

Intercom for Microsoft Teams solution

Service Setup Guide

Contents

Intercom for Microsoft Teams solution	1
Step 1: Send device information to HelloDoor	2
Step 2: Prepare Teams	2
Step 3: Activate your subdomain in Teams	6
Step 4: Link the Intercom button(s) to call users in Teams	7
Call Queue Setup for Intercom button	7
Create a call queue:.....	11
Test.....	20
Repeat for every Intercom button	20
Step 5: Connect your Intercom to the Internet	21
Step 6: Configure your 2N IP Intercom	22
Step 7: Test the configuration:	26
Support.....	26
Addendum 1 – Video.....	27

Step 1: Send device information to HelloDoor

If you allow HelloDoor to manage the device remotely and give HelloDoor the possibility to do remote troubleshooting when there should be an issue, you will need to send the information from the card inside the package containing the Serial Number and the Security Code of the 2N Intercom.

The Serial Number and My2N Security Code can be found on the My2N paper card inside the 2N IP intercom package.



Serial Number *

54-1755-0526

My2N Security Code *

BAFW-7PMN-CZM5-CNRU



Send the info in an email to HDteamsdomain@hellodoor.info:

Email content reply format:

- Serial Number :
- My2n Security Code :

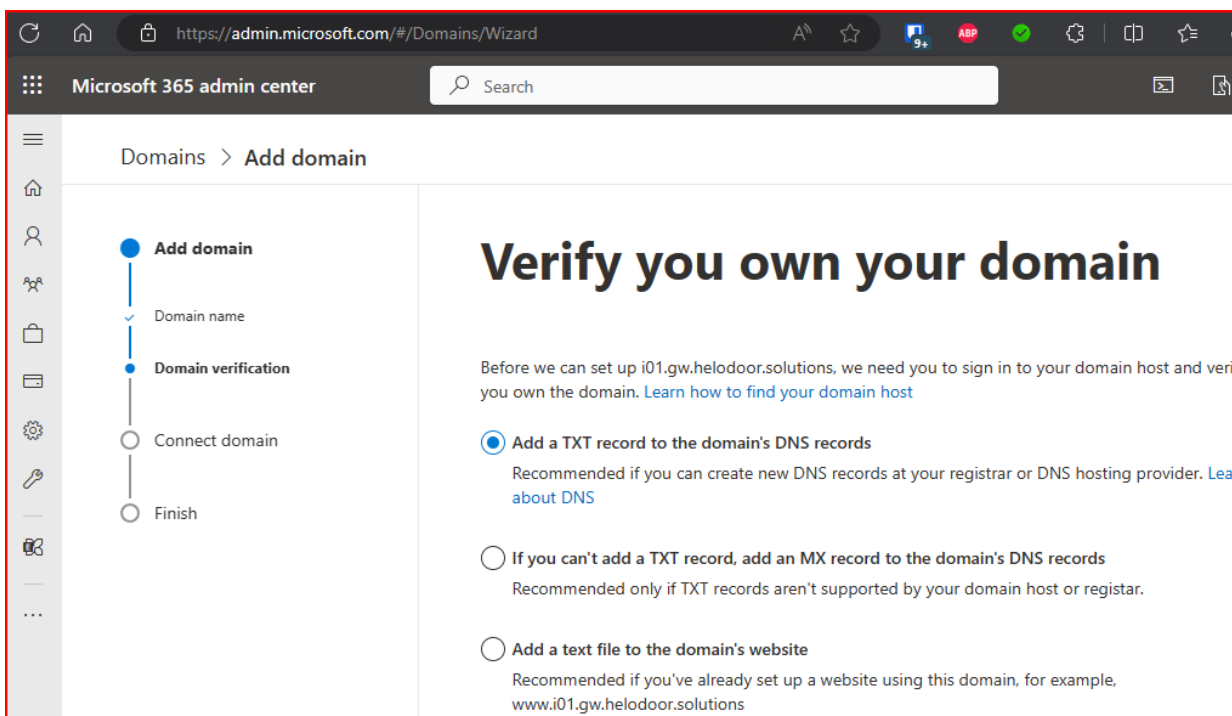
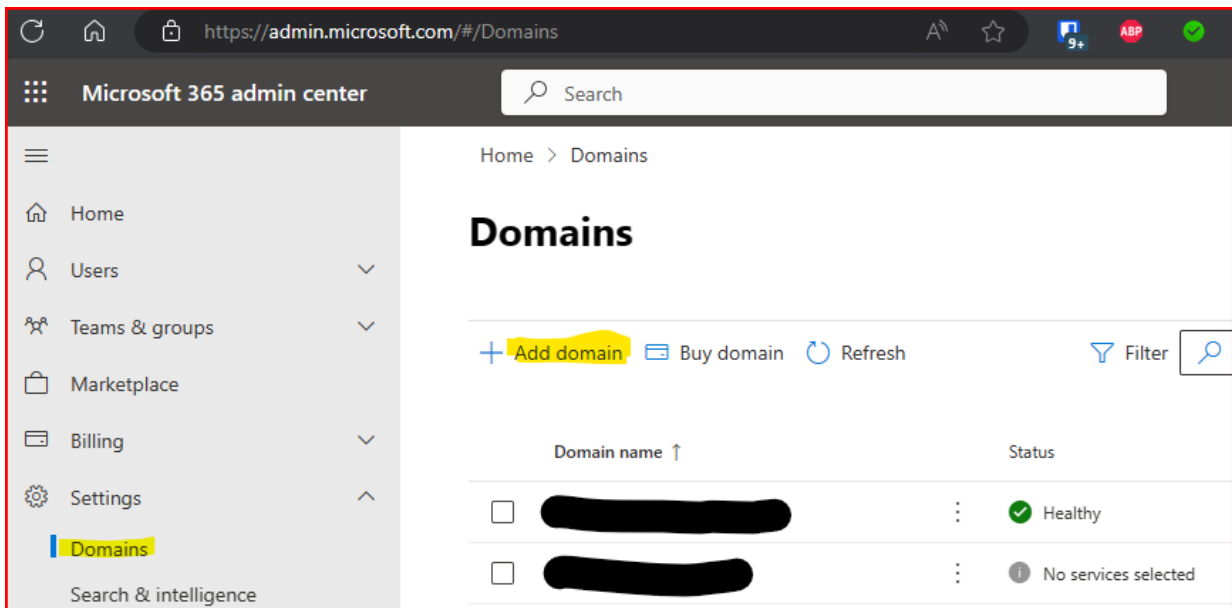
If you want to register multiple devices, you can send the info for all of them in one email.

