

2N IP Intercom Integration Guide

Yeastar P-Series Software Edition

Version:

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2N IP Intercom Integration Guide

This guide provides a configuration example to show you how to integrate 2N IP intercom devices with Yeastar P-Series Software Edition to implement functions such as video intercom, access control, and intercom call forwarding.

Highlights

By integrating the 2N IP intercom device with Yeastar P-Series Software Edition, the following features can be implemented:

- **Conduct real-time video communication with the visitor**

In addition to audio communication, the door station can conduct video communication with various endpoints.

- Indoor station
- Linkus UC Client
- Video IP phone

- **Simultaneous ringing and flexible access control with different endpoints**

You can configure the Ring Strategy feature for the PBX extension to make the door station calls be sent to Yeastar Linkus clients or other extension endpoints simultaneously. In this way, you can answer and open the door via Linkus clients or other extension endpoints at hand, no matter you are in the office or on the road.

- **Auto-forward visitor calls to other destination without missing any calls**

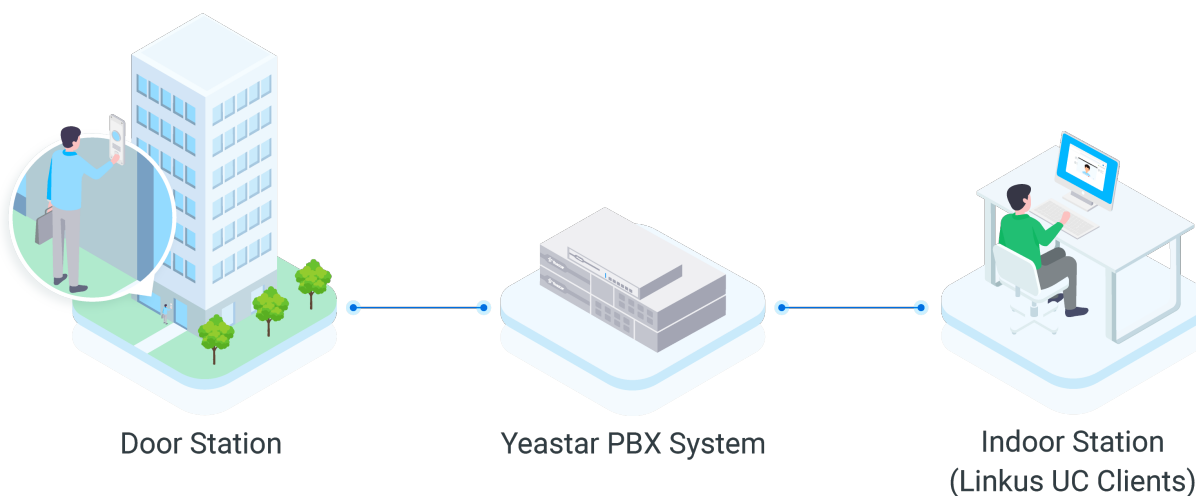
If you don't want to miss any calls when absent, you can configure the Call Forwarding feature for the PBX extension, by which the calls will be forwarded to a designated destination (such as an external number). In this way, remote access control can be easily implemented.

Scenario

In this solution, the 2N IP intercom serves as the door station, while the Linkus UC clients of PBX extensions function as indoor stations. When a visitor presses the call button, the 2N IP intercom initiates a video SIP call through the PBX to the designated extension(s). The extension user can then answer the call, communicate with the visitor via two-way audio, and view real-time video. After verification, the user can press a predefined switch code to remotely unlock the door.

**Note:**

This guide uses the Yeastar Linkus UC Client for illustration. However, any SIP-compliant endpoint, including IP phones registered with the indoor receiver's extension, can function as the indoor station to receive calls and execute the door release operation.



Supported intercom devices

This solution is compatible with multiple models of 2N IP intercoms. The supported device models are as follows:

• 2N IP Base	• 2N IP Force	• 2N IP One
• 2N IP Solo	• 2N IP Style	• 2N IP Verso

Test environment

This guide assumes the 2N IP intercom and PBX are deployed within the same local network, the information of the test environment is listed below:

Device	Firmware Version	IP Address
Yeastar P-Series Software Edition	83.21.0.16	192.168.28.39
2N IP Solo	2.46.0.70.3	192.168.28.48

Integration process

1. Preparation

Prepare the integration by creating necessary extensions on Yeastar PBX, and setting up the network connectivity for the intercom device to allow access to its web interface for subsequent configuration.

