information is requested in IFTTT when creating an “applet” that has webhooks as a starting point. Finally, it is necessary to specify for which value of the dragged object the IFTTT event should be called (in the case of "always", it will be called at every change of value).

In IFTTT, you create an applet by choosing “webhooks” as the starting service, pressing the “this” keyword, and inserting the event name specified in DELÉGO. As an action (“that”) you can choose any other service or device, keeping in mind that DELÉGO passes to IFTTT, during the call, the following parameters (usable in the creation of the applet, depending on which service is chosen as destination):

Value1	ID of the object that invoked the event
Value2	Name of the object that triggered the event
Value 3	Value (in numeric format) of the object at the time it triggered the event

Conversely, it is possible to invoke a command on DELÉGO SERVER as an action performed by an applet, starting from an event that occurred on another service or device. In this case, the objects must be dragged into the “EVENTS RECEIVED BY IFTTT” section.

Generic settings

General information

ID

471

Name:

Webhooks

IFTTT key:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CLOSE

LOG

Events to be sent to IFTTT

OBJECT	EVENT	CONDITION
✖ Light_ONOFF_St_Kitchen_Est	test	⊖ Every status change ⊕
Drop here objects from search results or free menu		

Events received from IFTTT

OBJECT	EVENT	ACTION	VALUE
✖ ⊕ Light_ONOFF_Cmd_Garden_Est	garden light		⊖ Off ⊕
Drop here objects from search results or free menu			

Weather service

Webhooks

Also in this case you need to specify an event name, and the action value to send to the object when recalled by IFTTT. If you choose "current value", the value will be passed in the URL called by IFTTT.

By pressing the link button next to an object, is displayed a dialog box, in which you can copy the URL to insert into IFTTT. DELÉGO SERVER must be preliminarily configured to be accessible remotely, via public IP, dynamic DNS or cloud service.

When creating the applet in IFTTT, after choosing the starting service, pressing "that" and choosing "webhooks" as a service, you are asked to paste the previous address; inside it, if necessary, it is possible to replace fixed values with "ingredients" that derive from the starting event, to make the call dynamic based on the triggering cause:

You can enter a # where you want to hear the number in the response

Language
Italian

Make a web request
This action will make a web request to a publicly accessible URL. NOTE: Requests may be rate limited.

URL
`https://piko.dyndns.org/www/modules/iftt/server.maker.php?key=XXXXXXXXXXXXXXXX&event=luce_esterna&value=#[[NumberField]]`
Surround any text with "<<>>" to escape the content [Add ingredient](#)

Method
GET
The method of the request e.g. GET, POST, DELETE

Content Type (optional)
Please select

Optional

Body (optional)
Surround any text with "<<>>" to escape the content [Add ingredient](#)

To monitor the correct functioning of the rules in both directions, it is possible to use two tools:

- 8 the LOG in button DELÉGO SERVER, which shows a series of messages collected on the server during communication with IFTTT.
- 9 the "activity" section in IFTTT, which records all the events of the service.

8 Revision History

The following table contains the most relevant changes in the software releases, concerning the topics of this application manual:

Release	Changes	Date
2.8.0	Minor changes	15/04/2026
2.7.0	Added section for ETS remoting	01/09/2025
	Updated Telegram service	
	General adaptations to the new software version	
2.6.0	Introduced cloud backup service	02/04/2025
2.5.2	New Cloud VPN service for remote configuration of KNX devices and other appliances in the home network	14/02/2025
2.5.1	Coordinates from location in project settings	16/12/2024
	Email notifications via Ekinex cloud	
	Weather service via Ekinex cloud	



Before the software release 2.6 the application manuals of DELÉGO SERVER were organized differently. An exact correspondence with older versions of the manuals and the changelog could not be found for this reason.