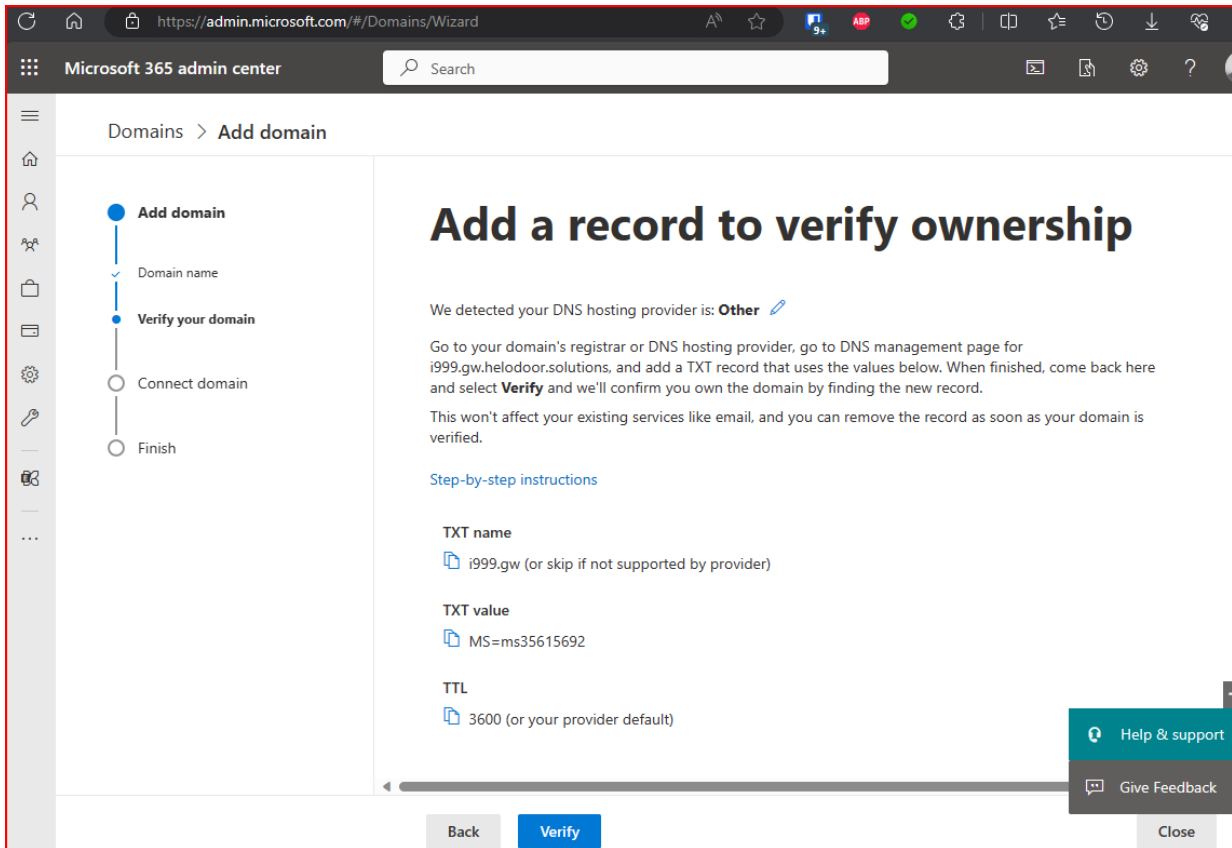
Step 2: Prepare Teams

HelloDoor uses the official Shared Direct Routing interface from Microsoft to allow calls from your Intercom to Teams. Microsoft requires you to add a unique subdomain to the list of domains in your Office365 environment for this. Upon registration with HelloDoor, your company will be assigned this unique subdomain. It will have the format **ixx.gw.hellodoor.solutions** (where **ixx** is a number).

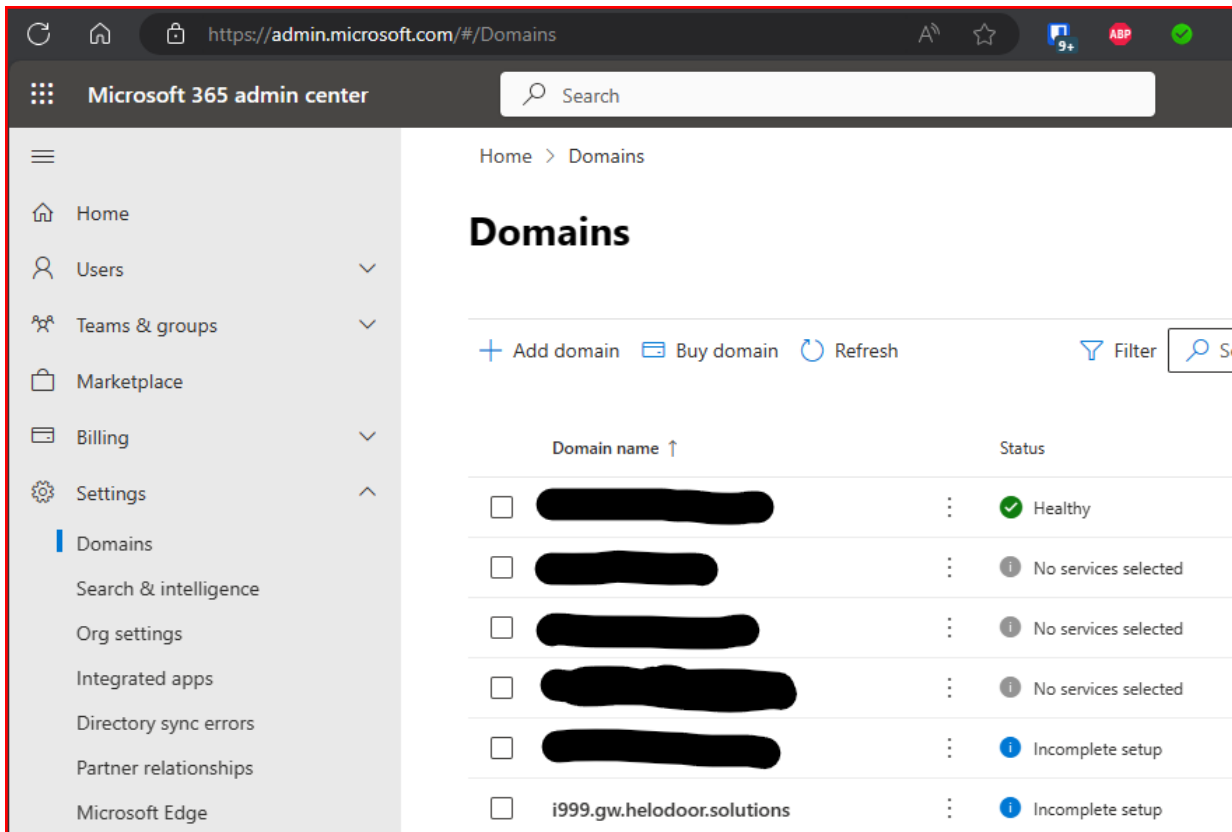
Please add this unique subdomain to the list of trusted domains in your Microsoft 365 Admin Portal.

Sample actions:





Copy the output of this step to send it to HelloDoor. Then select “Close”



As shown, email the domain verification TXT Record info that you receive during the process to HDteamsdomain@hellodoor.info, as well as your Public IP address that will be used for the Intercom communication towards the internet from your network.