For more information, see [2N IP Intercom Integration Preparation](#).

2. Register 2N IP intercom with Yeastar PBX's extension

Register the intercom device with a PBX extension, which allows the intercom to initiate calls through the PBX when its button is pressed.

For more information, see [Register 2N IP Intercom with Yeastar P-Series Software Edition Extension](#).

3. Configure call and door release settings for PBX extensions on 2N IP intercom

Configure the intercom's dialing, switch code, and audio prompts, which allows it to automatically initiate calls to specified extension(s) when the button is pressed, automatically unlock the door upon receiving a designated DTMF code, and play the customized prompt when the door is open.

For more information, see [Configure Call and Door Release for PBX Extensions on the Intercom](#).

2N IP Intercom Integration Preparation

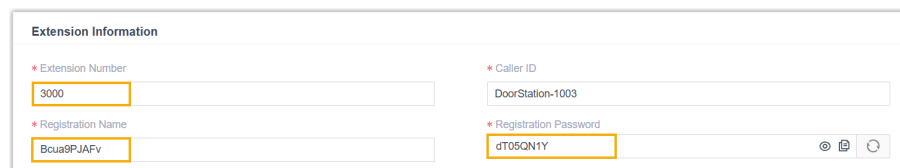
Before the integration, you need to create and configure extensions on PBX for the 2N IP intercom device (door station) and the indoor receiver, then set up the network connectivity for the intercom device.

Create extensions on Yeastar PBX

Prepare the necessary extensions before integration, one will be registered to the 2N IP intercom, while the others will be assigned to users to receive calls from the intercom device and trigger door release.

Create an extension for 2N IP intercom (door station)

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, click **Add > Add**.
2. In the **User** tab, do as follows:
 - a. Configure the user and extension information or retain the default settings.
 - b. Note down the following details, which are required for subsequent extension registration on the 2N IP intercom.



Extension Information	
* Extension Number	* Caller ID
3000	DoorStation-1003
* Registration Name	* Registration Password
Bcu9PJAFv	dT05QN1Y

- Extension Number
 - Registration Name
 - Registration Password
3. If you want the receivers to preview video before answering the intercom call, set up video preview for the extension.



Note:

The supported video preview methods vary depending on the indoor receiver's Linkus UC clients, as listed in the table below:

	Video Preview	Auto Preview
Linkus Mobile Client (iOS)	x	x

	Video Preview	Auto Preview
Linkus Mobile Client (Android)	✓	✓
Linkus Desktop Client (Windows)	✓	×
Linkus Desktop Client (Mac)	✓	×
Linkus Web Client	✓	✓

- Click the **Features** tab.
- Scroll down to the **Door Phone Application** section, enable the preview mode as needed.

