Loxone

About

The integration of **2N** with the **Loxone** automation system.

Key Features

Call Notifications:

- When the call button on the 2N intercom is pressed, a **Push Notification** is sent to the **Loxone mobile application,** notifying the user about an incoming call.

Live Video Streaming:

- Users can view live video from the intercom's camera directly within the Loxone mobile application.
- This functionality is available **both locally and remotely** (outside the local network) by utilising the **Loxone Remote Connect**.

Two-Way Communication:

- With the Loxone mobile application, users can **establish two-way audio and video calls** to the 2N intercom to communicate seamlessly with anyone at the door.
- This functionality is available over the **local network**. If you would like to set up an external connection (outside the local network), you must **utilise** an **external SIP provider.**

> ⚠️ **We cannot offer any support, warranty or liability for external services.**

Door opening:

- Users can **securely open the door of 2N devices** via a dedicated button in the **Loxone mobile application.**

I/O monitoring:

- The Loxone Miniserver can **monitor the status** of inputs and outputs on 2N devices, allowing for customised actions within the system.

Home Automation Control:

- Customizable buttons on the 2N Indoor units allow users to **control their Loxone home** directly by sending **commands to the Loxone Miniserver.**

Calling

To complete the setup, follow these three stages: first, prepare the **Loxone** system, then apply the necessary settings inside the **2N intercom**, and finally, complete the configuration back in **Loxone**.

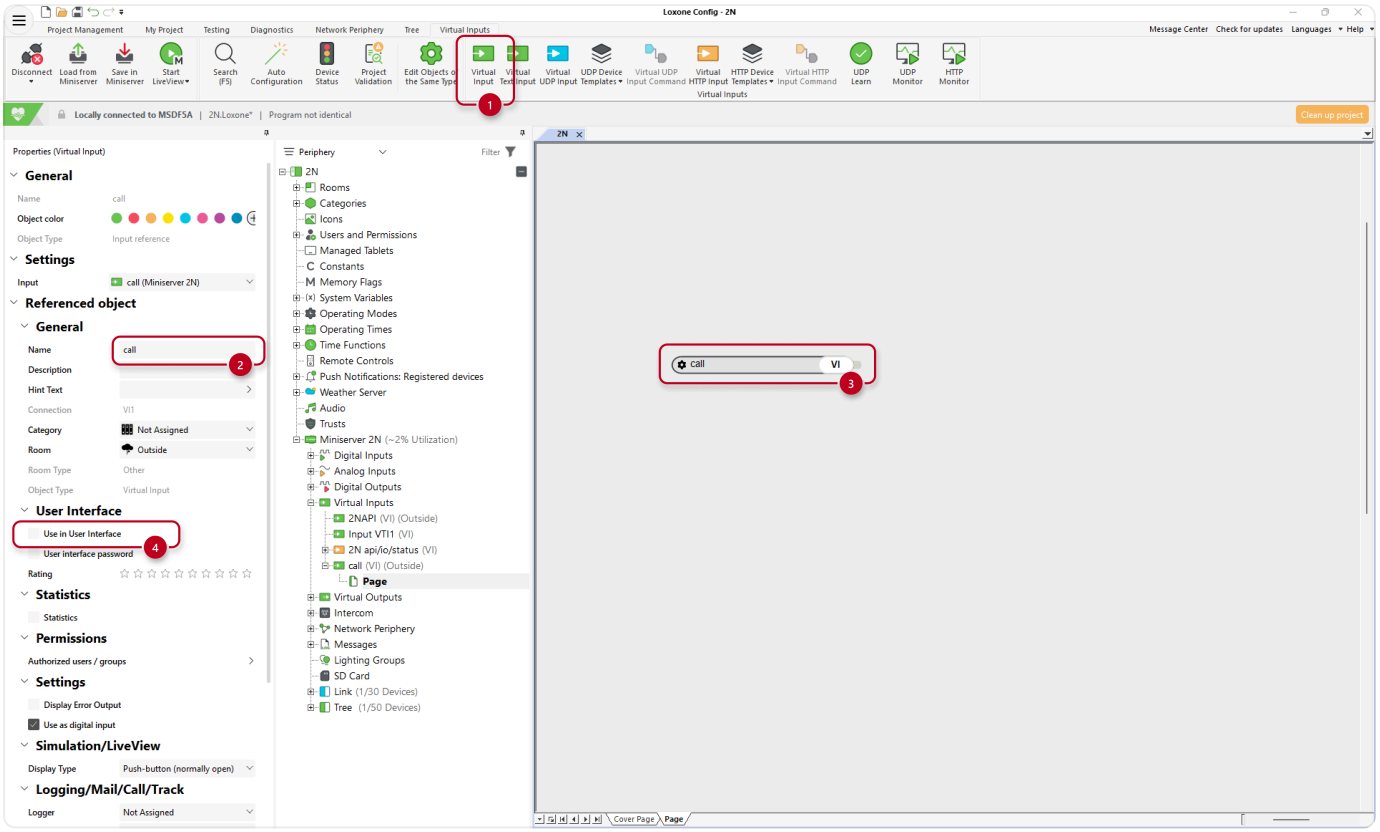
1. Loxone Miniserver

Virtual Input

To notify the Loxone system about an **incoming call**, the 2N intercom triggers the **Loxone virtual input** via HTTP API. Follow the steps below to create a virtual input:

1. Create **Virtual Input**.

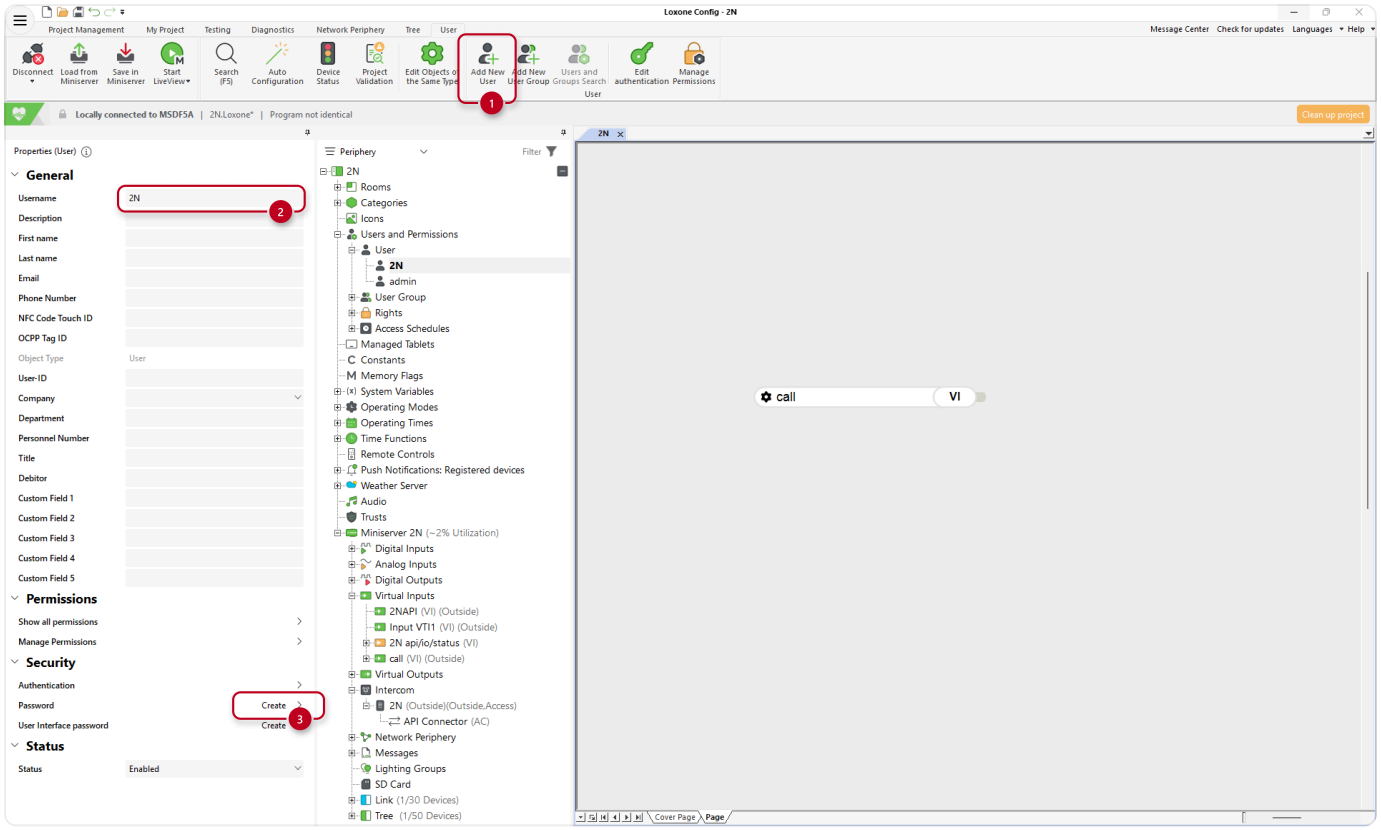
2. Give it a name, for example, “call”.
3. Drag and drop the input to any available page.
4. **Disable** this input from being used in the **user interface**.



Creating user

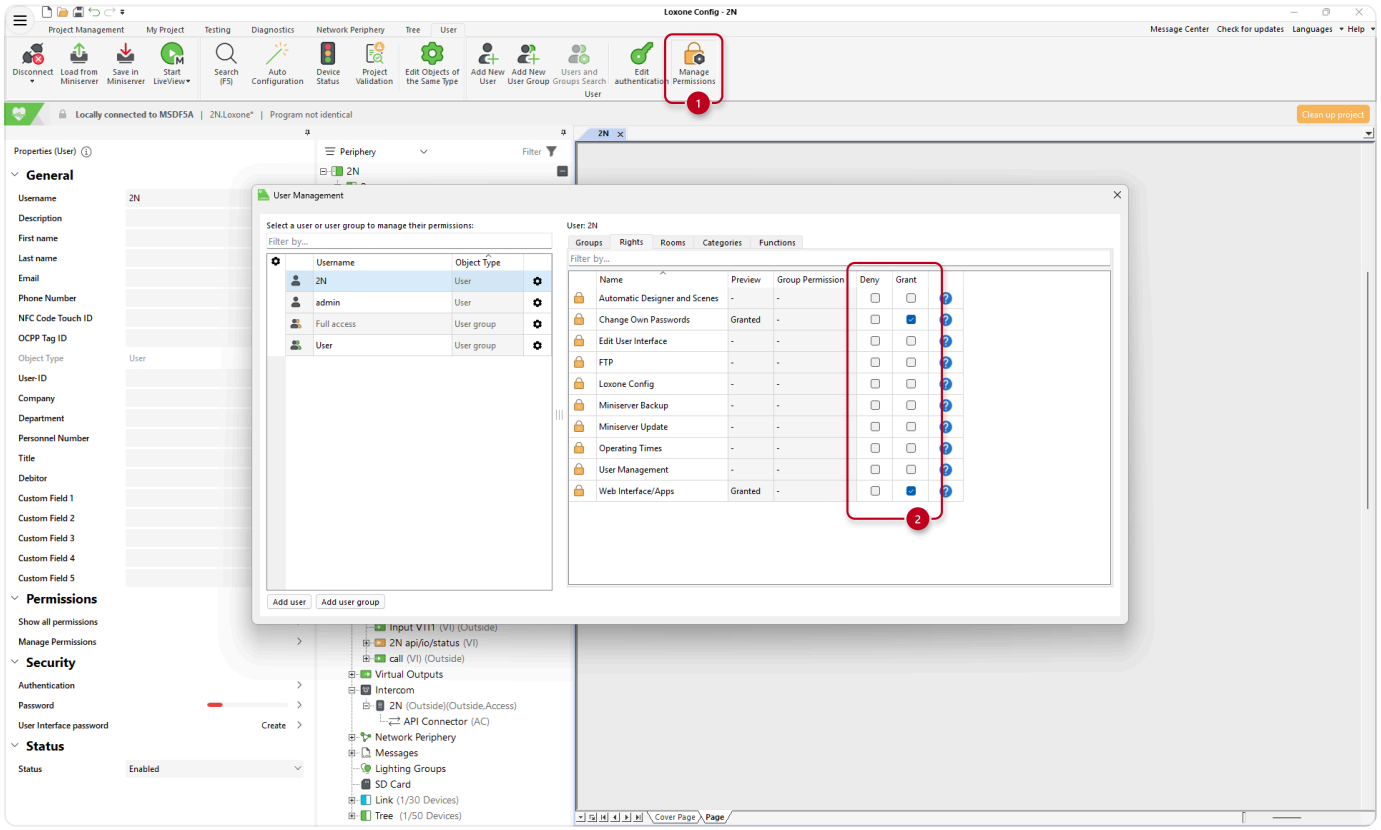
To **authenticate** the HTTP API request to trigger a virtual input from the 2N intercom, it is recommended to create a separate **user and password**. Follow the steps below to create a new user:

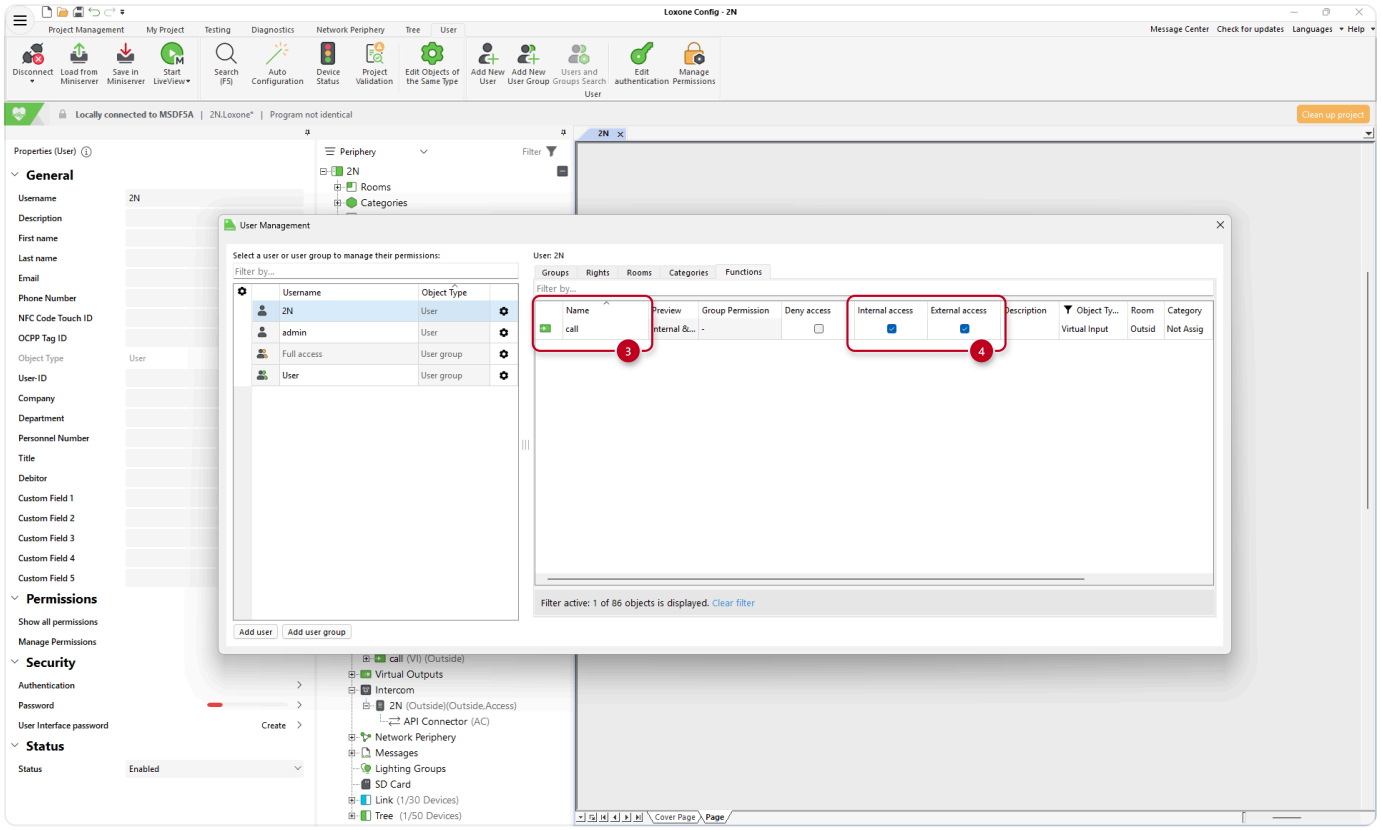
1. Add **New User**.
2. Change the username, for example, “2N”.
3. Set your **password**.



Set rights & permissions

1. Select the newly created user and open the permission manager.
2. **Grant** access rights to the **Web Interface/Apps** and allow changing own passwords (optional).
3. Find the previously created **virtual input “call”.**
4. Grant **Internal and External access** for user “2N” to use the virtual input.



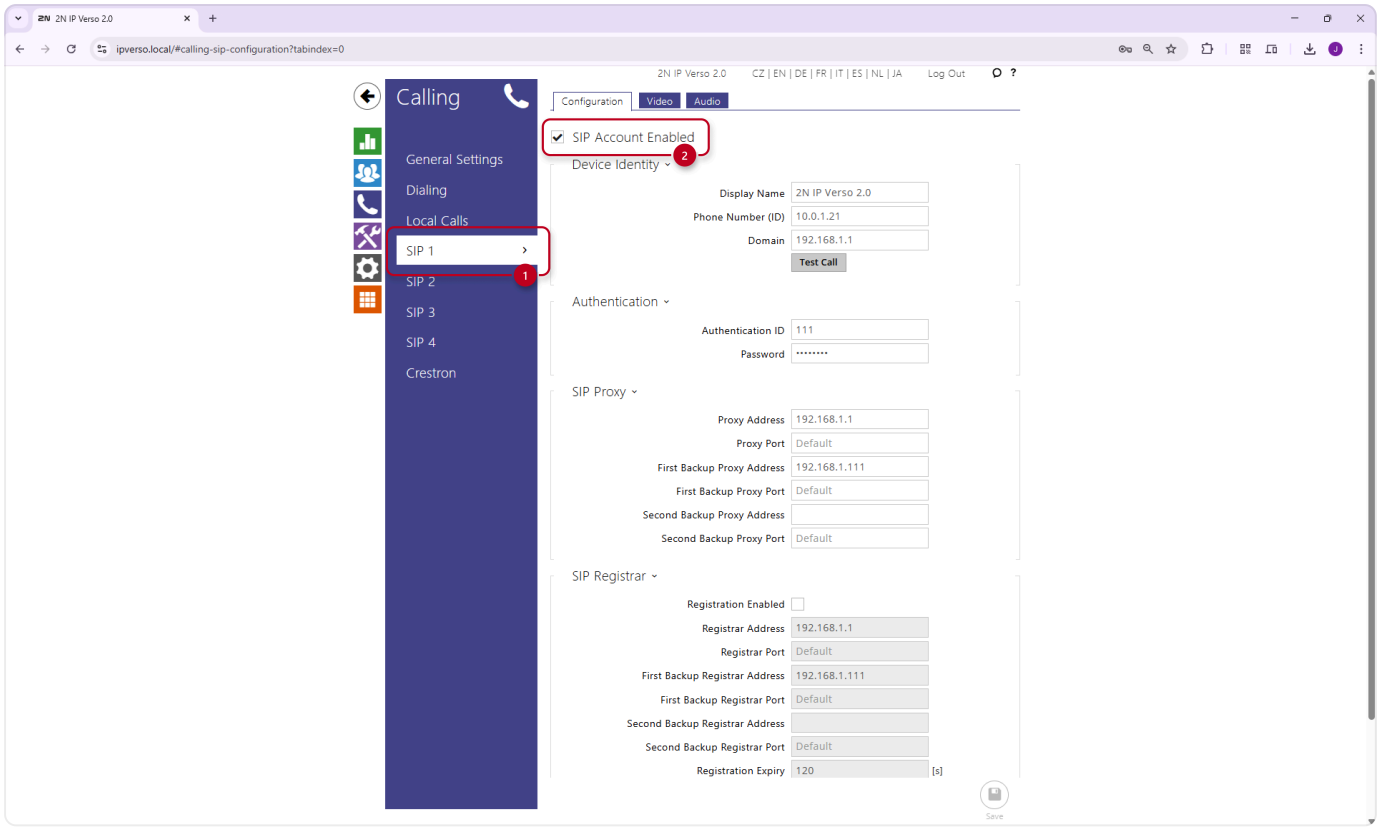


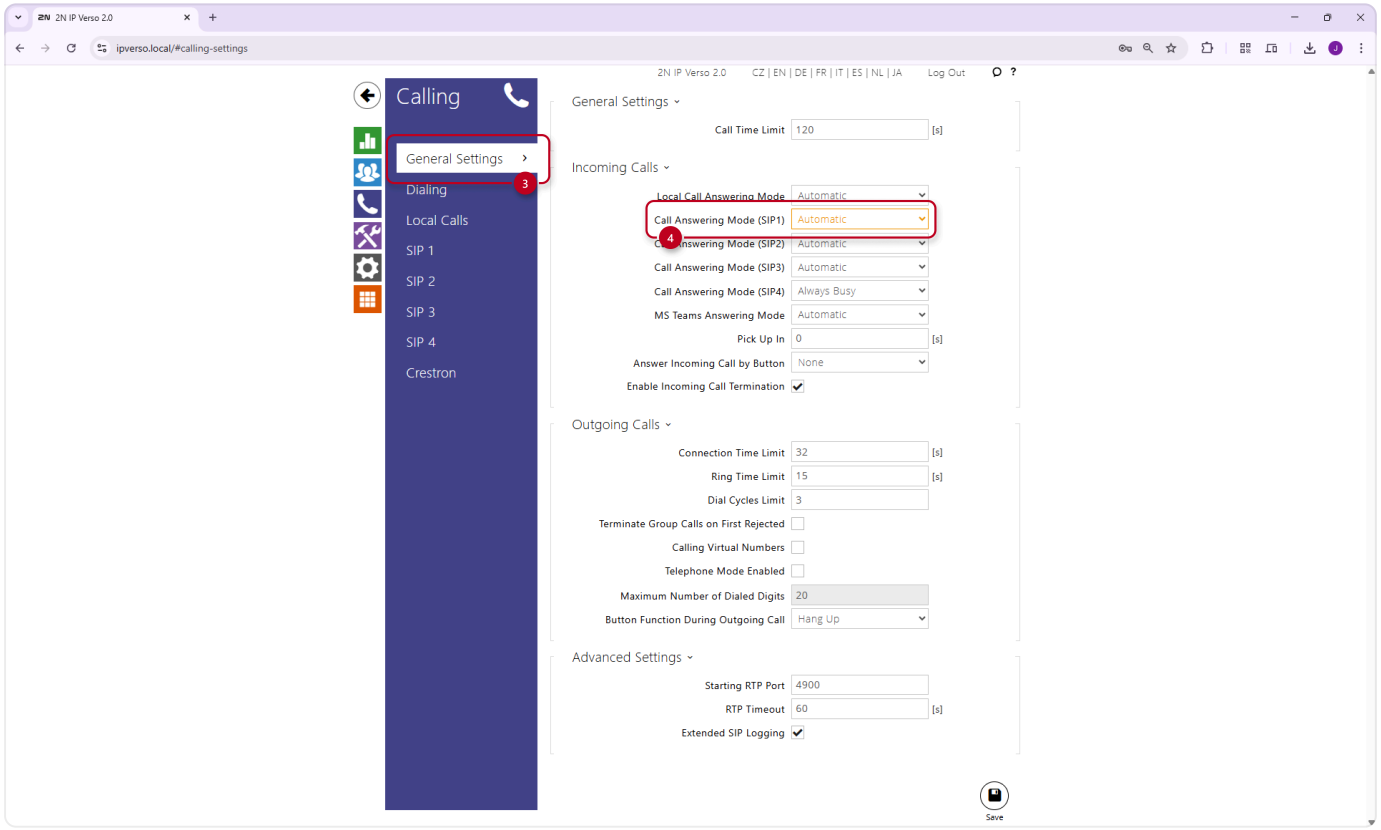
2. 2N Intercom

Local Calling

To allow the intercom to make or receive calls within the local network, you must enable the SIP 1 account.

1. Navigate to the section **Calling** and open the **SIP1 account**.
2. **Enable** the SIP account.
3. Set the **Automatic Answering Mode** for the **SIP1 account** in the general settings.





External Calling

For the intercom to make or receive calls while connected externally, you need to use an external service (for example Antisip).