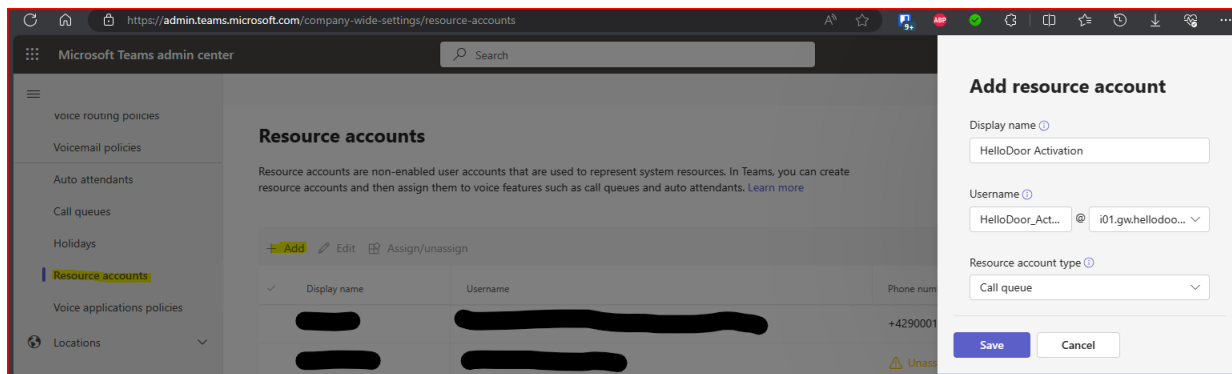
Email content reply format:

- TXT name:
- TXT value:
- Public IP address:

Step 3: Activate your subdomain in Teams

After confirmation from HelloDoor that the Domain registration is done, the subdomain needs to be activated. This needs to be done by:

- 1) Creating a new Resource Account in your Microsoft 365 environment in the format: HelloDoor_Activation@**ixx**.gw.hellodoor.solutions (where **xx** is your specific number). You can do this from the Teams Admin Panel: Voice – Resource Accounts - Add
Example of an account name: [HelloDoor_Activationr@i02.gw.hellodoor.solutions](mailto>HelloDoor_Activationr@i02.gw.hellodoor.solutions)



- 2) Add a **Microsoft Teams Phone Resource Account** license to the account that you just created.

Note: it is also possible to create a normal “User” account in Office 365 that uses the unique subdomain in its username, and assigning a Teams and a Phone System license to this account, but this is a more expensive approach.

Step 4: Link the Intercom button(s) to call users in Teams

For every Intercom button, you need to create a Call Queue that will accept the call and forward it to one or more Teams users.

For this, you will need to create a **Resource account** and a linked **Call Queue** for each Intercom button.

Call Queue Setup for Intercom button

Microsoft Teams admin center – Voice – Resource Accounts – Add

Add resource account

Display name ⓘ

Username ⓘ

 @

Resource account type ⓘ

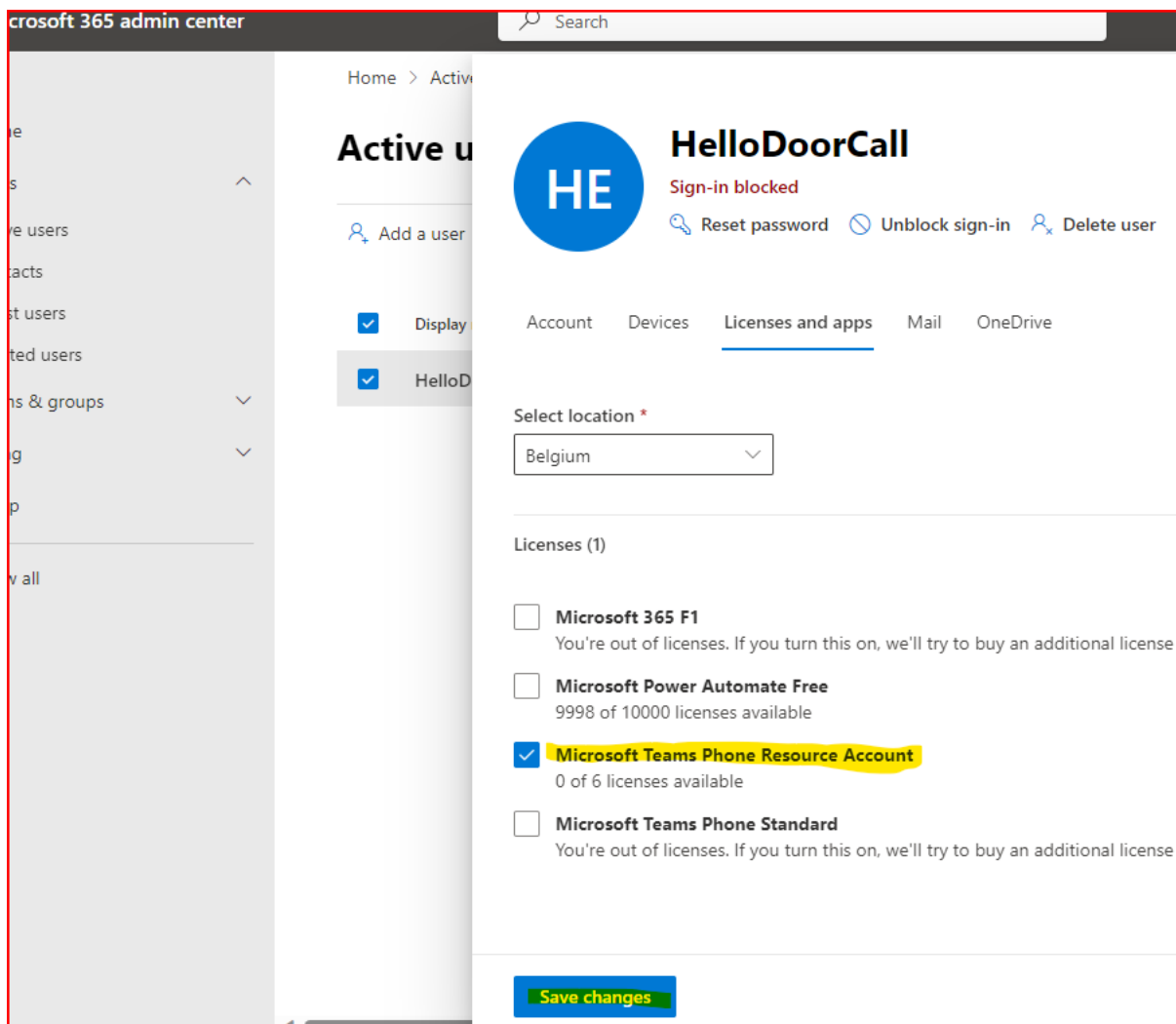
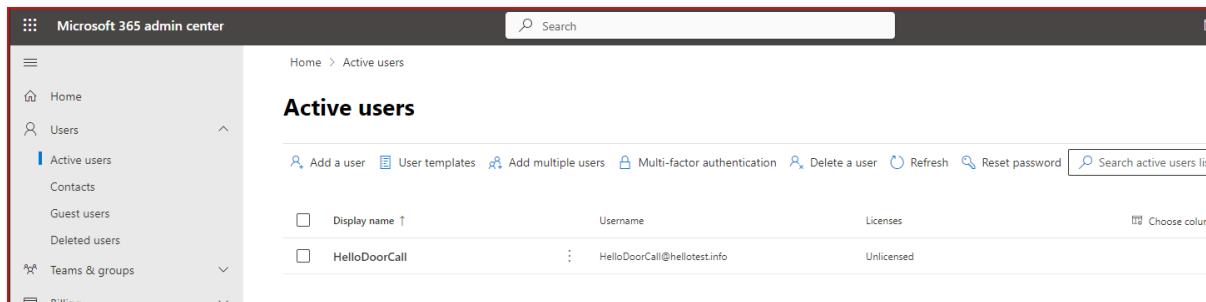
Resource accounts