Door Phone Application

Video Preview

Enabled

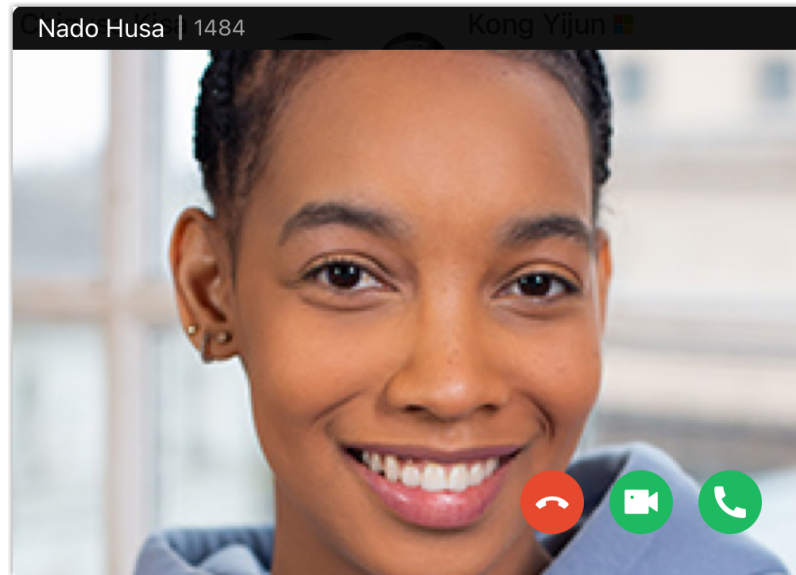
Auto Preview

Disabled

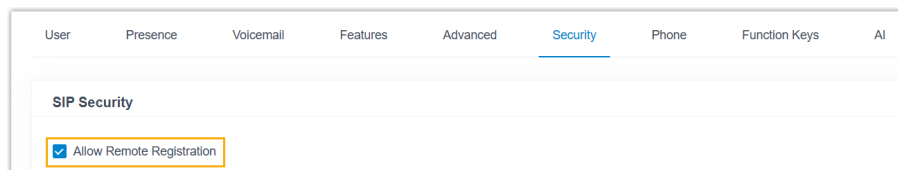
- **Video Preview:** If enabled, when receiving a call from the door station, the callee can click  on his or her Linkus client to preview the video while ringing.



- **Auto Preview:** If enabled, when receiving a call from the door station, the callee's Linkus client will automatically show the video while ringing.



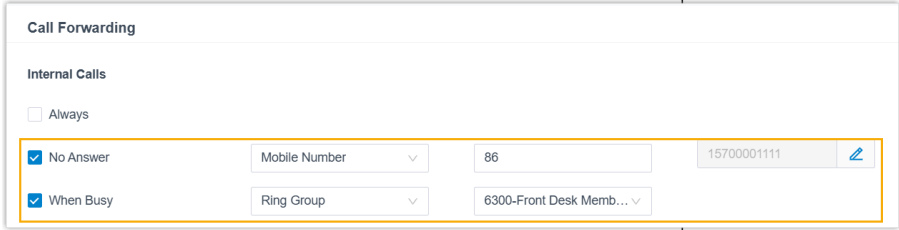
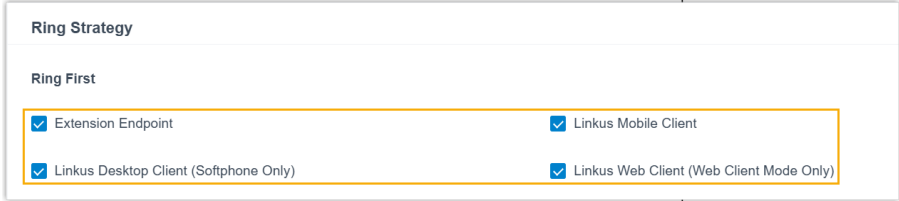
4. If the intercom device and PBX are located in different subnets, enable the remote registration feature for the extension.
 - a. Click the **Security** tab.
 - b. In the **SIP Security** section, select the checkbox of **Allow Remote Registration**.



5. Click **Save** and **Apply**.

Create extensions for indoor receivers

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, click **Add > Add**.
2. In the **User** tab, configure the user and extension information or retain the default settings.
3. In the **Presence** tab, configure call handling rules for the extension as needed to prevent from missing calls from visitors.

Configuration	Instruction
Call forwarding	To ensure calls are automatically routed to a backup number (e.g. user's mobile number) when the extension user is not available, complete the following settings: - In the Call Forwarding section, select the checkbox of the unavailable conditions (No Answer or When Busy) for internal calls. - Specify a destination for the specific condition.  Note: If you set the destination to an external number or mobile number, enter the prefix of the outbound route that will be used according to its outbound dial pattern.  The screenshot shows the 'Call Forwarding' configuration page. Under the 'Internal Calls' section, the 'Always' checkbox is unchecked. The 'No Answer' checkbox is checked, with 'Mobile Number' selected in the dropdown, '86' in the number field, and '15700001111' in the destination field. The 'When Busy' checkbox is also checked, with 'Ring Group' selected in the dropdown and '6300-Front Desk Memb...' in the destination field.
Simultaneous ring	To ensure prompt response to visitors, configure the extension to ring on multiple registered devices at the same time. This allows the user to answer the call immediately from any available device. - Scroll down to the Ring Strategy section. - Select the registered devices that will ring when receiving a call.  The screenshot shows the 'Ring Strategy' configuration page. Under the 'Ring First' section, four checkboxes are checked: 'Extension Endpoint', 'Linkus Mobile Client', 'Linkus Desktop Client (Softphone Only)', and 'Linkus Web Client (Web Client Mode Only)'.

4. Click **Save** and **Apply**.

Configure Network for 2N IP Intercom

Locate the 2N IP intercom device in your network, and configure its IP address to enable access to the device's web interface for subsequent configuration.