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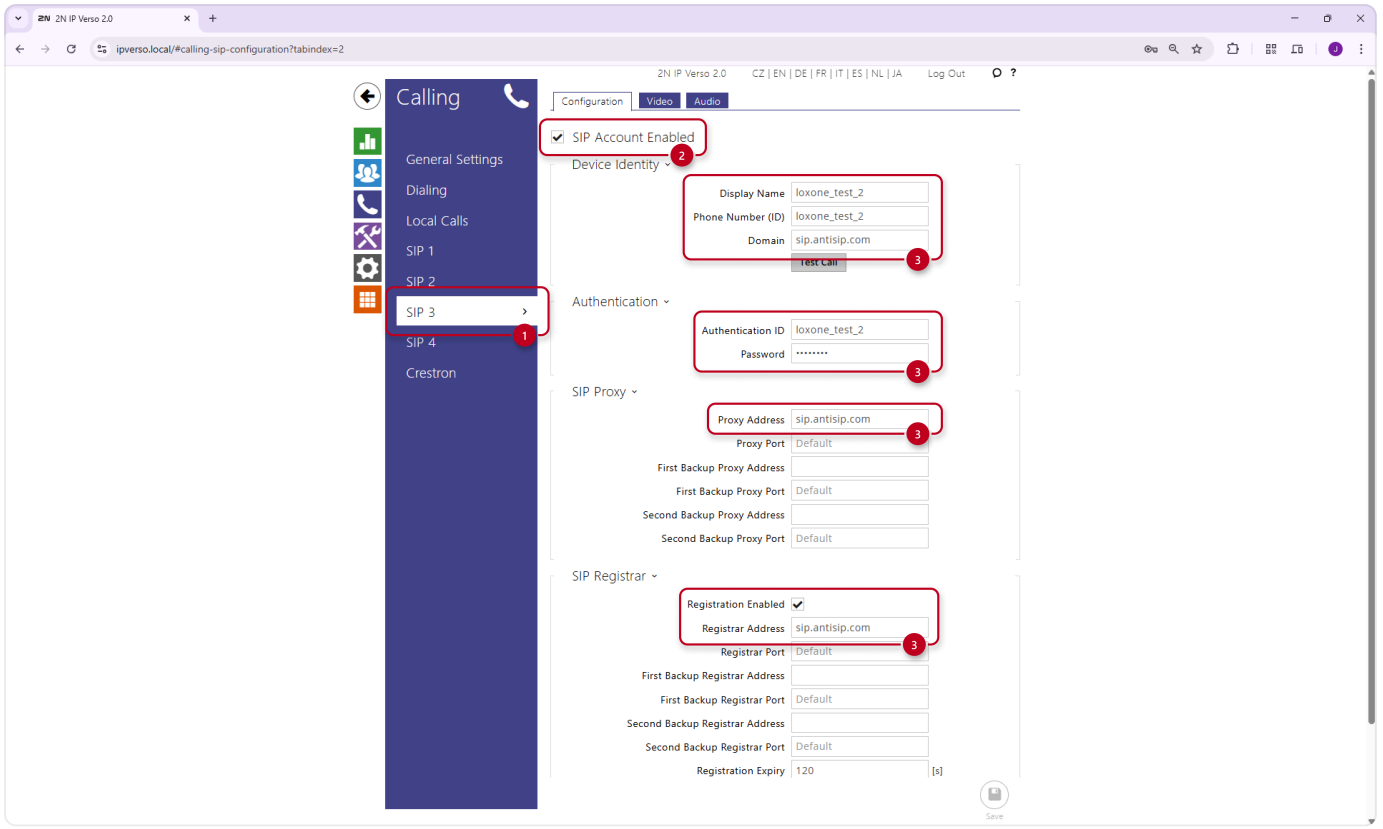
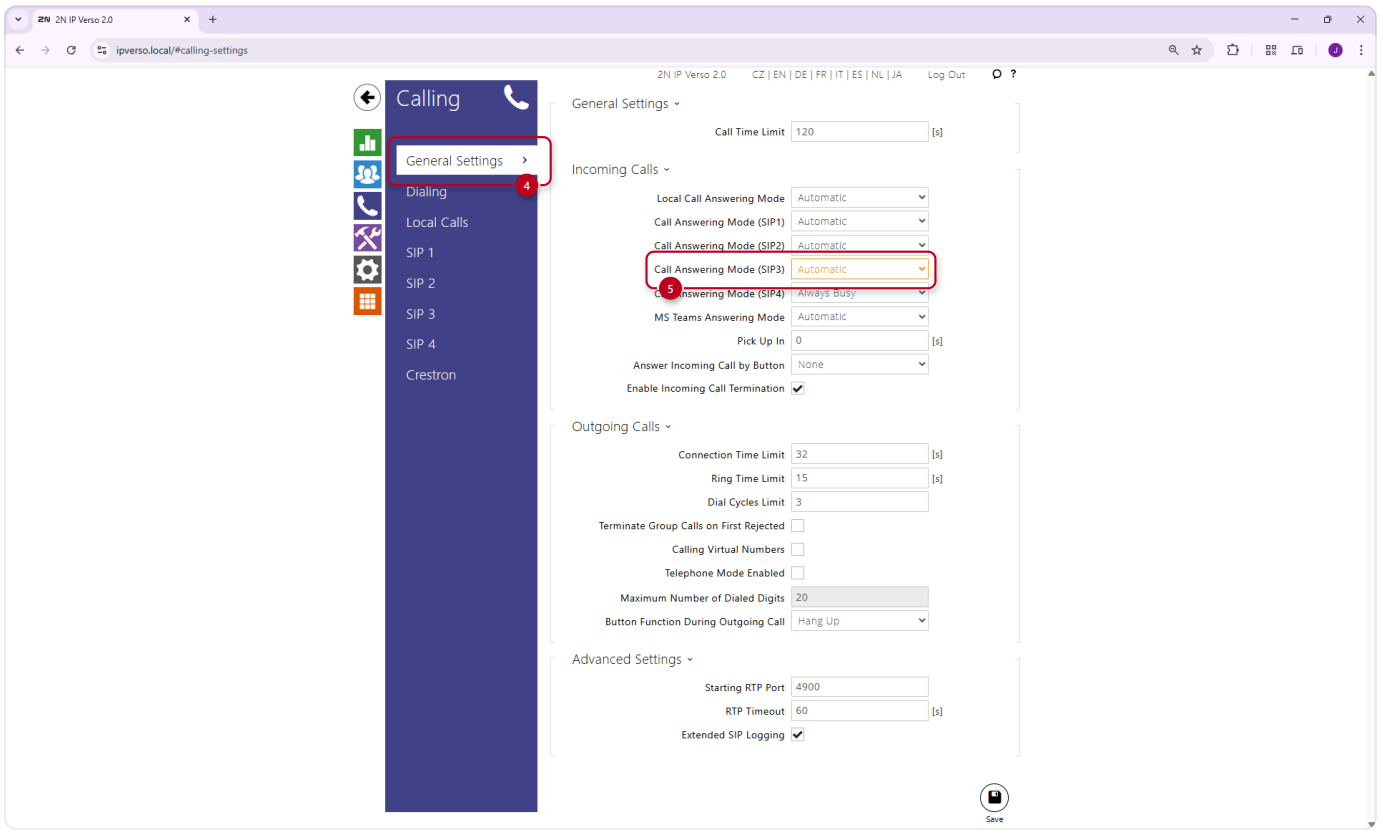
1. Navigate to the section **Calling** and open the **SIP3 account** (recommended).
2. **Enable** the SIP account.
3. Configure the SIP account using the **credentials provided by the external service** (for example Antisip).
4. Set the **Automatic Answering Mode** for the **SIP3 account** in the general settings.

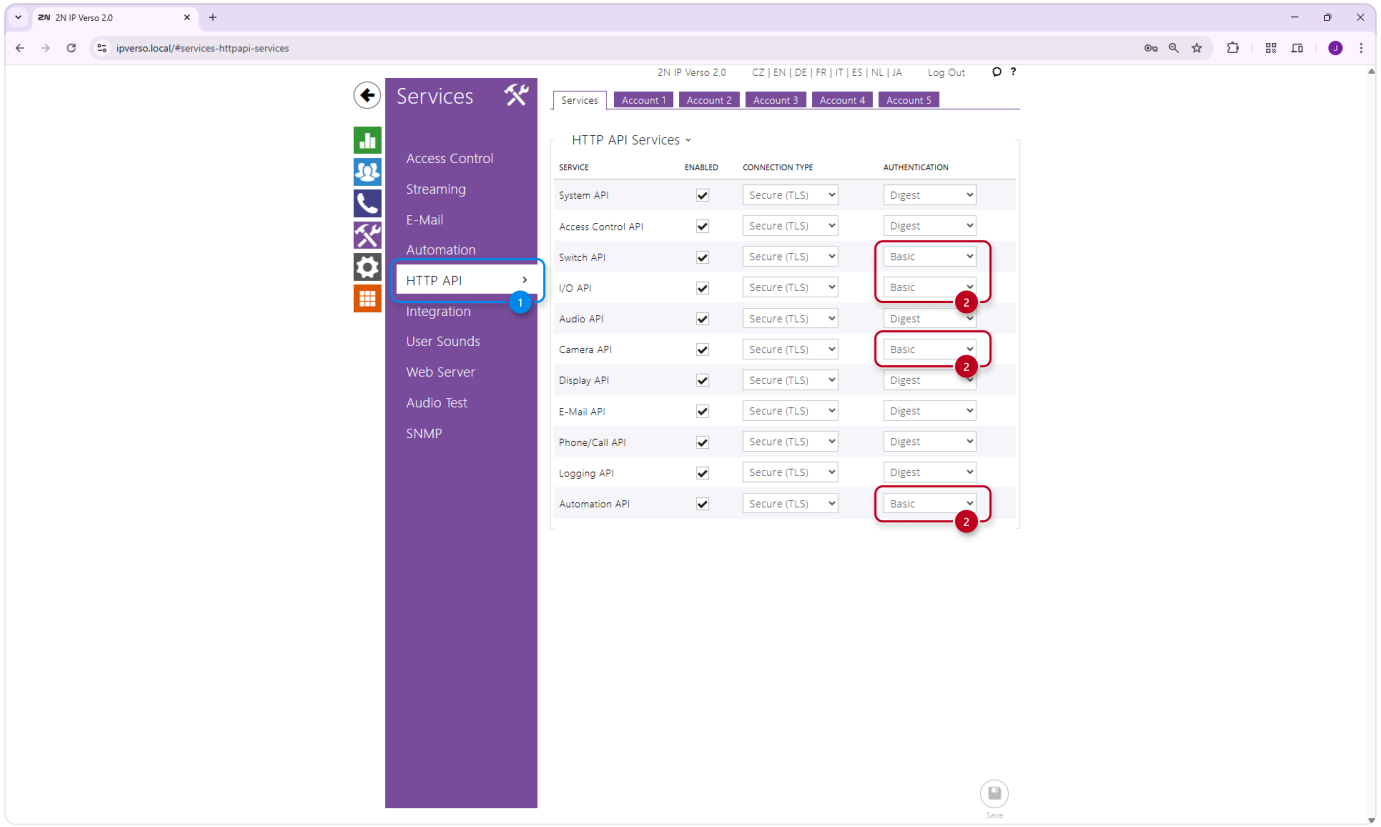




HTTP API Services

To **open the door**, **monitor inputs and outputs** and **control 2N devices** from Loxone, you need to configure the HTTP API Services as follows:

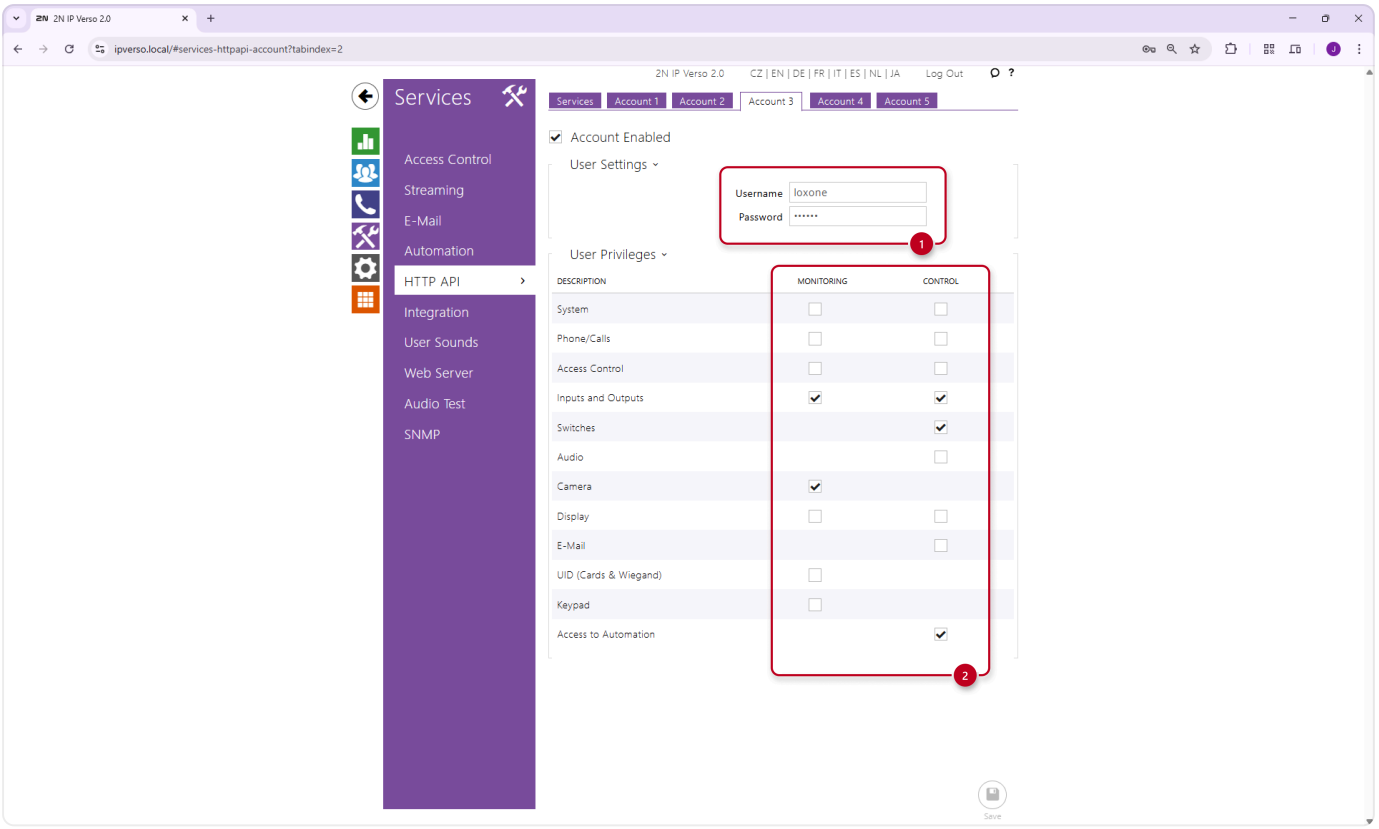
1. Navigate to the **HTTP API** section.
2. Change the authentication method for the selected services to **Basic.**