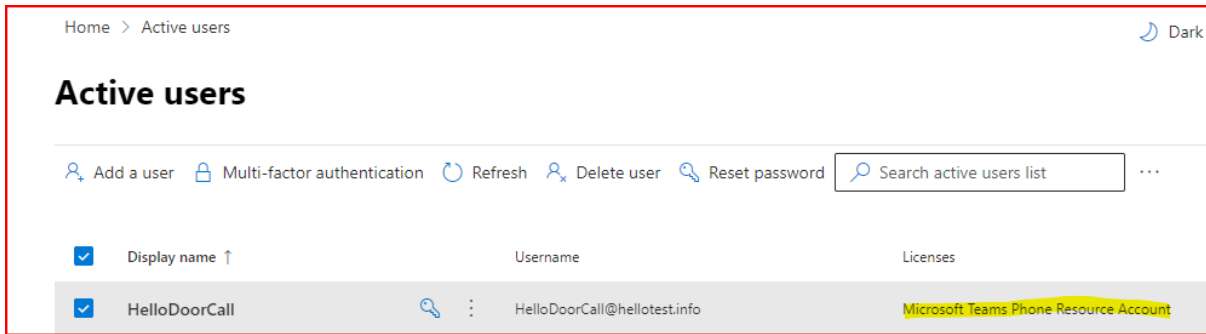
Resource accounts are non-enabled user accounts that are used to represent system resources. In Teams, you can create resource accounts and then assign them to voice features such as call queues and auto attendants. [Learn more](#)

+ Add ✎ Edit ⌘ Assign/unassign

✓	Display name	Username	Phone number	Licensed
⊕	HelloDoorCall	HelloDoorCall@hellotes...	⚠ Unassigned	⚠ Unlicensed

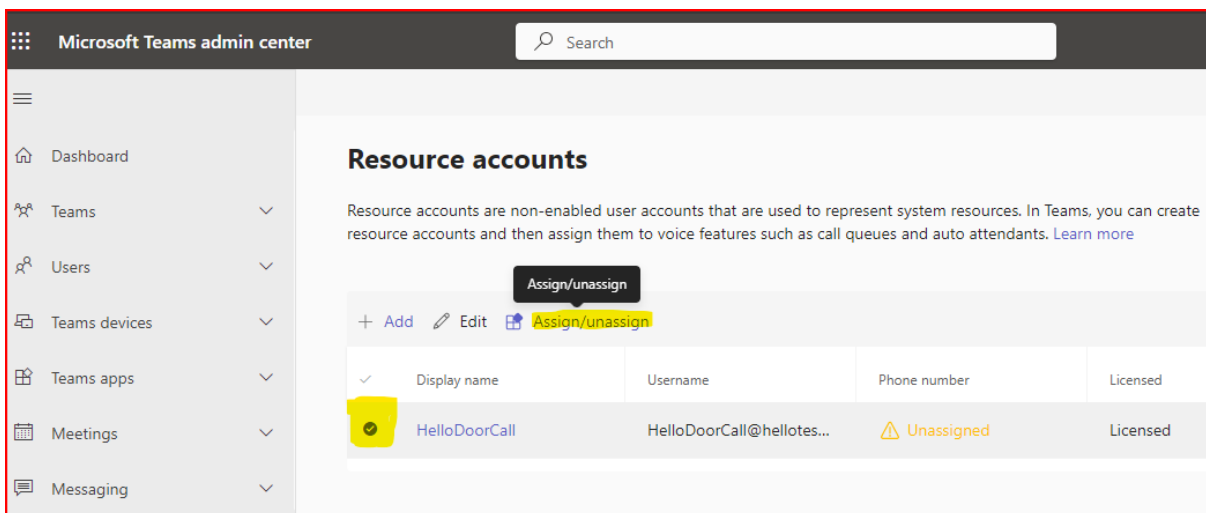
Assign a Microsoft Teams Phone Resource Account license **in the Microsoft 365 admin panel** to the Resource Account that we just created:





Once the Resource account is licensed, then assign a Phone number in the **Teams Admin Panel**:


Select the Resource account and click “Assign/Unassign” button on top:




Assign the telephone number to the Resource Account. This needs to be a unique number from the telephone number range that you received from HelloDoor (+429xxxxxxx). The same telephone number will be assigned to the Intercom button in the Intercom config later.

Assign/unassign

HelloDoorCall

 To see a service number listed here, buy a Phone System or get a Teams Phone Resource Account license and make sure it's not assigned to any other voice services. [Learn more](#)


Phone number type

Direct Routing 


Assigned phone number

+42900020002

Assigned to

 Your changes must be saved before making more changes.

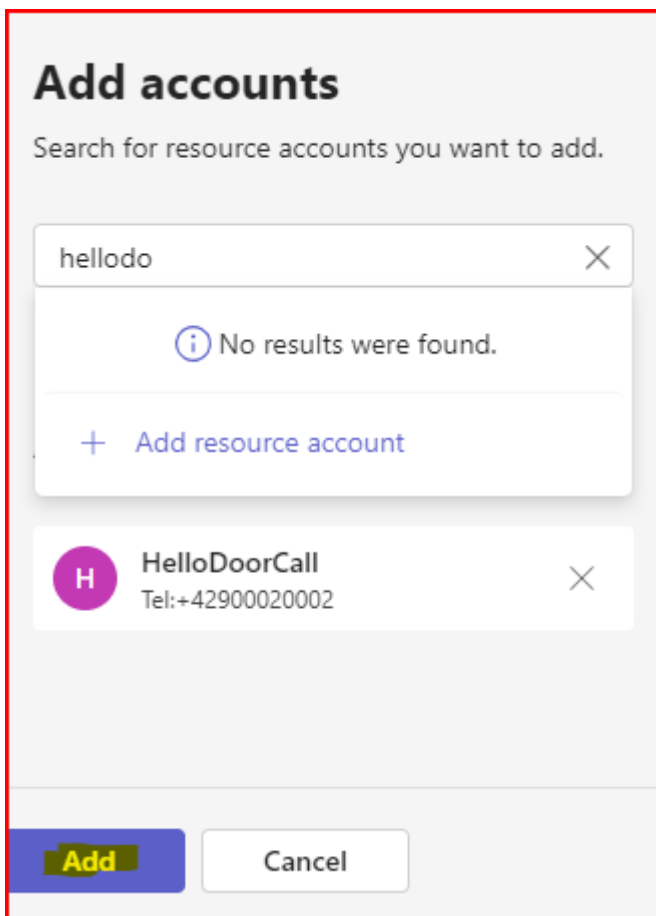
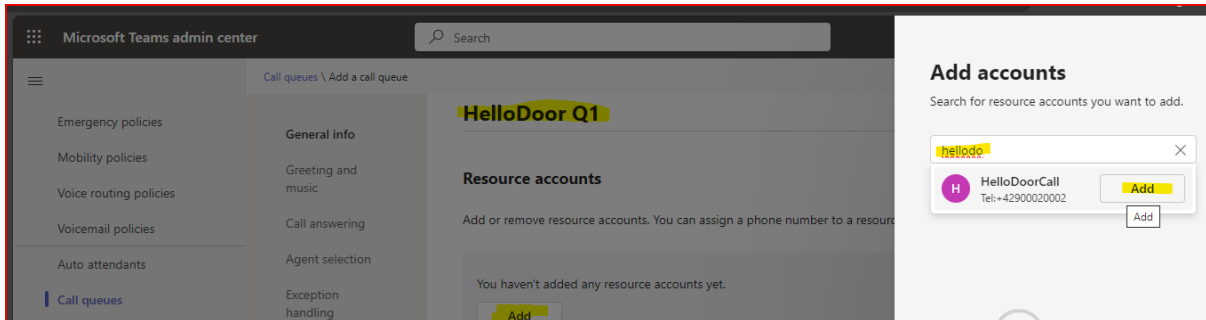
Select a call queue

Search by call queue 

[Save](#) [Cancel](#)

The phone number in the screenshot is just shown as an example. Please use a number from the range given to you by HelloDoor.