Prerequisites

- Download and install the [2N Network Scanner](#) on your local computer.
- Connect the 2N IP intercom to same local network (LAN) as your computer, then perform a factory reset.
- Obtain the login credentials for the intercom's web interface.



Note:

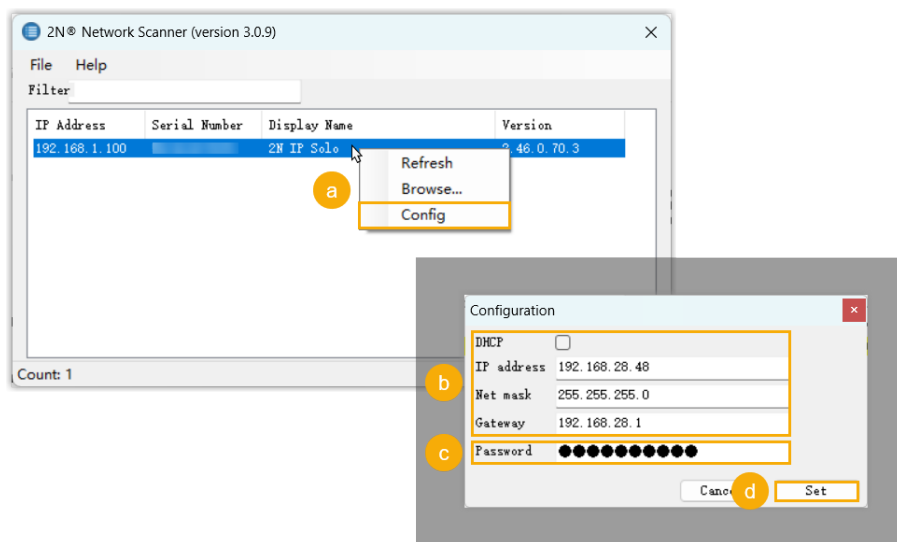
In this example, the default username is admin with the password 2n.

Procedure

1. On your computer, run the 2N Network Scanner.

The application automatically discovers all 2N IP intercoms within the same local network, displaying the device type, firmware version, and current IP address.

2. Modify the IP address of the 2N IP intercom.



- a. Right click the desired device, then select **Config**.
- b. Configure the IP address assignment.
 - For dynamic IP, select the checkbox of **DHCP**.
 - For static IP, enter the network details (IP address, net mask, and gateway).
- c. In the **Password** field, enter the password of the device.

- In this example, enter the default password 2n.
- d. Click **Set**.

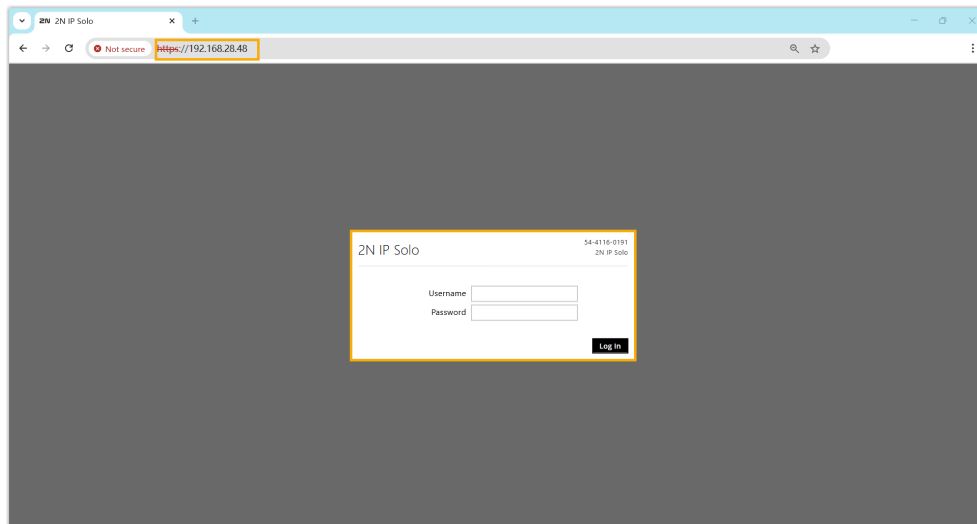
Result

- The device list now displays the newly assigned IP address for the intercom, indicating successful configuration of the network settings.
- You can use the IP address to log in to the web interface of the 2N IP intercom.



Note:

- In this example, the default username and password of the 2N IP solo is admin and 2n.
- For security purposes, you will be prompted to change the default password upon initial login. Follow the on-screen instructions to complete this process.