API Account

To authenticate the HTTP API commands sent to the 2N device, you need to create a separate account for the **Loxone Miniserver:**

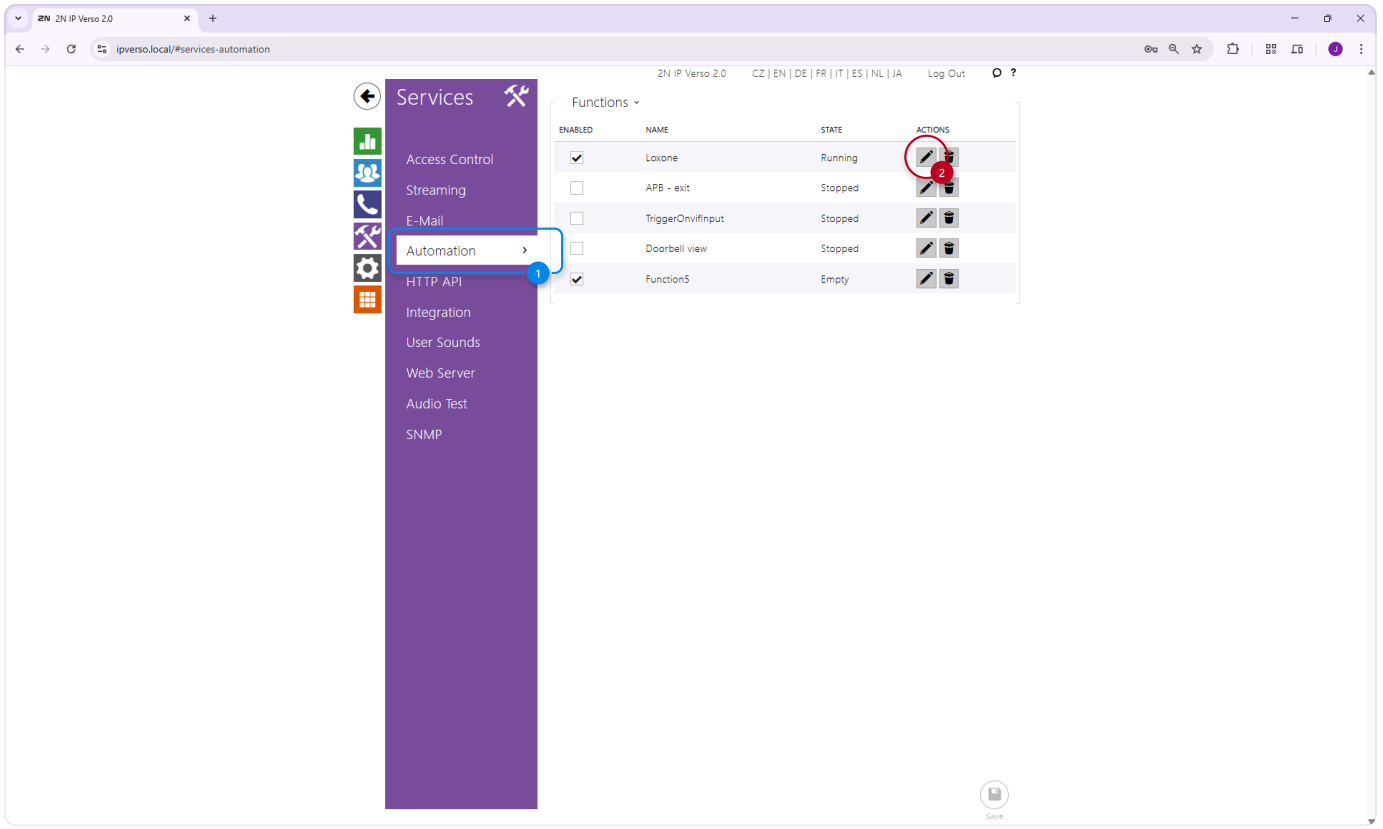
1. Create your **username and password**, for example, “loxone”.
2. Grant access to **selected services** for this account.

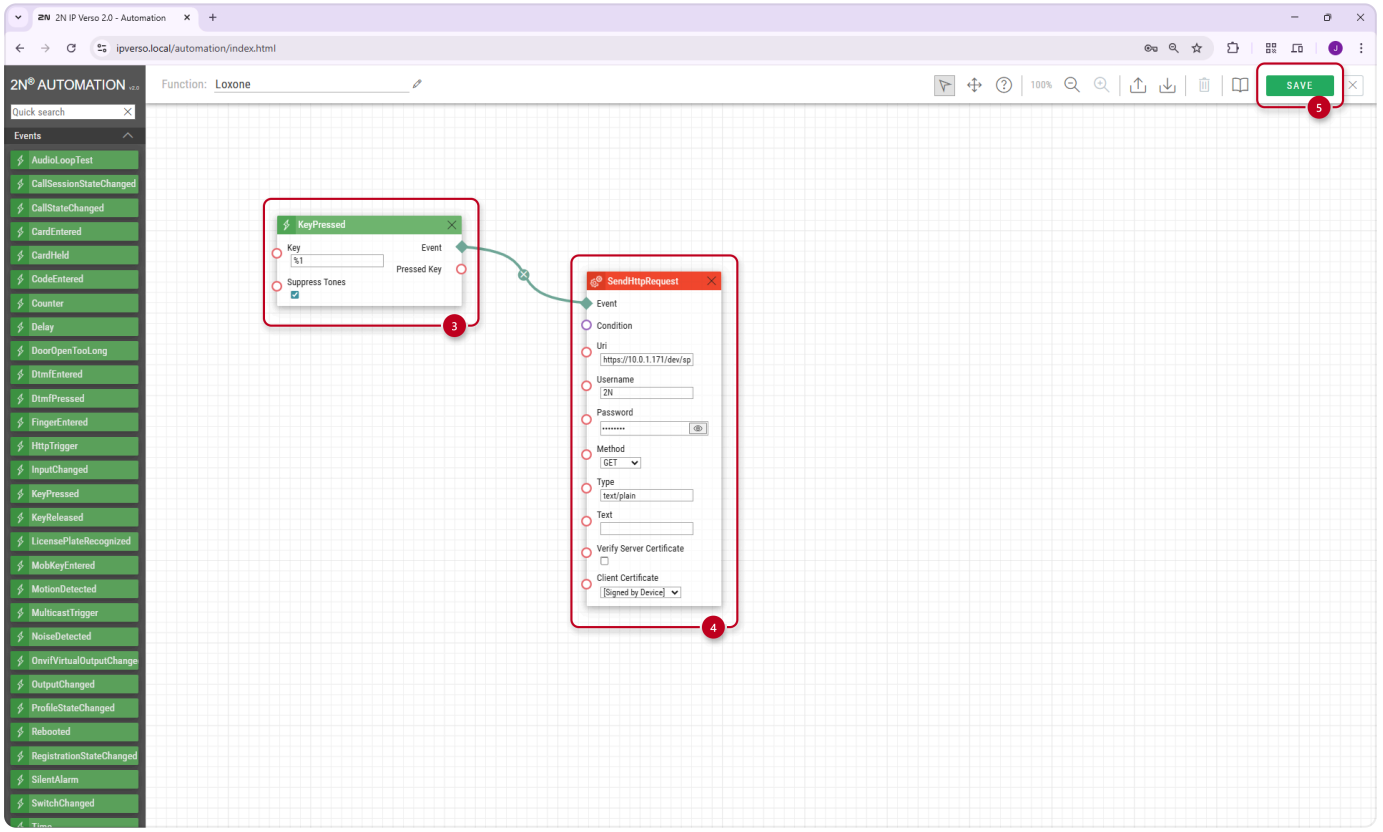


Automation (calling)

To notify the Loxone Miniserver about an **incoming call**, you must create an automation that triggers the previously created virtual input “call”.

1. Navigate to the **Automation** section.
2. Select any **available** slot and click on the **edit function** button (pencil).
3. Drag and drop the **KeyPressed event** onto the page; for the **first Quick Dial Button**, set the input parameter to “%1”.
4. Drag and drop the **SendHttpRequest action** onto the page, configure it, and **connect** it with the **KeyPressed event**:
   a. As URI use the **IP address** of the **Loxone Miniserver** followed by “/dev/sps/io/**call**/pulse” (http**s**://**<ip_address>**/dev/sps/io/**<input_name>**/pulse).
   b. Use the **Username and Password** for the user "2N", which was previously set up in Loxone.
   c. If you are **not using** custom SSL certificates, **disable** certificate **validation.**
5. **Save the automation** and proceed to the last step.





3. Loxone Miniserver

Adding Intercom

1. Under the Intercom section, add **User Defined Intercom**.
2. Add name to the 2N intercom, for example, “2N”.
3. Properly configure its properties:

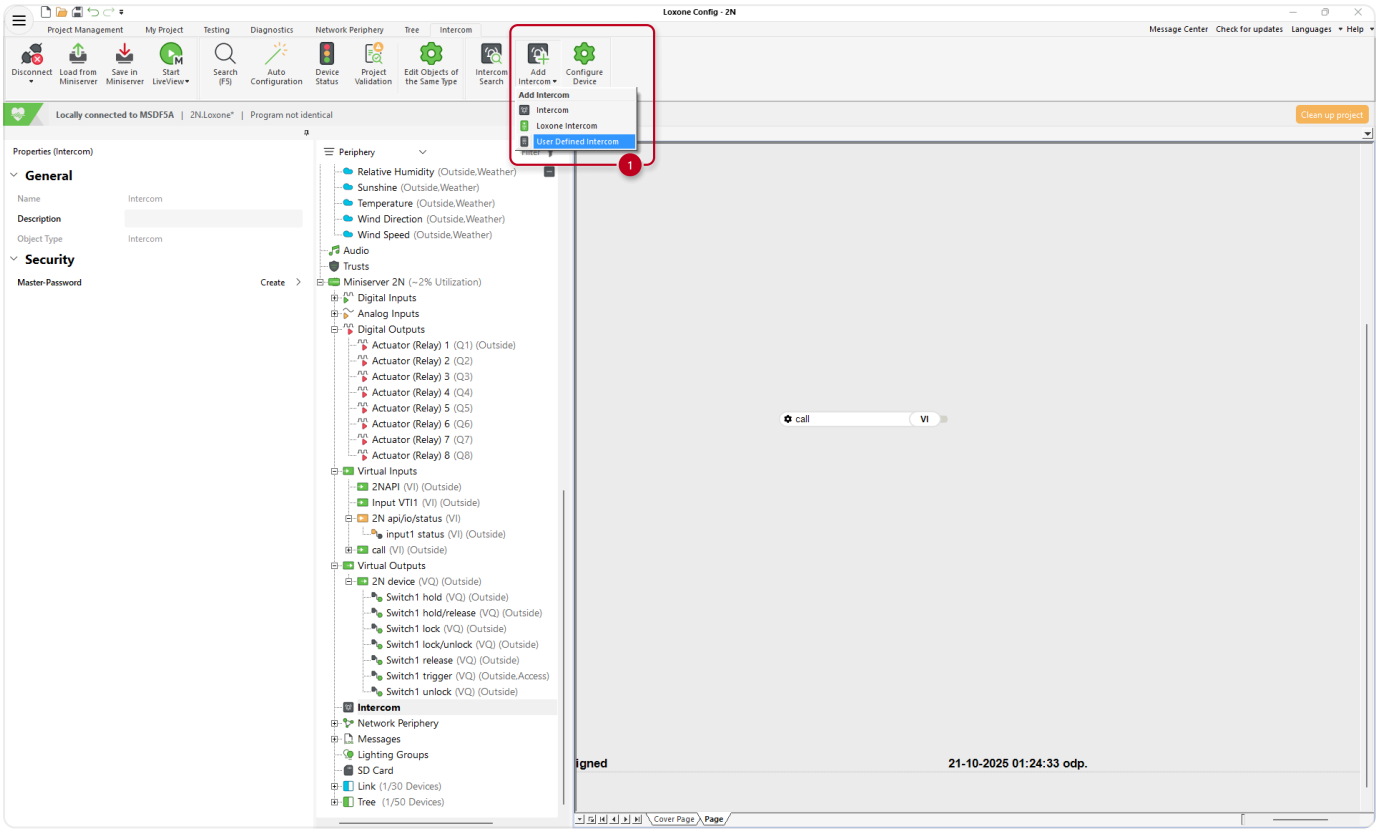
a. To construct the **video stream URL**, use the intercom's **IP address** (substitute the IP address with "**remoteconnect**" for external connections), followed by “/api/camera/snapshot?width=1920&height=1080&fps=15” (supported **resolution may vary** based on the intercom model).