Link the new Call Queue to the Resource account that you created before:




Continue to configure the Call Queue

Call queues \ Add a call queue

HelloDoor Q1

Resource accounts

Add or remove resource accounts. You can assign a phone number to a resource account you're adding. ⓘ

+ Add × Remove  Assign/unassign | 1 item

✓	Resource account	Phone number	Licensed
	HelloDoorCall	tel:+42900020002	Licensed

Assign calling ID

Agents can make outbound calls using the phone numbers on the following resource accounts. ⓘ

You haven't added any resource accounts yet.

Language



This lets you set the language used to transcribe voicemail messages and play system prompts to the caller.

- General info
- Greeting and music**
- Call answering
- Agent selection
- Exception handling
- Authorized users

Greeting and music


Greetings and music keep your caller informed about their call while waiting.

Greeting

- No greeting
- Play an audio file 
- Add a greeting message 

Hello and Welcome at HelloDoor

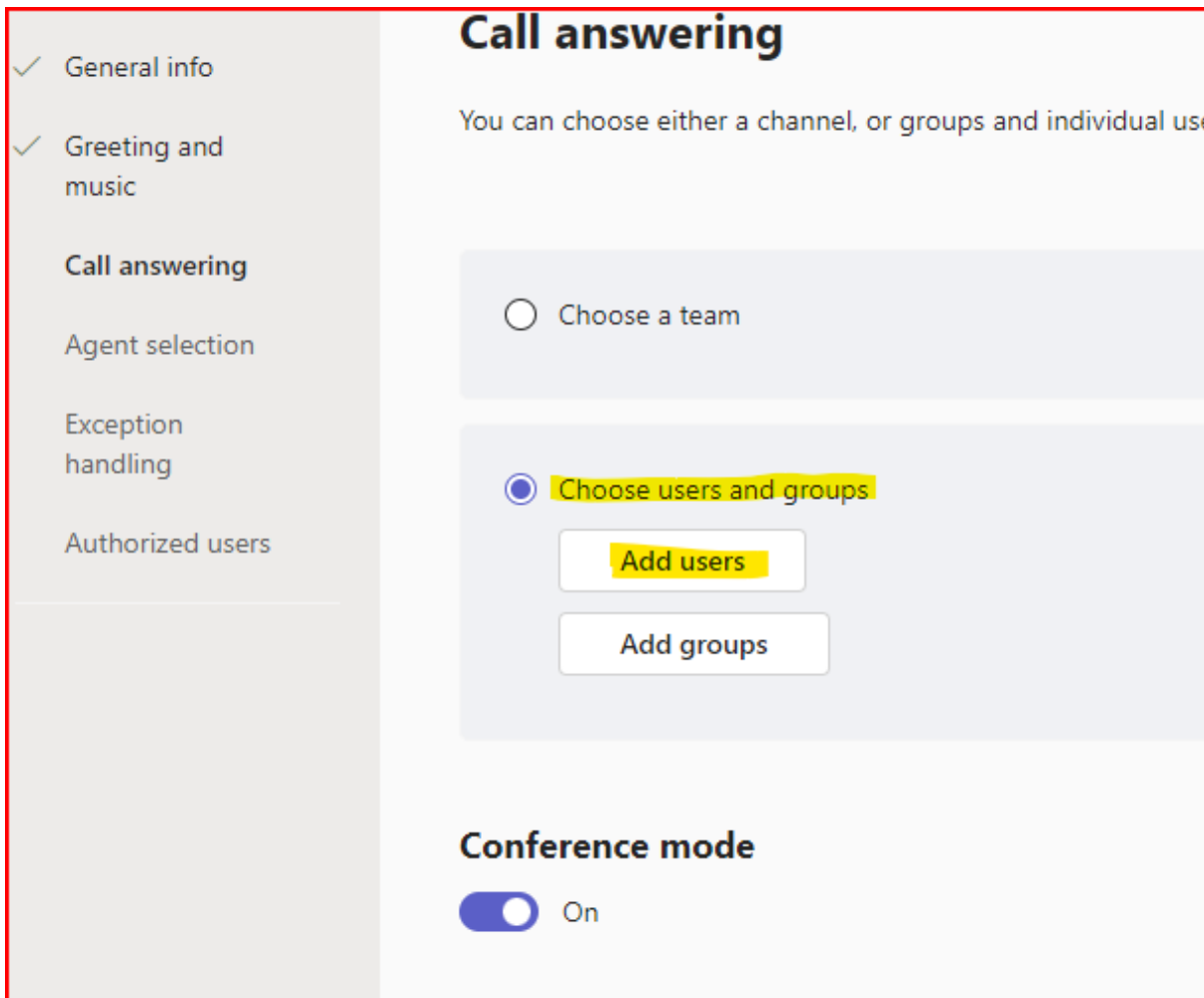
Music on hold

- Play default music
- Play an audio file 

Back Next Submit

Adding a greeting is recommended, but can be removed if it is not wanted.

Add all users that need to receive calls from this Intercom button:



Call answering

You can choose either a channel, or groups and individual users

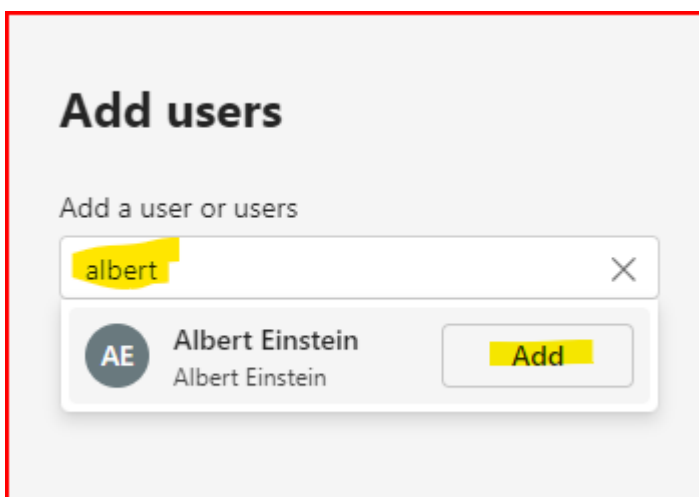
Choose a team

Choose users and groups

Conference mode


On

All users need a Teams Phone System license before they can be added. If the user you want to add does not show up in the list, please check if they have the needed license.



Add users

Add a user or users

-  **Albert Einstein**
Albert Einstein

Add users

Add a user or users

 ✕

Selected (1) users

 John Doe ✕

Add

Cancel

When all users are added, click Next:

Call answering

You can choose either a channel, or groups and individual users to an

Choose a team

Choose users and groups

Users

+ Add users ↑ Move up ↓ Move down × Remove

- ✓ Call agents
- John Doe

Add groups

Conference mode

On





Call agents who use the Skype for Business client won't receive calls when conference mode is enabled.