What to do next

- [Register 2N IP Intercom with Yeastar P-Series Software Edition Extension](#)
- [Configure Call and Door Release for PBX Extensions on the Intercom](#)

Register 2N IP Intercom with Yeastar P-Series Software Edition Extension

This topic describes how to connect the 2N IP intercom to Yeastar P-Series Software Edition as a SIP endpoint. By registering a PBX extension on the intercom, the device is able to make and receive calls with other extensions through the PBX.

Prerequisites

- You have [created an extension for the 2N IP Intercom](#) on the PBX and gather the following information:
 - The extension's information, including extension number, registration name, and registration password.
 - The IP address and SIP registration port of the PBX.



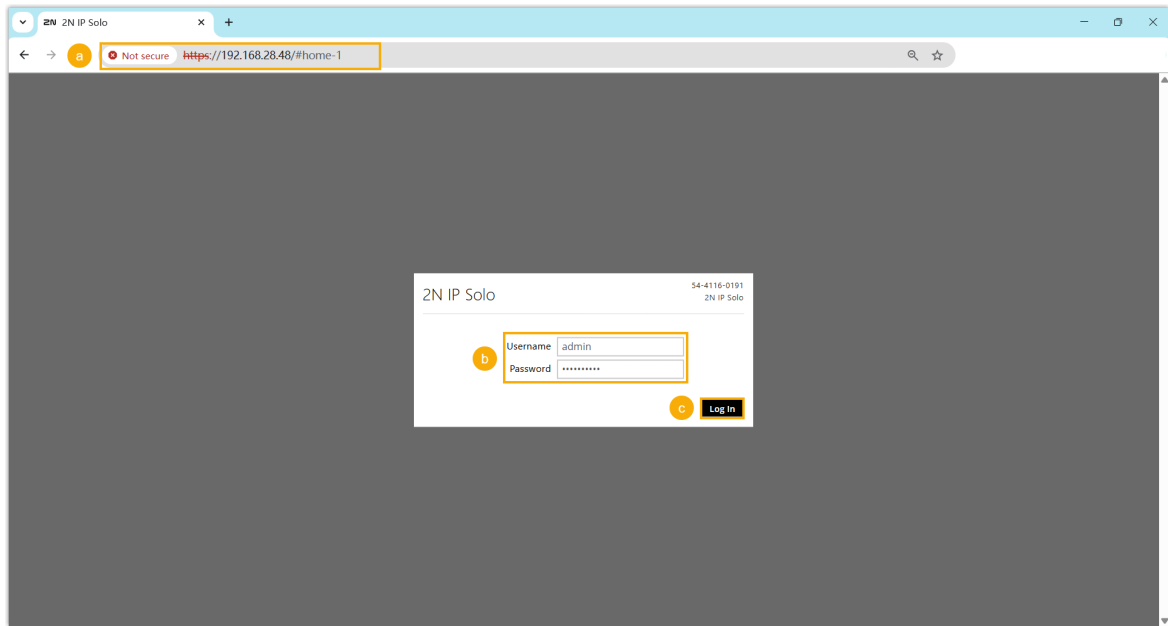
Tip:

You can check the SIP registration port on **System > Network > Service Ports > SIP UDP/SIP TCP**.

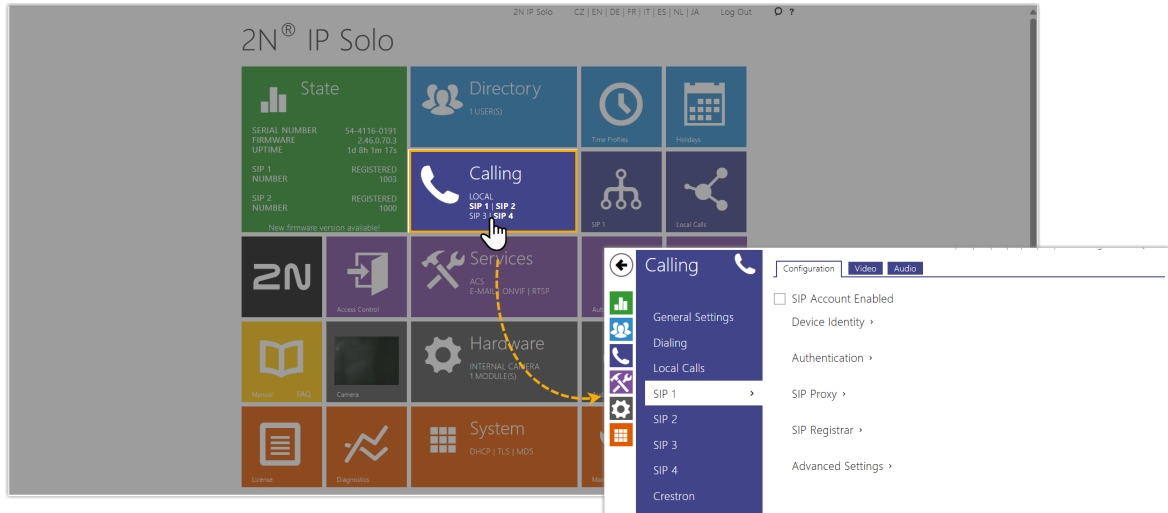
- You have [configured network for 2N IP Intercom](#).