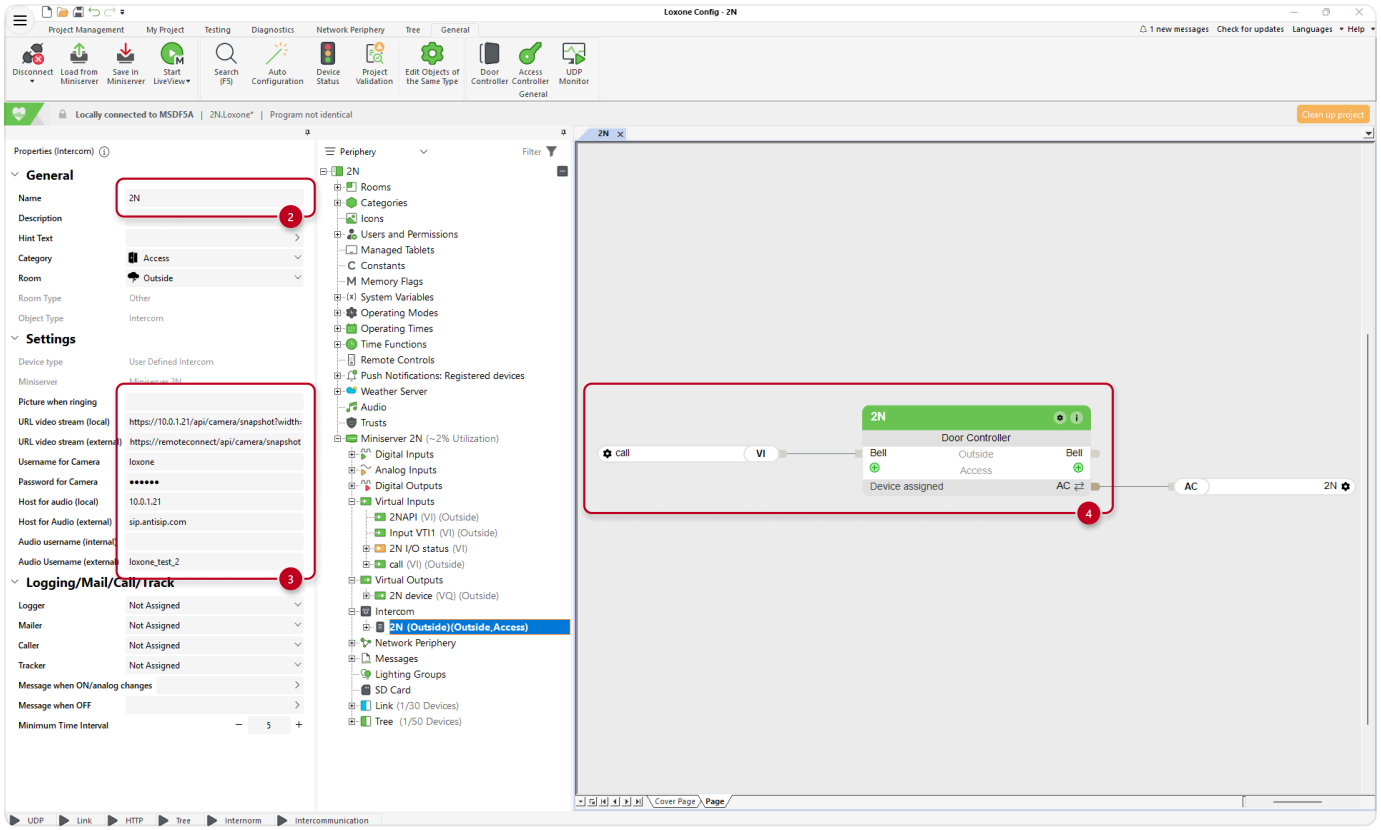
b. To view the video, you must **authorise** using the previously created **2N API account.**

c. The host address should be the **intercom's IP address**. For external calls, use the host address **provided by the external service.**

d. For local calls host username is **not required**. For external calls, use the username **provided by the external service**.

4. **Connect** the **virtual input** “call” with the “Bell” **input** on the Intercom block.