[Back](#) [Next](#) [Submit](#)

Agent selection

Routing method controls how calls will be presented to agents. Pre
presented to agents. Allow agents to opt-out if they need to be re

Routing method

- Attendant routing 
- Serial routing 
- Round robin 
- Longest idle 

Presence-based routing

Off

Call agents can opt out of taking calls

Off

Call agent alert time (seconds)

30

Back

Next

Submit

Any Routing method can be selected.

Optionally configure further exception handling:

Exception handling

Manage settings for call overflow, call timeout, and scenarios wh

Exception handling summary

Call overflow	Call timeout	No agents
50	20:00	All
maximum calls in queue, disconnect	maximum wait time, disconnect	queue

[Call overflow ⓘ](#)

[Call timeout ⓘ](#)

[No agents opted or signed in ⓘ](#)

[Back](#) [Next](#) [Submit](#)

Call queues \ Add a call queue

- ✓ General info
- ✓ Greeting and music
- ✓ Call answering
- ✓ Agent selection
- ✓ Exception handling
- Authorized users

Authorized users

Users listed here and assigned a voice application policy can make changes to this call queue. [Learn more](#)

+ Add ✕ Remove | 0 item

	Display name	Username	Job title
ⓘ No data is available.			

Back
Submit

Call queues

Call queues provide a method of routing callers to people in your organization who can help with a particular issue or question. Calls are distributed one at a time to the people in the queue (who are known as agents). While waiting for an agent, a greeting message and music may be played to callers. [Learn more](#)

+ Add ✎ Edit 🗑 Delete | 3 items

	Name	Resource accounts ⓘ	Call agents	Maximum calls	Maximum wait time
✓	HelloDoor Q1	1	1	50	20 minutes, 0 seconds

Test

(wait 10 to 15 minutes to make sure the creation has been activated properly inside Teams)

Another Teams user can call the created call queue and it should ring the users defined in the Call Queue “Call Answering” list. This Teams user can call the number you defined for the Resource account (+42900020002 in the example above) or the accountname ([HelloDoorCall@hellotest.info](mailto>HelloDoorCall@hellotest.info) in the example above) for the test.

Repeat for every Intercom button

Repeat the “Step 4” actions for every Intercom button, using a unique phone number for each.

Step 5: Connect your Intercom to the Internet

Connect your 2N IP Intercom device(s) to the network with an Ethernet cable. This cable should also provide PoE power to the device.

There is no need for the Intercom network connection to have access to your internal network for calling your Teams users, it is only required that the network connection allows Internet access to the HelloDoor gateway. The HelloDoor gateway is addressed by using your unique subdomain DNS record (**ixx.gw.hellodoor.solutions**).

The 2N IP Base hardware Installation manual can be found here:

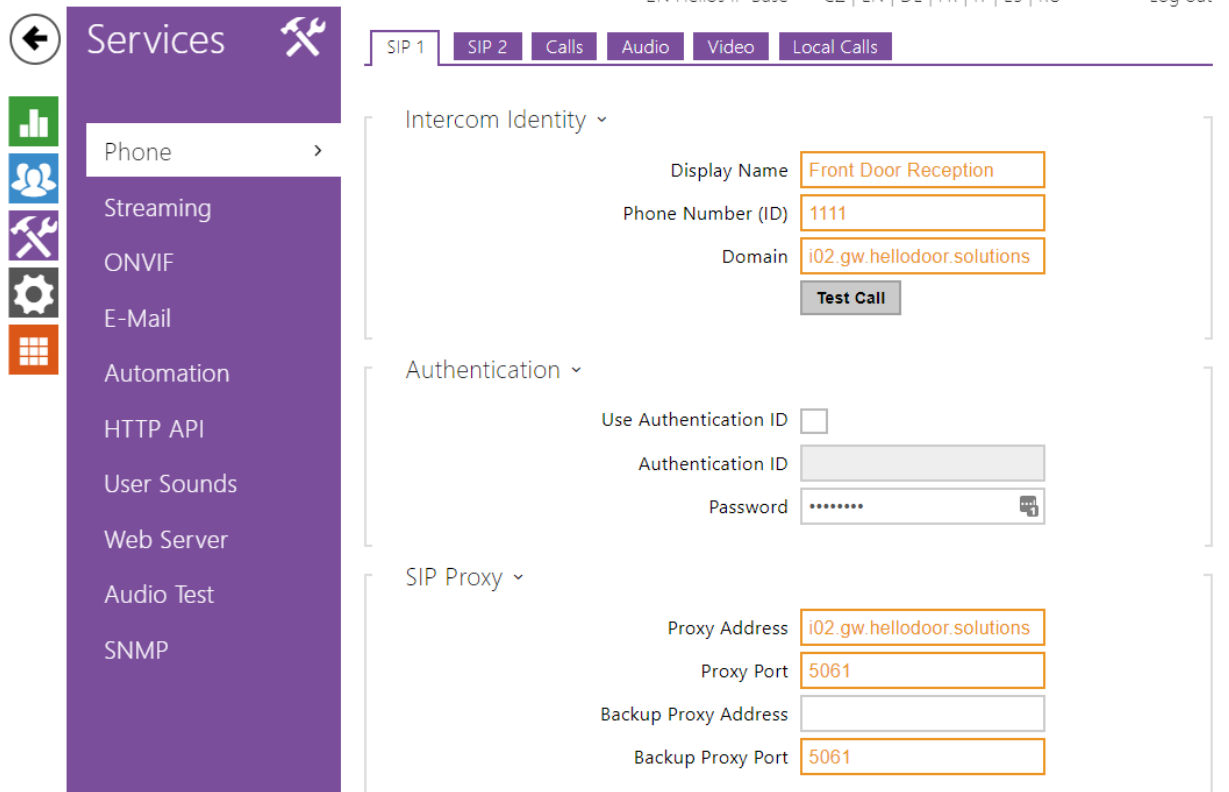
<https://wiki.2n.cz/hipba/inst/latest/en>

Make sure the Intercom device is at a recent Firmware version (Version 2.29.1.38.8 or more recent).

Step 6: Configure your 2N IP Intercom

Log in to the device

Configure the SIP account:



Services

Phone >

Streaming

ONVIF

E-Mail

Automation

HTTP API

User Sounds

Web Server

Audio Test

SNMP

SIP 1 | SIP 2 | Calls | Audio | Video | Local Calls

Intercom Identity ▾

Display Name

Phone Number (ID)

Domain

Authentication ▾

Use Authentication ID

Authentication ID

Password

SIP Proxy ▾


Proxy Address











Proxy Port

Backup Proxy Address

Backup Proxy Port

- Display Name: this is the name of the “caller” that will be displayed to the called person in Teams. You are free to choose a text.
- Phone number: this is the number of the “caller” that will be displayed to the called person in Teams. You are free to choose a number.
- Domain & Proxy Address: use the “Unique subdomain” value you received from HelloDoor.
- Proxy Port & Backup: use the “SIP” Port value you received from HelloDoor.