Procedure

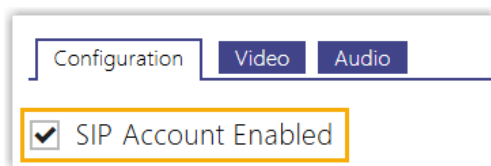
1. Log in to the web interface of the 2N IP intercom.



- a. In the browser's address bar, enter the IP address of the 2N IP intercom.
 - b. Enter the username `admin` and the associated password.
 - c. Click **Log In**.
2. On the web interface of the 2N IP intercom, go to **Calling > SIP 1**.



3. Register the PBX extension for the 2N IP intercom.
 - a. Select the checkbox of **SIP Account Enabled**.



b. In the **Device Identity** section, enter the following information.

Device Identity ▾

Display Name	2N IP Solo
Phone Number (ID)	1003
Domain	192.168.28.39
Test Call	

- **Phone Number (ID):** Enter the extension number.
- **Domain:** Enter the IP address of the PBX.

c. In the **Authentication** section, enter the registration information.

Authentication ▾

Authentication ID	1003
Password	*****

- **Authentication ID:** Enter the registration name of the extension.
- **Password:** Enter the registration password of the extension.

d. In the **SIP Proxy** section, enter the IP address of the PBX in the **Proxy Address**.

SIP Proxy ▾

Proxy Address	192.168.28.39
Proxy Port	Default
Backup Proxy Address	
Backup Proxy Port	Default

e. In the **SIP Registrar** section, select the checkbox of the **Registration Enabled**, then complete the following settings.

SIP Registrar ▾

Registration Enabled	☒
Registrar Address	192.168.28.39
Registrar Port	5060
Backup Registrar Address	
Backup Registrar Port	Default
Registration Expiry	120 [s]

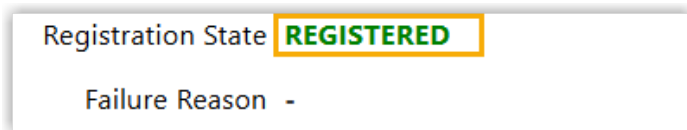
- **Registrar Address:** Enter the IP address of the PBX.

- **Registrar Port:** Enter the SIP registration port of the PBX. The default port is 5060.
- **Registration Expiry:** Specify the registration period or leave the default setting.

f. At the bottom-right corner of the web interface, click **Save**.

Result

The **Registration State** of the SIP line displays **REGISTERED**, indicating that the extension is successfully registered to the 2N IP intercom.



What to do next

[Configure Call and Door Release for PBX Extensions on the Intercom](#)

Configure Call and Door Release for PBX Extensions on the Intercom

This topic describes how to set up calls from the 2N IP intercom to PBX extensions, and configuring door release settings. Once configured, extension users can receive visitor calls and remotely unlock the door right from their Linkus UC client.