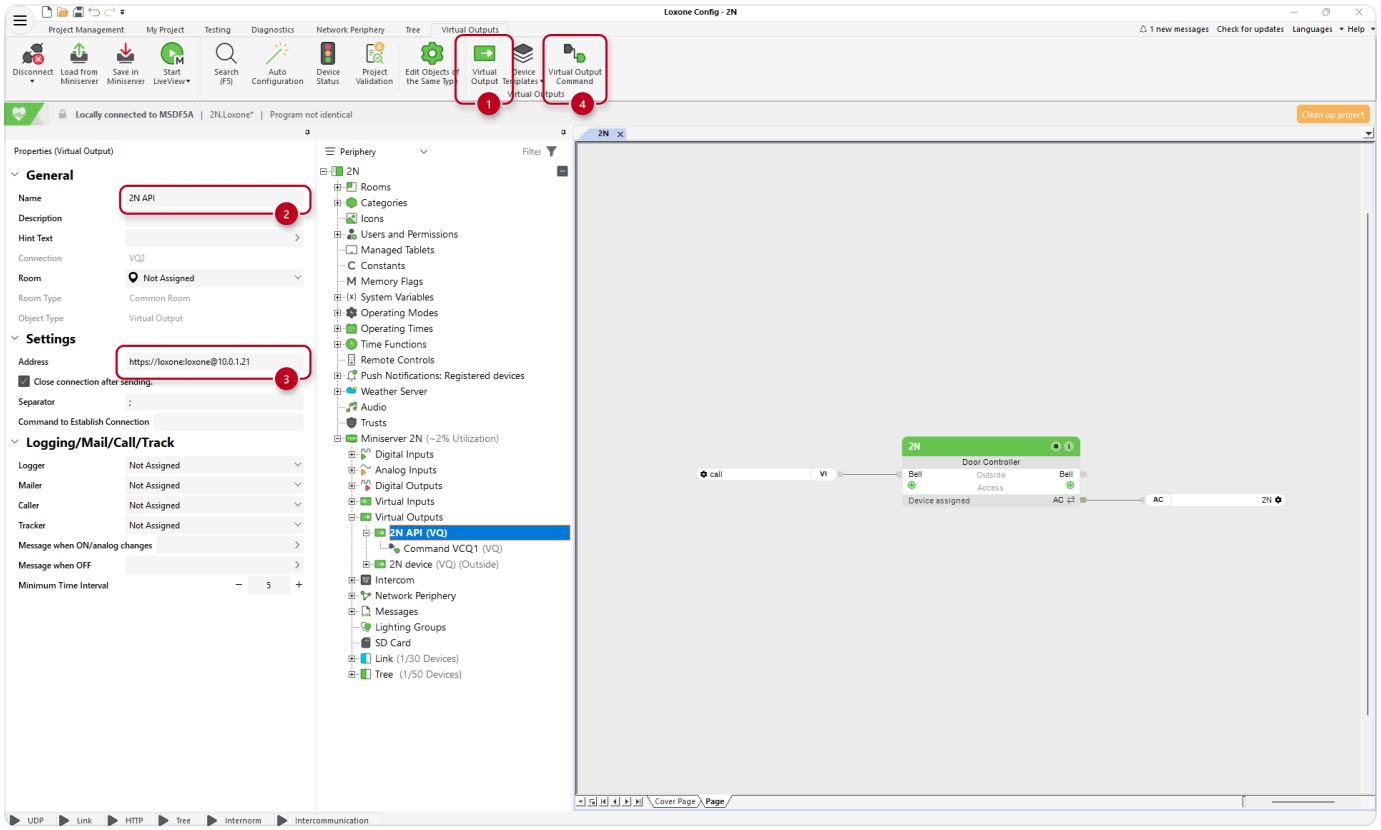


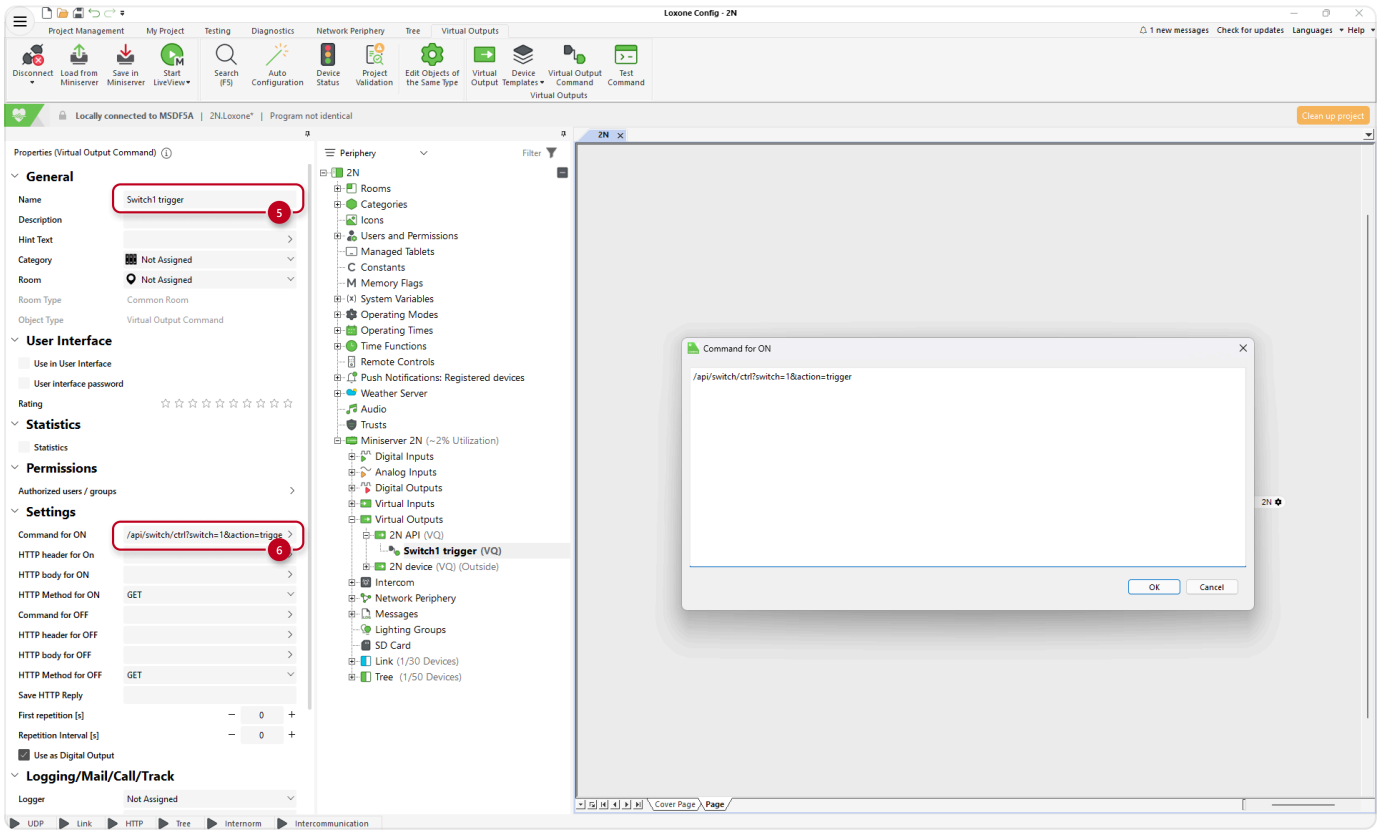


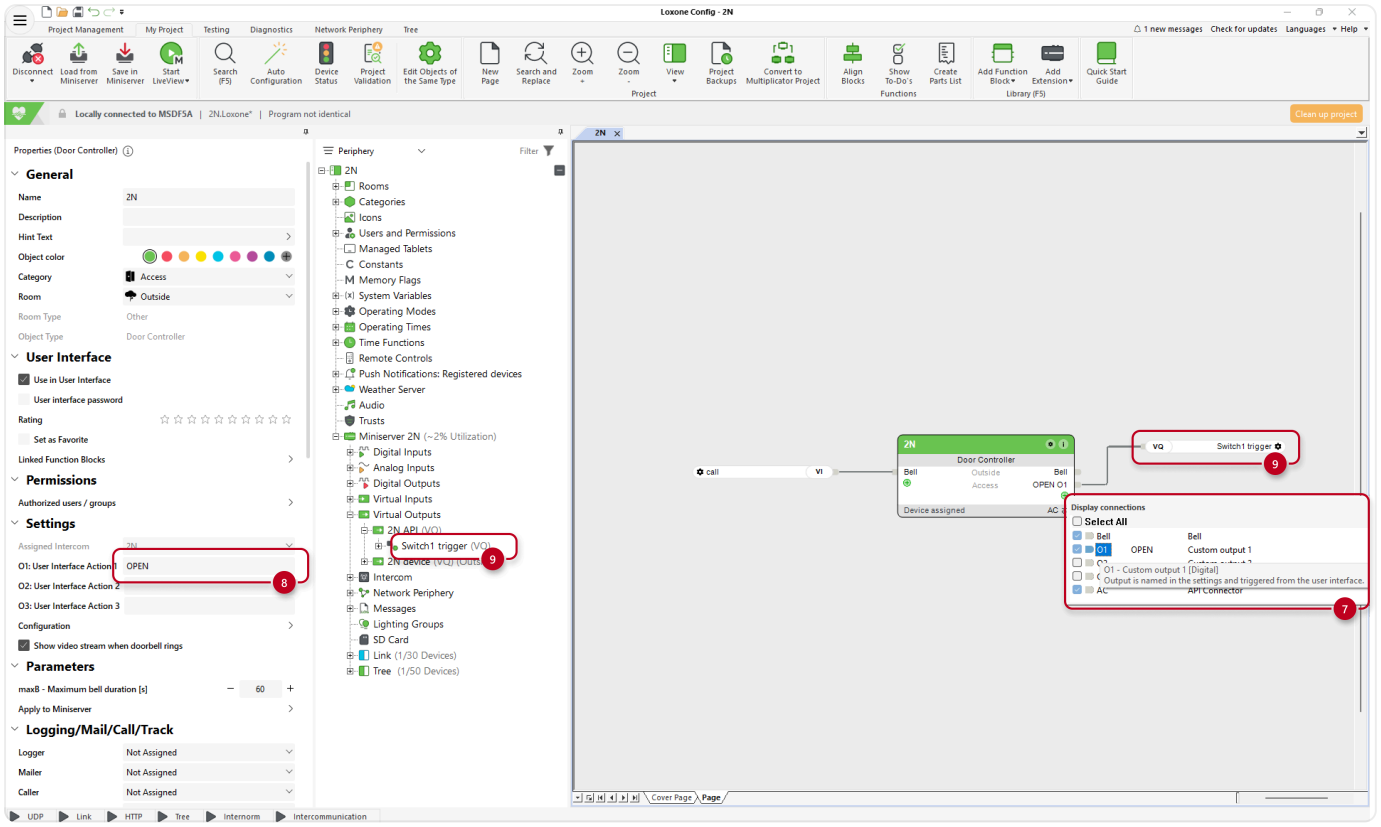
Intercom control

To control the 2N device, for example, to **open the door** during a call from the **Loxone mobile application**, you must create a **virtual output** that sends **HTTP API commands** directly to the 2N device.

1. Create the **Virtual Output**.
2. Conveniently name the output, for example, “2N API”.
3. You must include the Loxone account's **username and password** directly before the 2N device’s IP address, following the **Basic Auth format:**
    a. http**s://<username>:<password>@<ip_address>**
4. Add **Virtual Output Command**.
5. Give it a name based on what the command does, for example, “Switch1 trigger”.
6. Add the HTTP API command:
    a. To trigger **switch1**, add “/api/switch/ctrl?switch=1&action=trigger”
7. Click the "plus" icon under the intercom configuration and **enable the custom output**, which will create a **button in the user interface**.
8. Assign it a **descriptive name** that clearly communicates the button's function.
9. Drag&connect the **Virtual Output Command** (Switch1 trigger) with the **OPEN output** (O1).


Loxone Config - 2N
Virtual Output
Virtual Output Command
1
4
Properties (Virtual Output)
General
Name
2N API
2
Settings
Address
https://loxone:loxone@10.0.1.21
3
Close connection after sending.
Logging/Mail/Call/Track
Periphery
2N
Rooms
Categories
Icons
Users and Permissions
Managed Tablets
Constants
Memory Flags
System Variables
Operating Modes
Operating Times
Time Functions
Remote Controls
Push Notifications: Registered devices
Weather Server
Audio
Trusts
Miniserver 2N (~2% Utilization)
Digital Inputs
Analog Inputs
Digital Outputs
Virtual Inputs
Virtual Outputs
2N API (VQ)
Command VCQ1 (VQ)
2N device (VQ) (Outside)
Intercom
Network Periphery
Messages
Lighting Groups
SD Card
Link (1/30 Devices)
Tree (1/50 Devices)
Door Controller
call
VI
Bell
Outside
Access
Device assigned
AC
UDP
Link
HTTP
Tree
Internorm
Intercommunication


Loxone Config - 2N
Virtual Output Command
Test Command
Properties (Virtual Output Command)
General
Name
Switch1 trigger
5
User Interface
Statistics
Permissions
Settings
Command for ON
/api/switch/ctrl?switch=1&action=trigger
6
HTTP Method for ON
GET
HTTP Method for OFF
GET
Logging/Mail/Call/Track
Command for ON
/api/switch/ctrl?switch=1&action=trigger
OK
Cancel
Switch1 trigger (VQ)



Home Automation Control

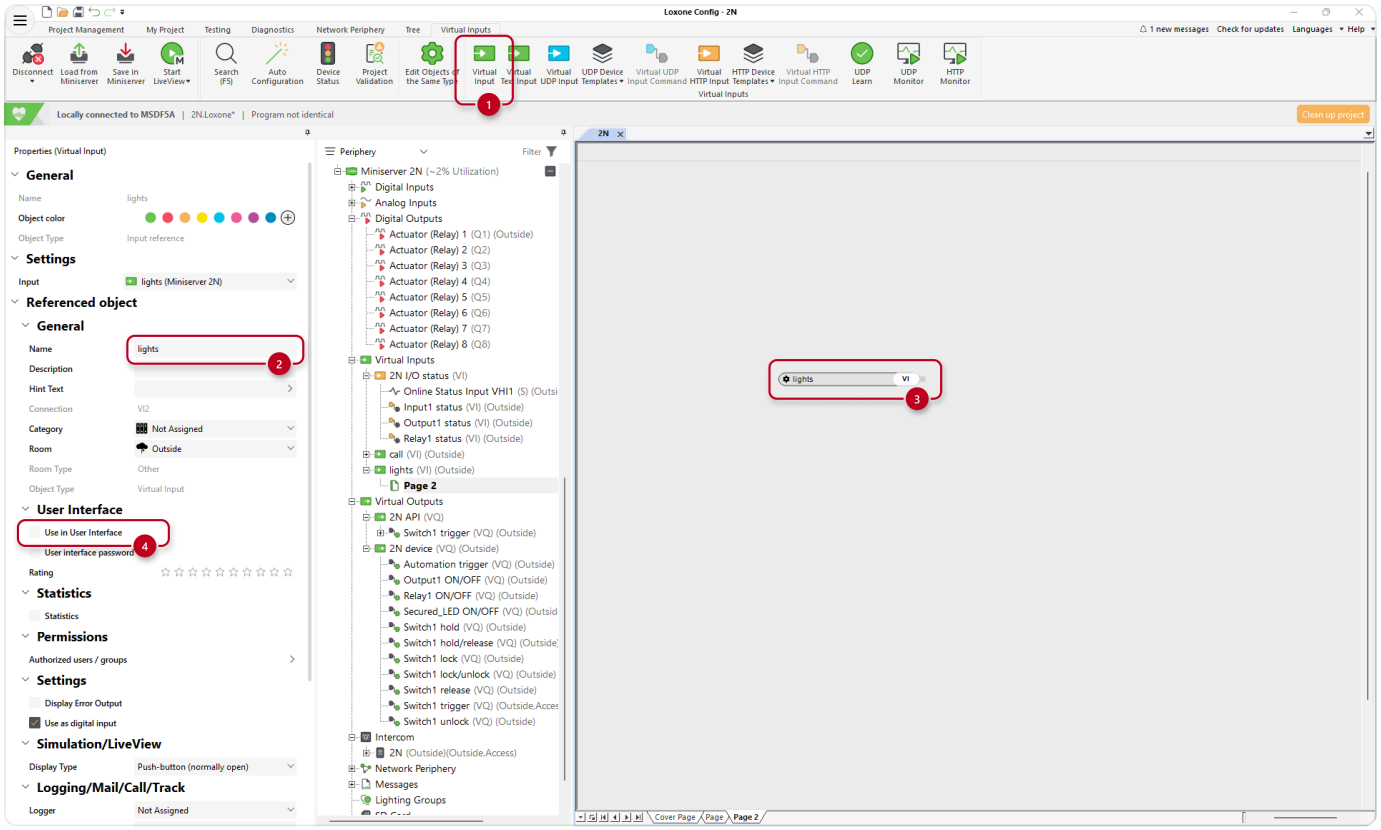
Users can control the Loxone home using **Loxone virtual inputs** from **2N Indoor units** that support sending **HTTP API** commands.

1. Loxone Miniserver

Virtual Input

To control the Loxone system, the 2N Indoor unit must trigger **Loxone virtual input** which is connected with proper **Function Block** via HTTP API. Follow the steps below to create a virtual input:

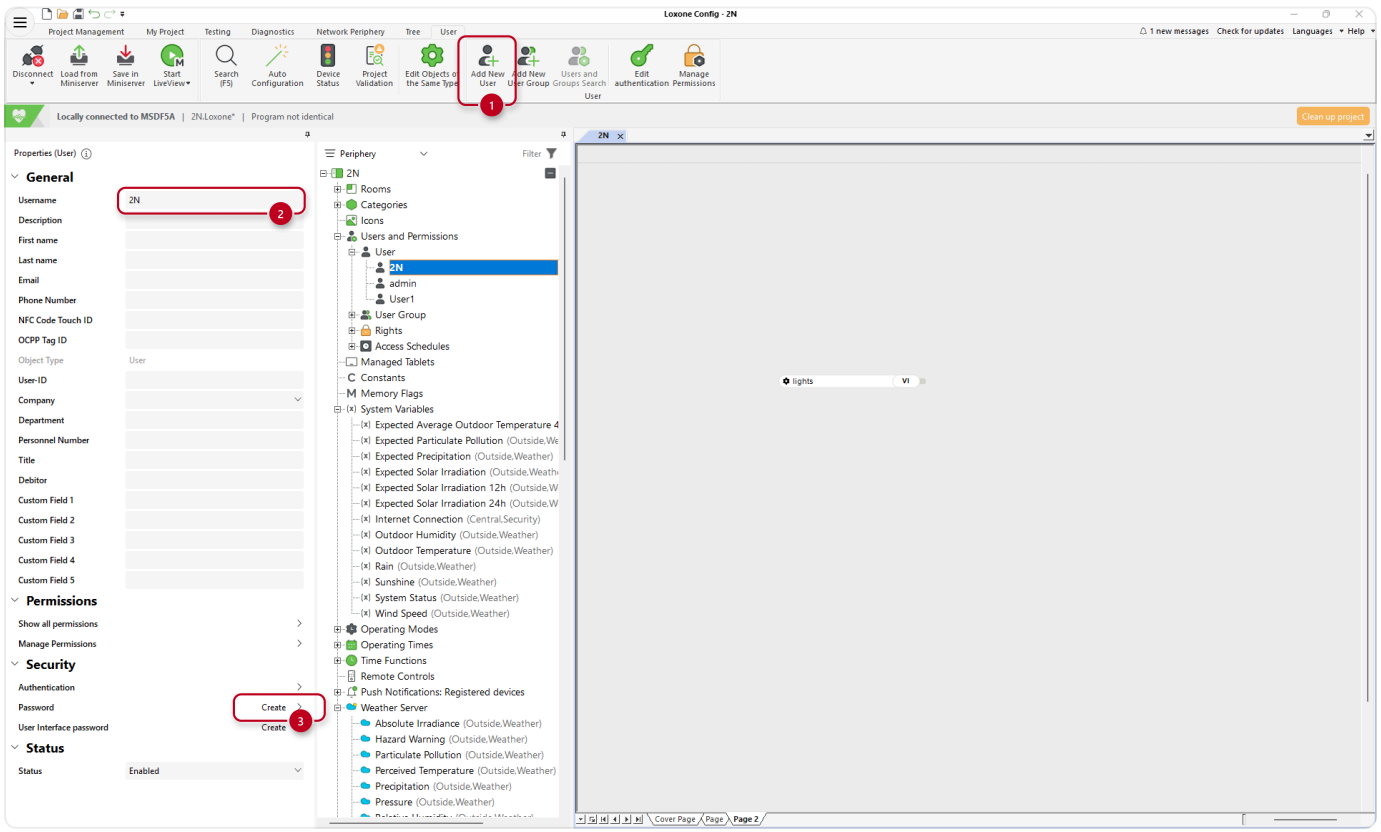
1. Create **Virtual Input**.
2. Give it a name, for example, “lights”.
3. Drag and drop the input to any available page.
4. **Disable** this input from being used in the **user interface**.