Services 

-  Phone >
-  Streaming
-  ONVIF
-  E-Mail
-  Automation
-  HTTP API
-  User Sounds
-  Web Server
-  Audio Test
-  SNMP

SNMP

SIP 1 SIP 2 Calls Audio Video Local Calls

SIP Registrar ▾

Registration Enabled

Registrar Address

Registrar Port

Backup Registrar Address

Backup Registrar Port

Registration Expiry [s]

Registration State **NOT REGISTERED**

Failure Reason -

Advanced Settings ▾

SIP Transport Protocol ▾

Lowest Allowed TLS Version ▾

Trusted Certificate ▾

User Certificate ▾

Local SIP Port

PRACK Enabled

REFER Enabled

Send KeepAlive Packets

IP Address Filter Enabled

Receive encrypted calls only (SRTP)

Encrypted outgoing calls (SRTP)

Encrypted outgoing calls (SRTP)

Do Not Play Incoming Early Media

QoS DSCP Value


External IP Address

Starting RTP Port

RTP Timeout

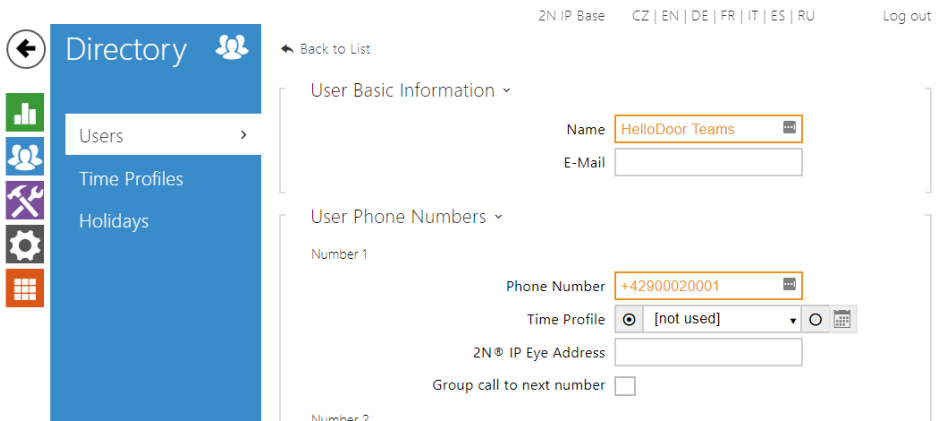
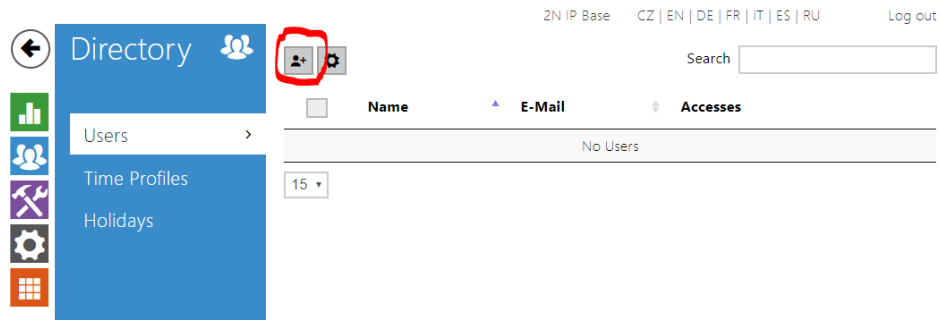
Compatibility with Broadsoft devices

Rotate SRV records

 Save

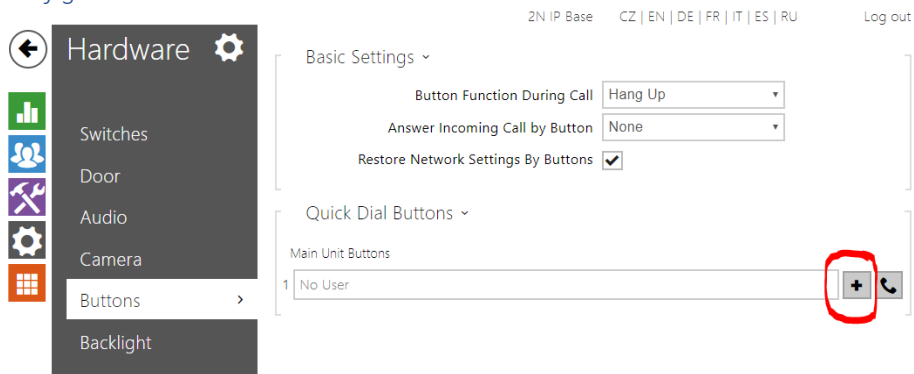
- SIP Transport Protocol: select “TCP”
- Local SIP Port: use the “SIP” Port value you received from HelloDoor.
- External IP Address: use your Public IP address. This is the IP address that is used on your site to communicate with the Internet.

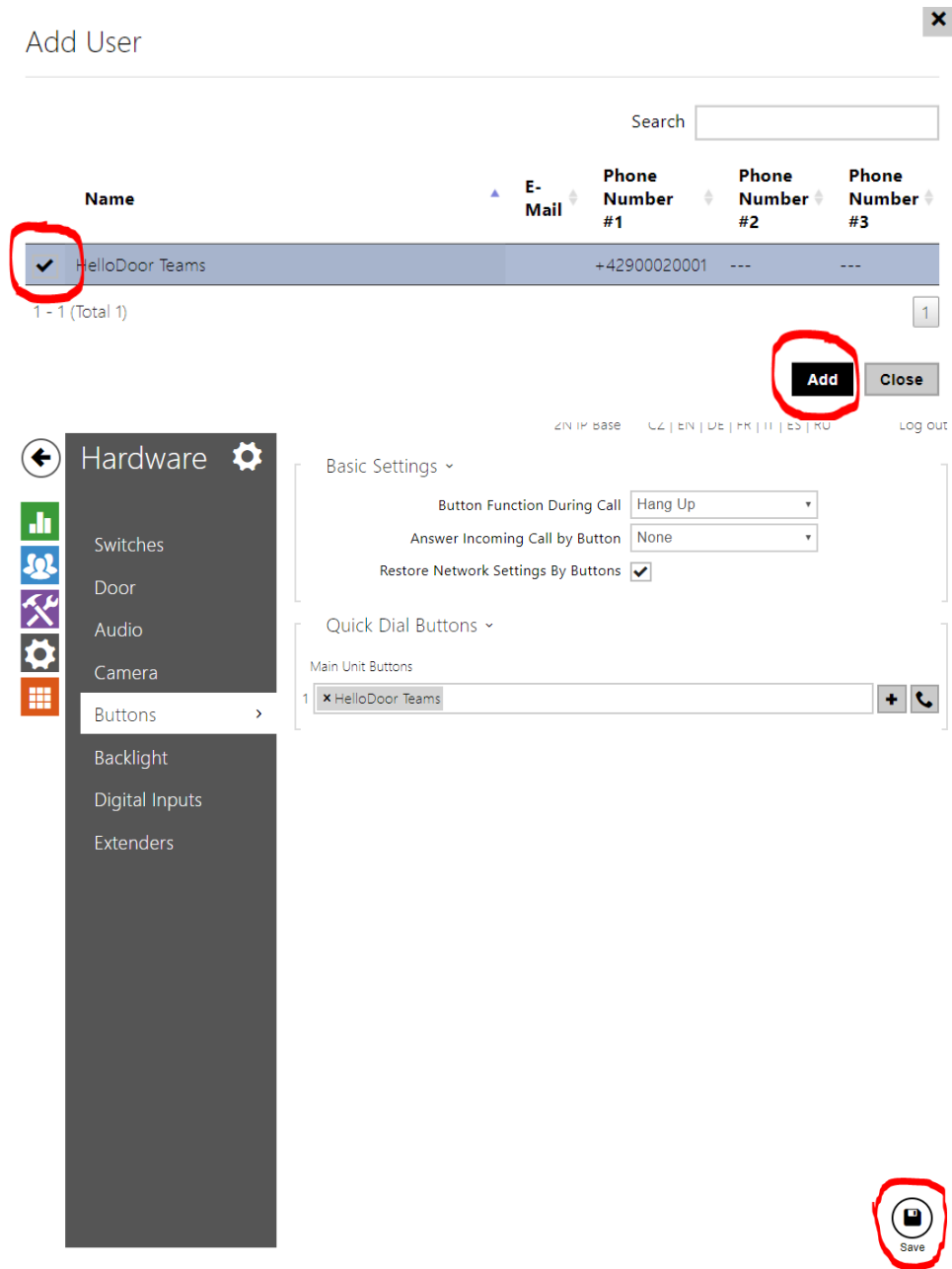
Create a user:



- Name: this is a text description you can choose
- Phone Number: use the phone number here that you also used for the Call Queue in the previous steps that you want to link to this Intercom button.

Configure a button:





The screenshot displays the 'Add User' dialog box at the top, which contains a search bar and a table of users. The table has columns for Name, E-Mail, and three Phone Number fields (#1, #2, #3). A single user, 'HelloDoor Teams', is listed with phone number '+42900020001'. A red circle highlights the checkmark in the first column of this row. Below the table, an 'Add' button is also circled in red. Below the dialog, the 'Hardware' settings menu is open, showing options like Switches, Door, Audio, Camera, Buttons, Backlight, Digital Inputs, and Extenders. The 'Buttons' option is selected. The main settings area shows 'Basic Settings' and 'Quick Dial Buttons'. Under 'Quick Dial Buttons', the 'Main Unit Buttons' section contains a list with one entry: '1 HelloDoor Teams'. A red circle highlights the 'Save' button at the bottom right of the settings area.

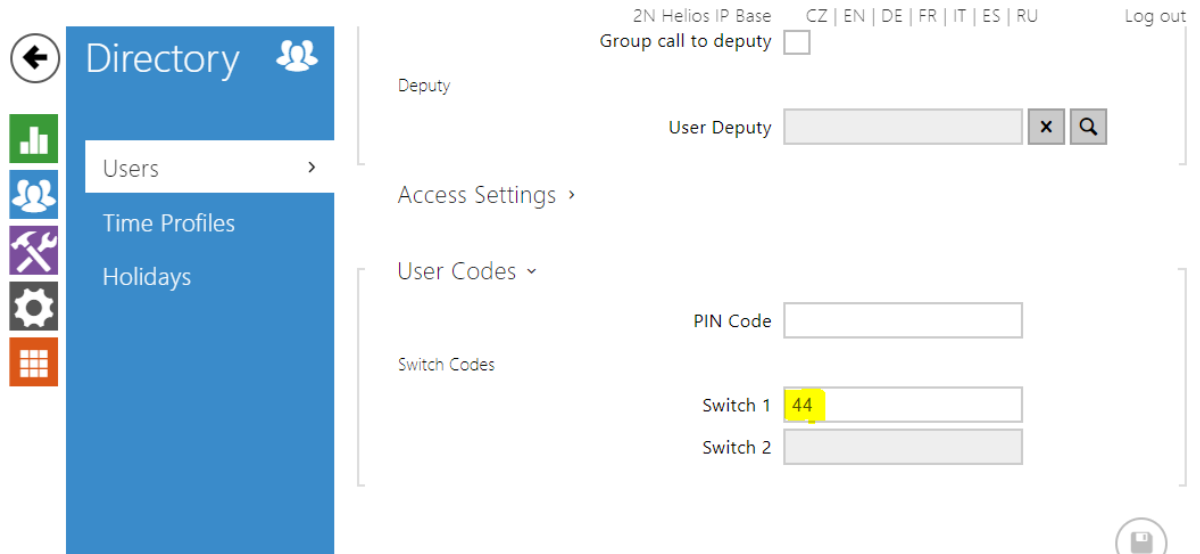
Optional configuration – Open doorlock

The 2N IP Base intercom has a relay build-in. It is possible to instruct the relay with a numeric code during the call, so that a door can be opened.

Technical relay information:

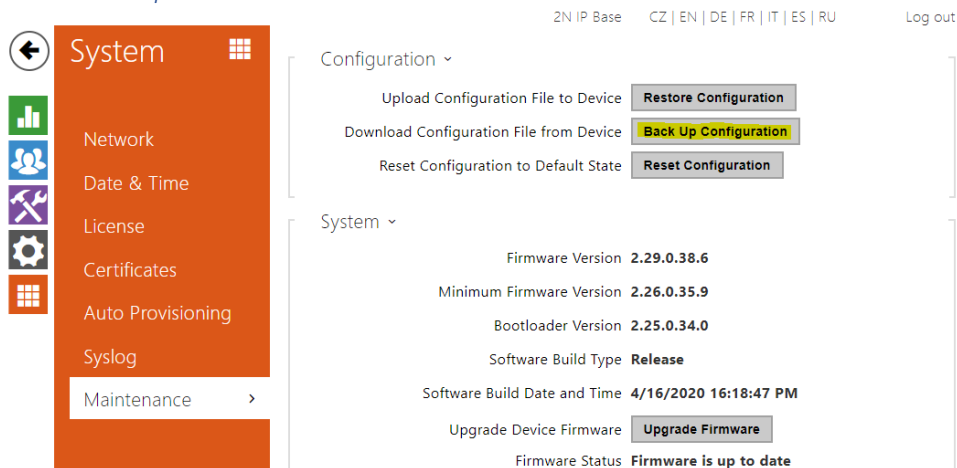
<https://wiki.2n.cz/hipba/inst/latest/en/2-popis-a-instalace/2-3-elektricka-instalace>

If you want to use this functionality, then add the code you want to use to the “Switch Code” for the user:



The relay can now be instructed to open by typing **44*** during the call.

Take a backup:



Store the backup file to keep a copy of the configuration.

Step 7: Test the configuration:

Log in to Teams with an account that is member of the Call Queue “Call Answering” list created for a specific Intercom button. Then press the Intercom button and answer the call in the Teams client.

Support

If the call fails and all the previous steps are correctly taken, please contact Support2n@hellodoor.info.

Addendum 1 – Video

Unfortunately, the Direct Routing interface from Microsoft that we use to connect to Teams does not support video. So the videostream cannot be sent into the Teams call.

It is however possible to have a popup on a PC showing the real-time video-stream, when a user presses the Intercom button. But this is outside of Teams. This is done with the free IP-Eye application from 2N.

Download: https://www.2n.cz/en_GB/products/2n-helios-ip-eye

Config info: <https://2nwiki.2n.cz/pages/viewpage.action?pageId=46173398>

Important: The Intercom needs local network access to the PC for this.

This application can also be used to permanently monitor the videostream from the camera from a PC.