Prerequisites

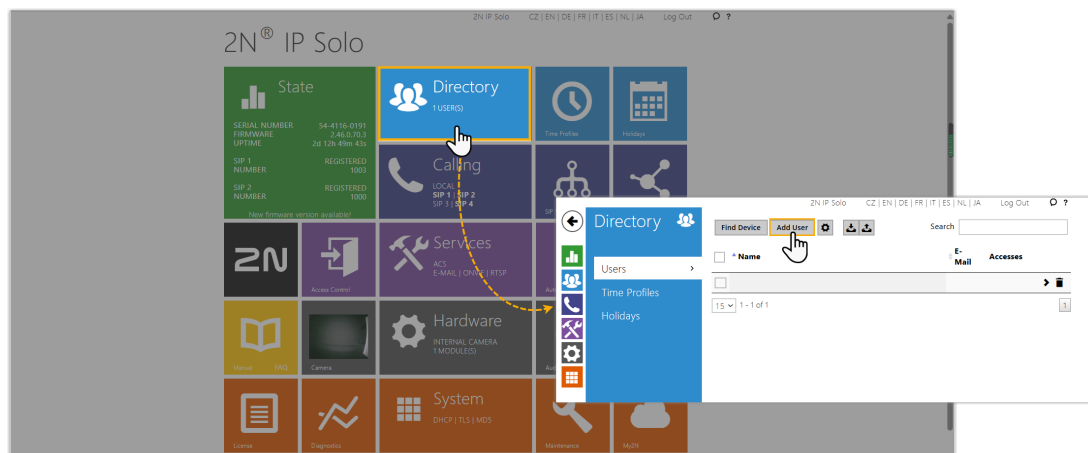
- You have [created extensions for indoor receivers](#) on the PBX.
- You have [configured network for the 2N IP intercom](#) and [registered a PBX extension to the device](#).

Procedure

- [Configure the call destination](#)
- [Set the DTMF code for door release](#)
- [\(Optional\) Customize the audio prompt for door release](#)

Configure the call destination

1. Log in to the web interface of the 2N IP intercom.
2. Add one or more users and their PBX extensions to the intercom.
 - a. Go to **Directory > Users**, click **Add User**.



- b. Complete the following settings.

User Basic Information ▾

Name Indoor Station - Linkus

E-Mail

User Phone Numbers ▾

Number 1

Phone Number 1005

Time Profile [not used]

2N® IP Eye Address

Group Call to Next Number ☐

- **Name:** Specify a name to help you identify the user.
- **Phone Number:** Enter the extension number of the user.

c. At the bottom-right of the web interface, click **Save**.

3. Assign the target users to the call button.

Calling

General Settings

Dialing

Local Calls

Quick Dial Buttons

Quick Dial Buttons ▾

Main Unit Buttons

1 No User

Add User

Search

Name	E-Mail	Phone Number #1	Phone Number #2	Phone Number #3
Indoor Station - Linkus		1005		
Indoor Station - Linkus 2		1002		

1 - 2 of 2

Add Close

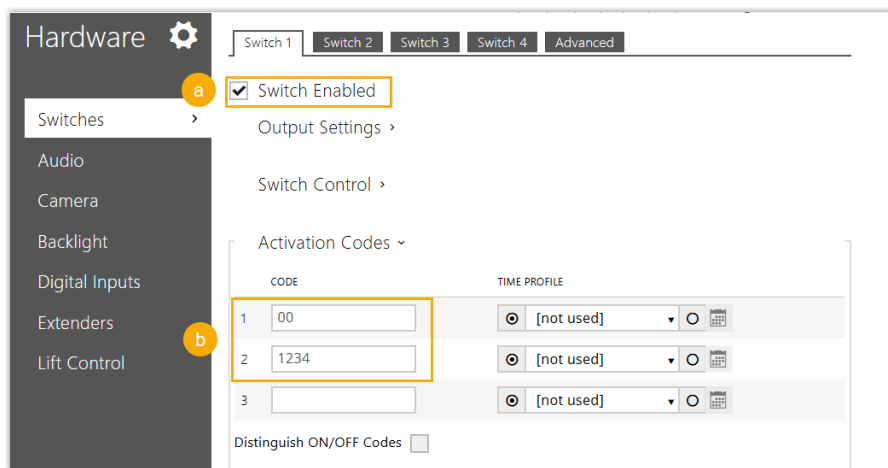
- Go to **Calling > Dialing**, click **+** in the **Main Unit Buttons**.
- In the pop-up window, select the user(s) you have added, then click **Add**.
- At the bottom-right of the web interface, click **Save**.