Creating user

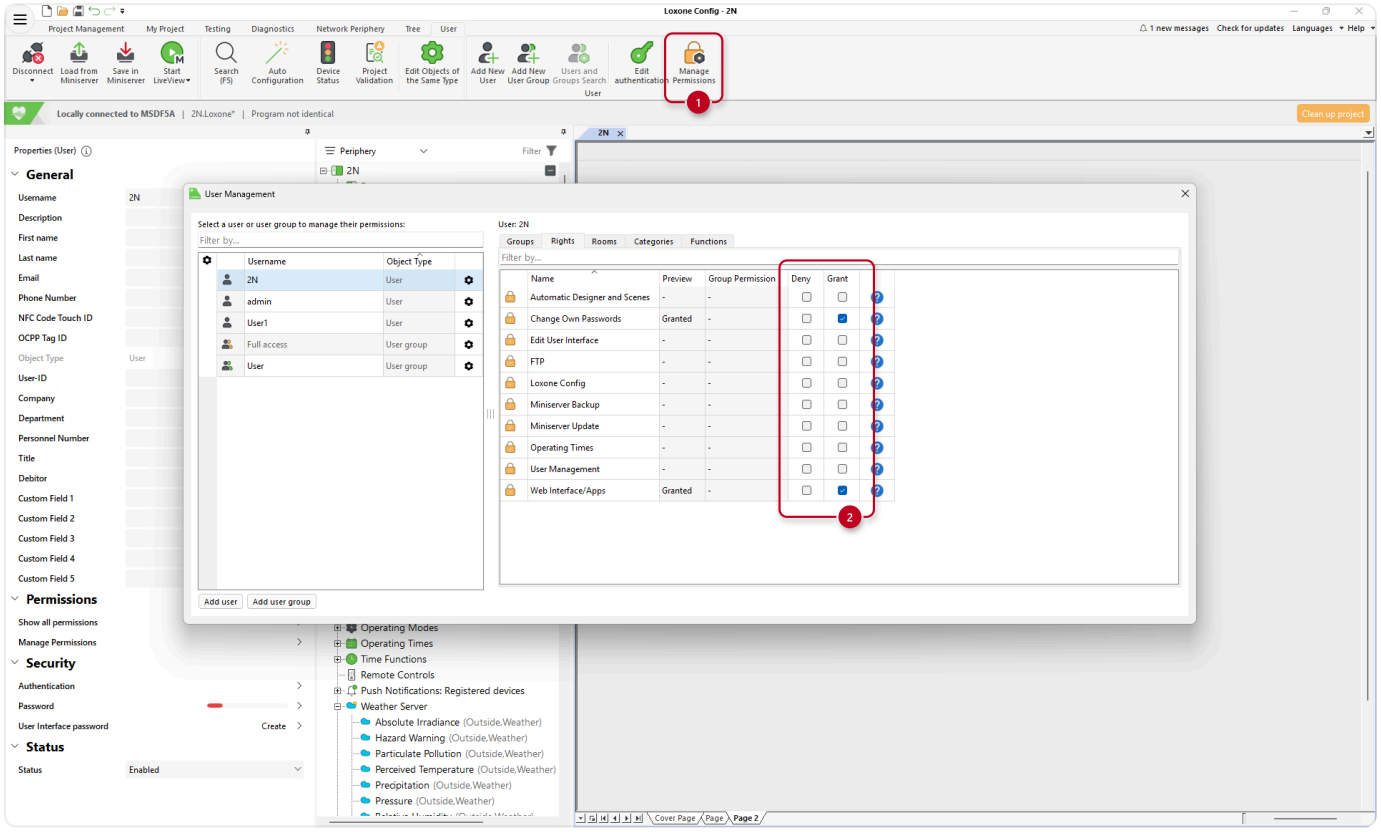
To **authenticate** the HTTP API request to trigger a virtual input from the 2N Indoor unit, it is recommended to create a separate **user and password**. Follow the steps below to create a new user:

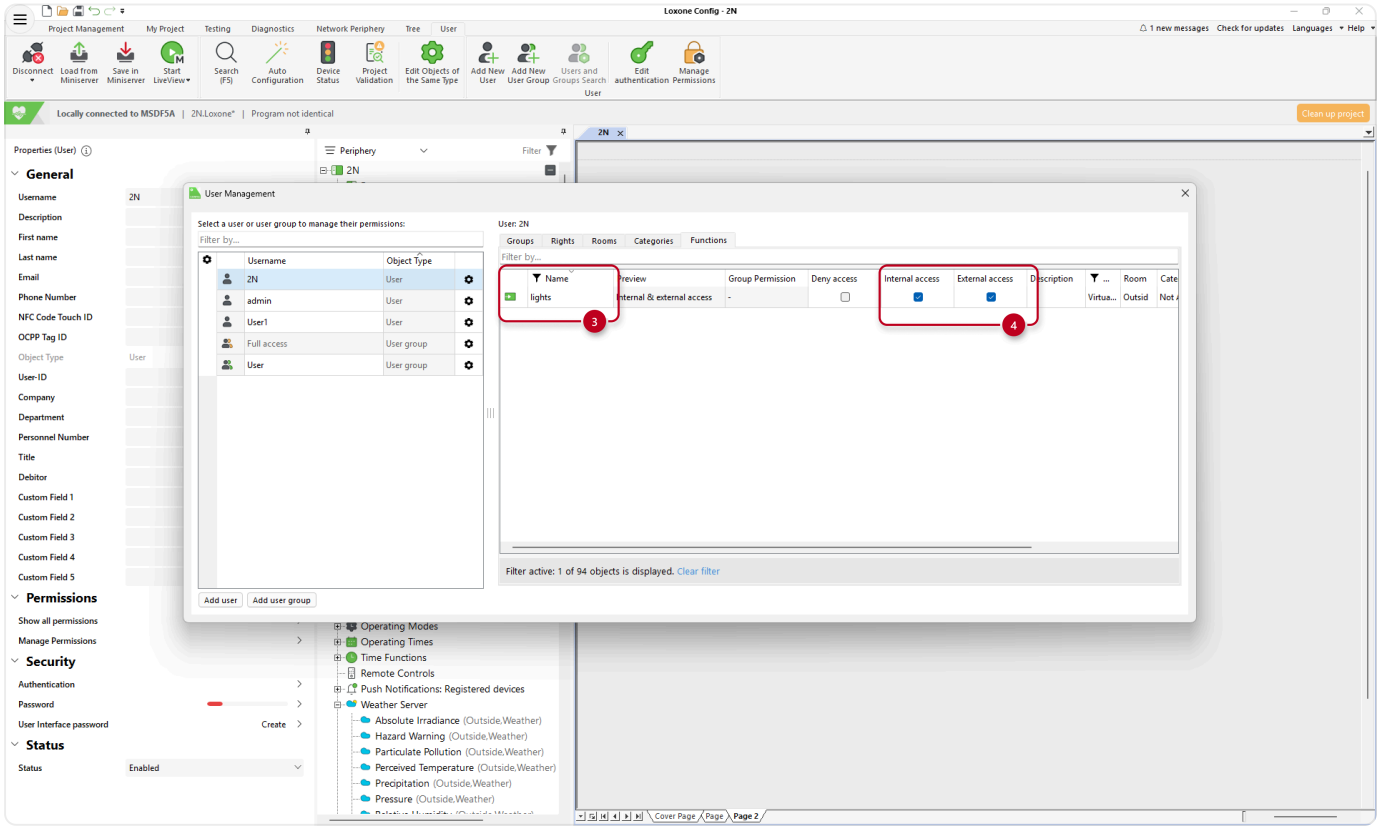
1. Add **New User**.
2. Change the username, for example, “2N”.
3. Set your **password**.



Set rights & permissions

1. Select the newly created user and open the permission manager.
2. **Grant** access rights to the **Web Interface/Apps** and allow changing own passwords (optional).
3. Find the previously created **virtual input “lights”.**
4. Grant **Internal and External access** for user “2N” to use the virtual input.

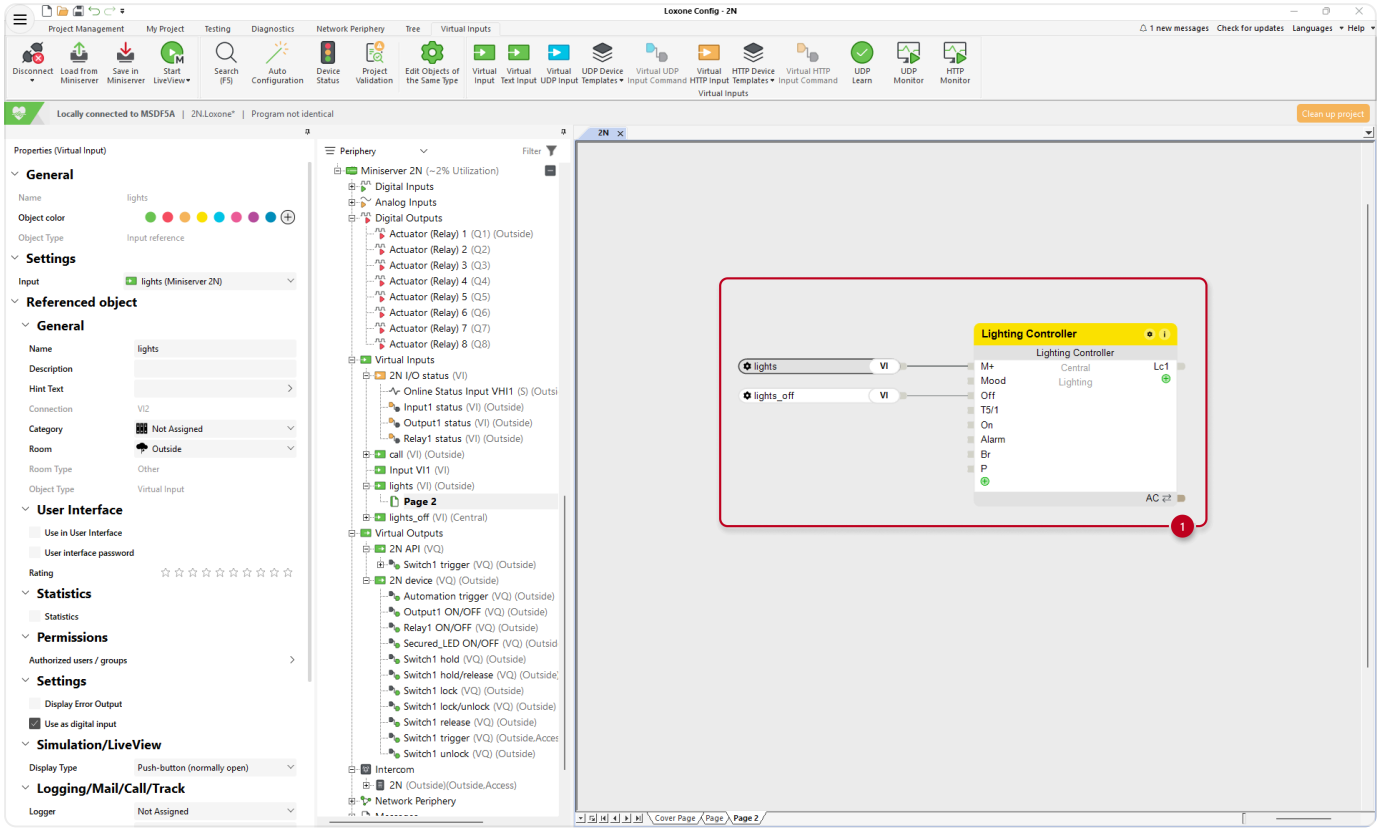




Connect with a function

Once a virtual input is created that can be controlled by a 2N device, you can connect it to the appropriate function block within Loxone.