Set the DTMF code for door release

1. On the web interface of 2N IP intercom, go to **Hardware > Switches**.



2. Under the **Switch 1** tab, configure the DTMF code for door release.



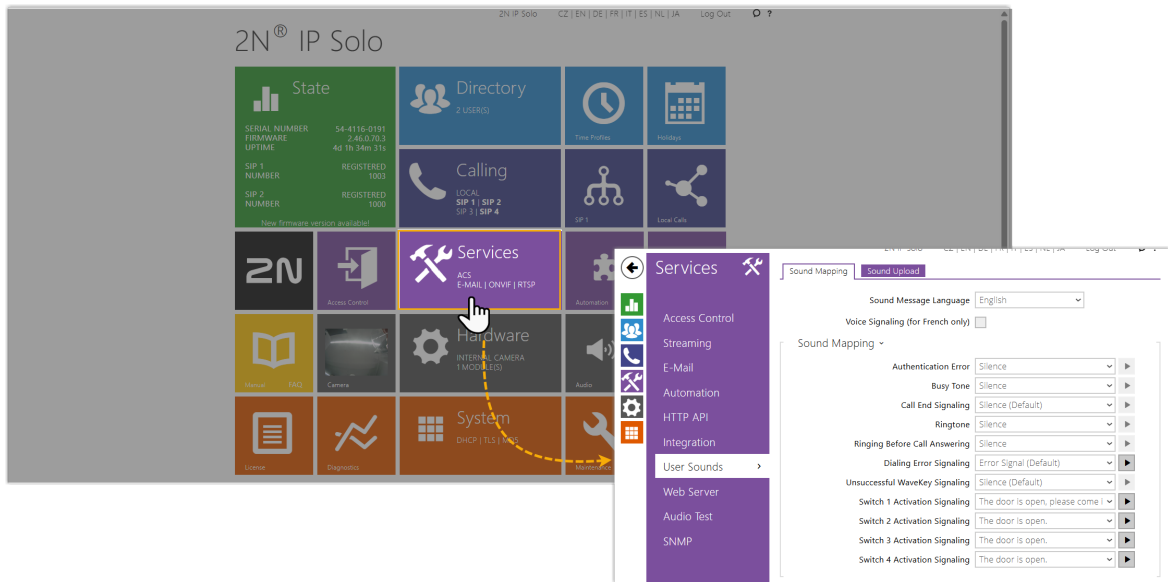
a. Select the checkbox of **Switch Enabled**.

b. In the **Activation Codes**, set one or more DTMF codes.

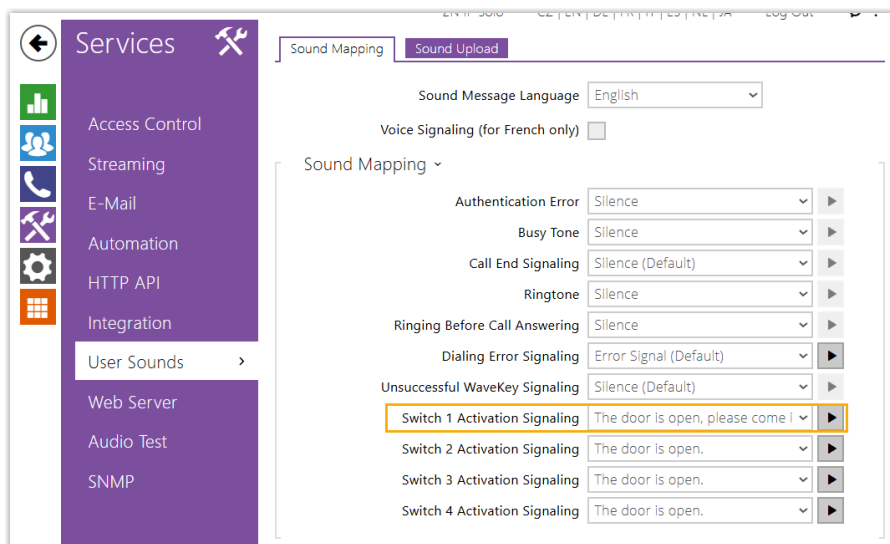
3. At the bottom-right of the web interface, click **Save**.

(Optional) Customize the audio prompt for door release

1. On the web interface of 2N IP intercom, go to **Services > User Sounds**.



2. In the **Sound Mapping** tab, select a desired sound for Switch 1.



When the door is unlocked using the code configured in the **Switch 1** tab, the intercom will play the assigned audio prompt.

Result

- When a visitor presses the call button on the 2N IP intercom, it automatically places a video call to the designated extensions.
- Extension users can preview the video and answer the call on their Linkus UC client. To grant access, the user simply dials the switch code followed by character * (e.g-

., 00* or 1234*) during the call. The door station plays the prompt "The door is open, please come in.", indicating that the door has been successfully unlocked.