1. **Connect** the **virtual input** “lights” with your desired **Function Block.**

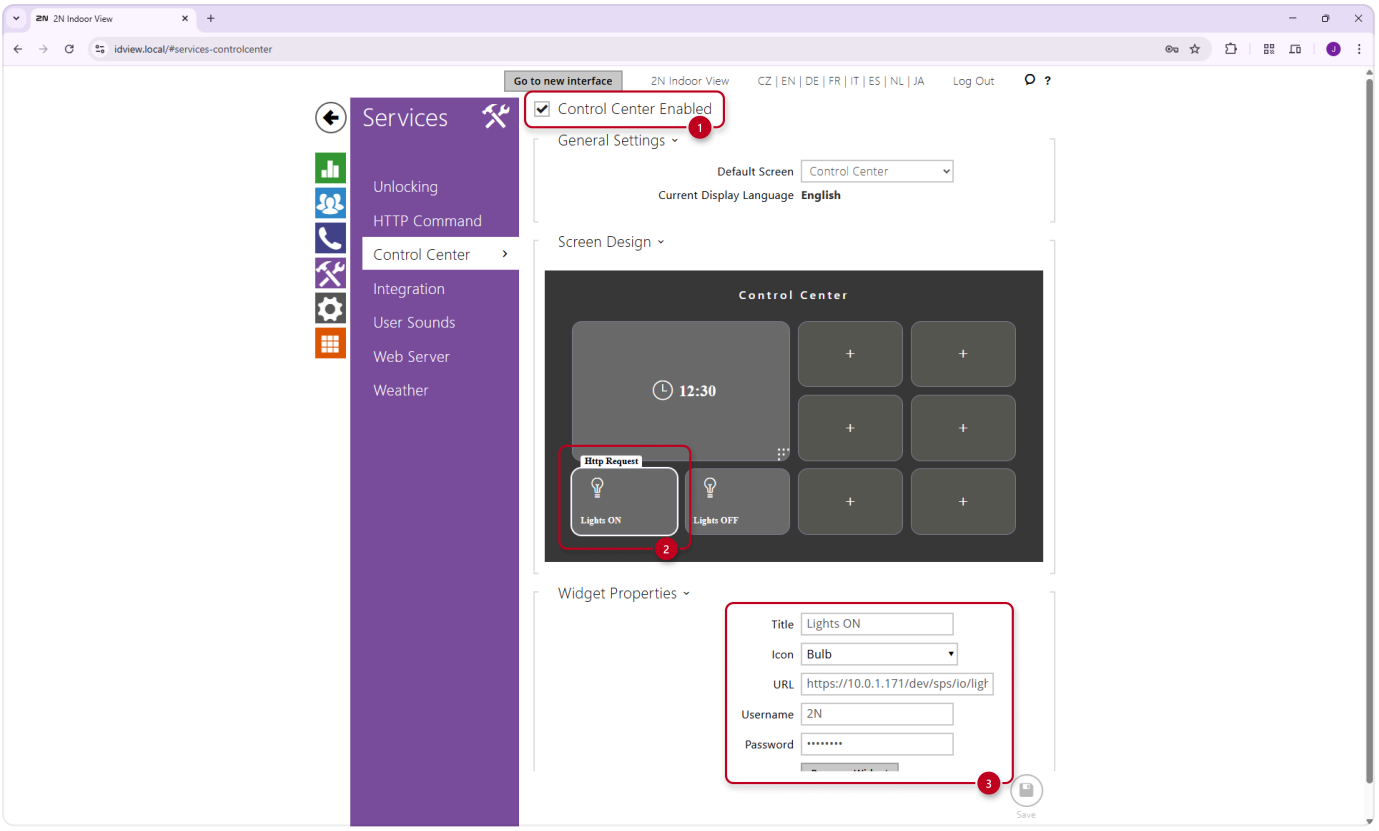


2. 2N Indoor unit

To control home automation from a 2N Indoor units, you need to **trigger** the previously created **virtual input** "lights" via Loxone's **HTTP API**. To do this, you can use the **HTTP Command buttons** or the **Control Center** (available on 2N Indoor View).

Control Center

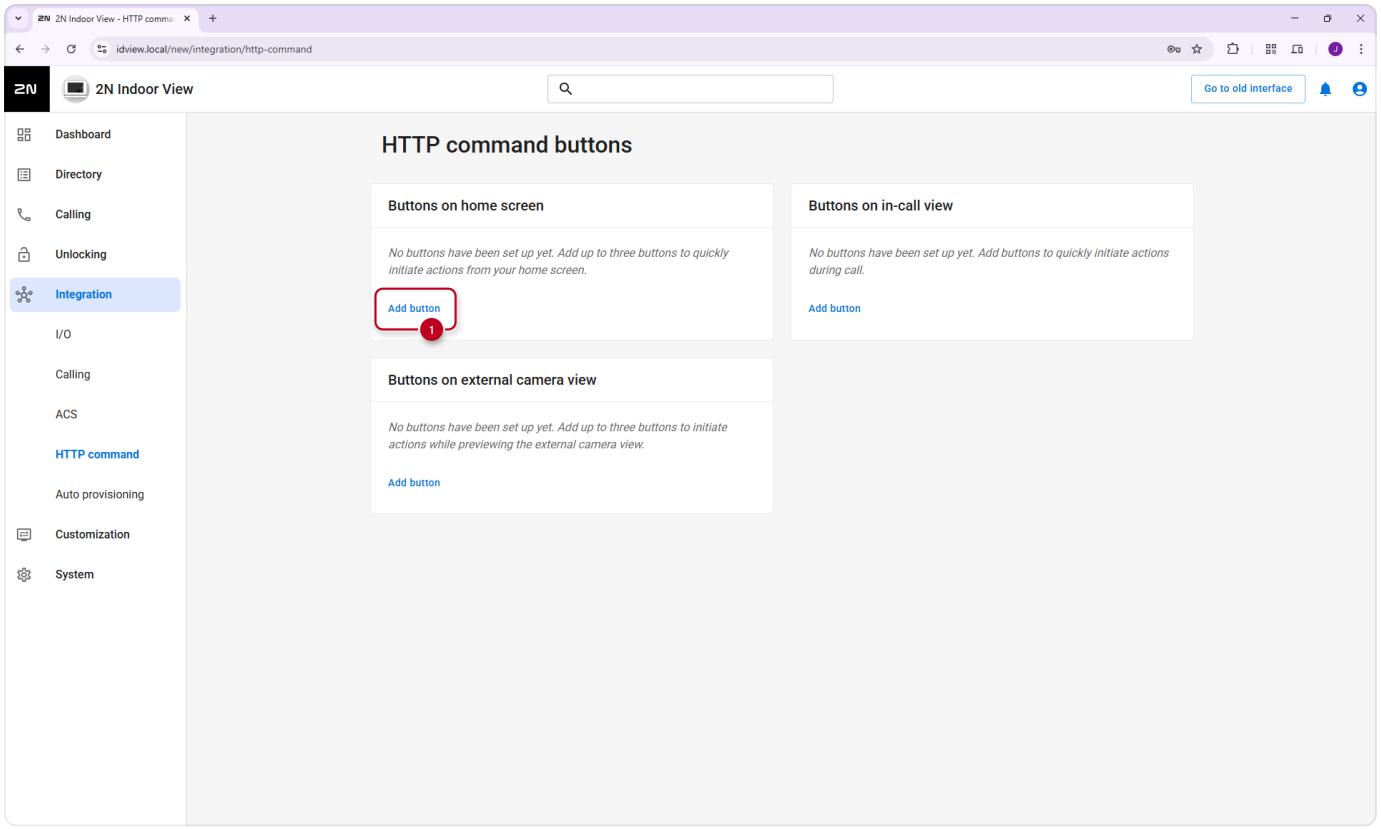
1. **Enable** the Control Center.
2. Select available space and **add** an **HTTP Request** widget
3. Configure the properties:
    a. Add a **title** that describes the action.
    b. Select an **appropriate icon** that indicates what the widget controls.
    c. As URL use the **IP address** of the **Loxone Miniserver** followed by “/dev/sps/io/**light**/pulse” (https://**<ip_address>**/dev/sps/io/**<input_name>**/pulse).
    d. Use the **Username and Password** for the user "2N", which was previously set up in Loxone.

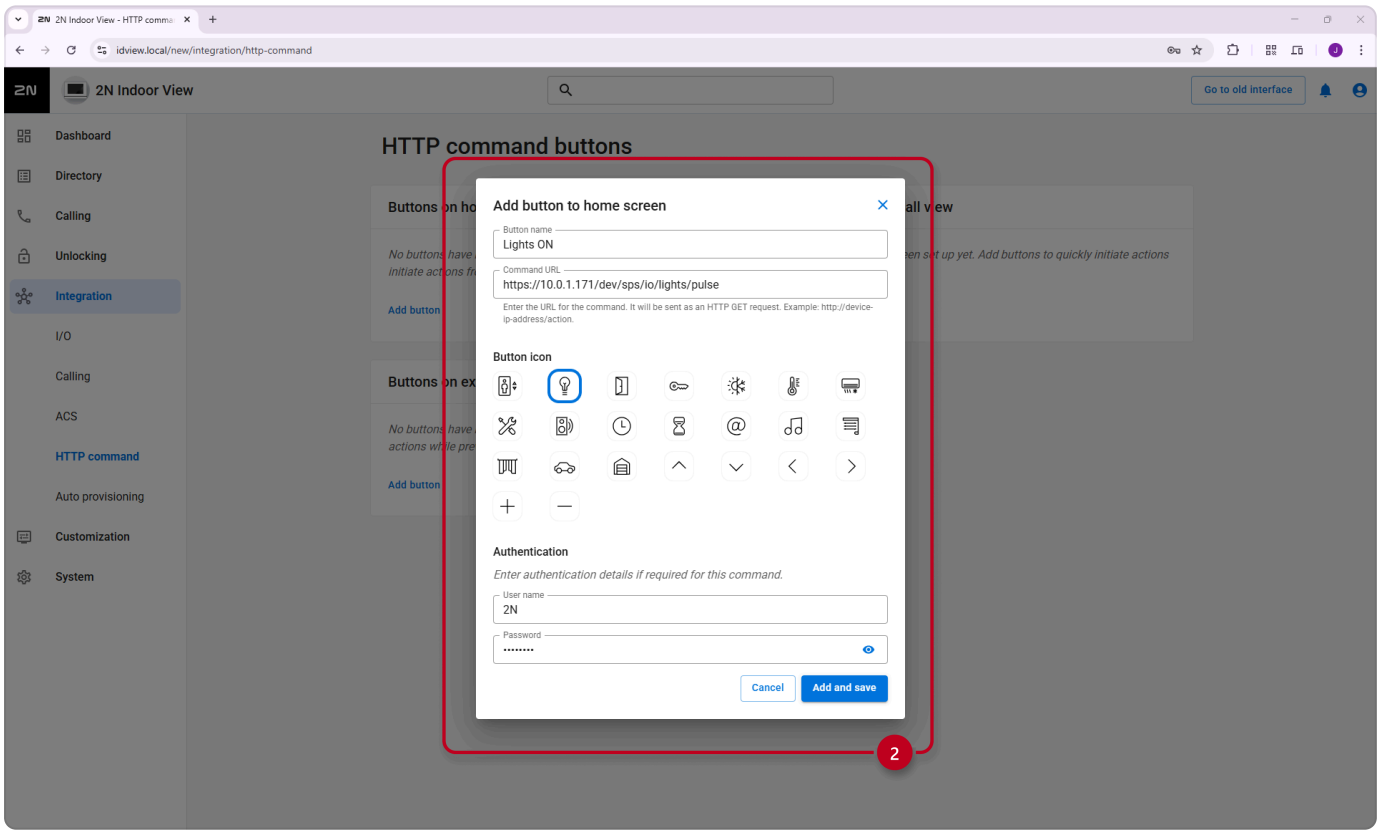


HTTP command buttons

For devices **without Control Centre**, or if you want to control automation **In-Call**, you can use HTTP command buttons.

1. **Add** a new button or **edit** an existing one.
2. Configure the properties:
   a. Add a **Button name** that describes the action.
   b. As **Command URL** use the **IP address** of the **Loxone Miniserver** followed by "/dev/sps/io/**lights**/pulse" (https://**<ip_address>**/dev/sps/io/**<input_name>**/pulse).
   c. Select an **appropriate icon** that indicates what the widget controls.
   d. Use the **Username and Password** for the user "2N", which was previously set up in Loxone.


2N Indoor View - HTTP comma
idview.local/new/integration/http-command
2N Indoor View
Go to old interface
Dashboard
Directory
Calling
Unlocking
Integration
I/O
Calling
ACS
HTTP command
Auto provisioning
Customization
System
HTTP command buttons
Buttons on home screen
No buttons have been set up yet. Add up to three buttons to quickly initiate actions from your home screen.
Add button
1
Buttons on in-call view
No buttons have been set up yet. Add buttons to quickly initiate actions during call.
Add button
Buttons on external camera view
No buttons have been set up yet. Add up to three buttons to initiate actions while previewing the external camera view.
Add button


2N Indoor View - HTTP comma
idview.local/new/integration/http-command
2N Indoor View
Go to old interface
Dashboard
Directory
Calling
Unlocking
Integration
I/O
Calling
ACS
HTTP command
Auto provisioning
Customization
System
HTTP command buttons
Add button to home screen
Button name
Lights ON
Command URL
https://10.0.1.171/dev/sps/io/lights/pulse
Enter the URL for the command. It will be sent as an HTTP GET request. Example: http://device-ip-address/action.
Button icon
Authentication
Enter authentication details if required for this command.
User name
2N
Password
Cancel
Add and save
2