PBXBoxNG

Manual

Using, transferring, setting up and operating

As of 27 November 2026

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PBXBoxNG is a web interface for the Asterisk phone system. This manual first explains daily use, then the reception desk and finally setup and operation.

> **About the pictures:** All screenshots show a test system with fictitious names, numbers and addresses (“Sample Company”) in the dark theme. The address `192.168.1.10` stands for the address of your system. As of 27 November 2026.

You are …	Read
a member of staff with a phone	Part A
at the reception desk or switchboard	Parts A and B
responsible for the system	everything, especially Parts C and D

Basics

Terms

Term	Meaning
Extension	An internal line with a short number, such as `101`. A desk phone or softphone registers to it.
Device	The phone or program that belongs to an extension.
Trunk	The connection to the outside: to a SIP provider or to a second phone system.
Phone number	A number under which others reach you from outside. You decide where it rings.
Call flow	What happens to a call: opening hours, voice menu, who rings.
Queue	Callers wait in line until someone is free.
Voicemail	The mailbox (answering machine) of an extension.
Apply changes	Only then does the phone system take over what you have set.

Roles

What you see in the interface depends on your role.

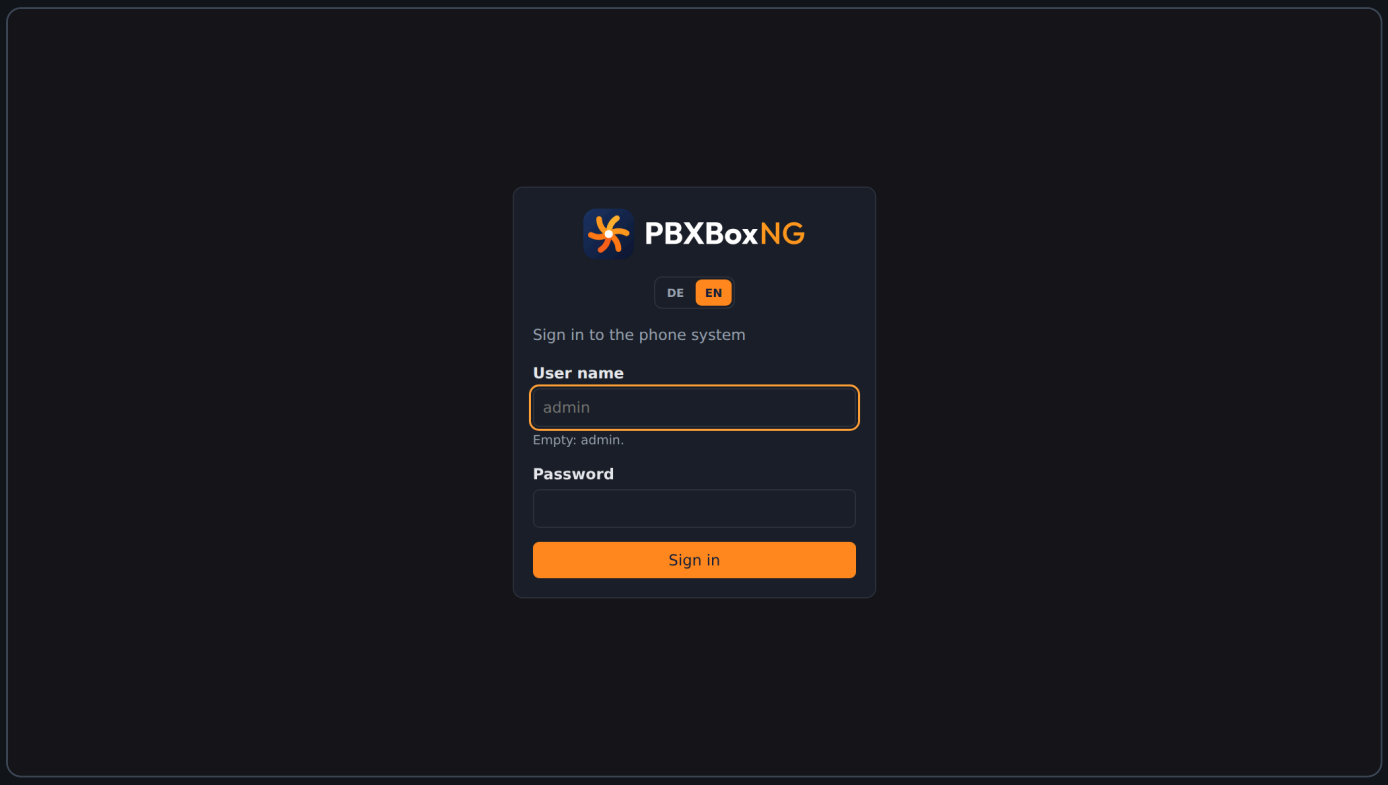
Role	Pages	May
Administrator	all	do everything
Operator	Overview, Call list, Contacts, Extensions, Forwarding, Phone numbers, Call flows, Queues, Announcements & music	set up telephony, maintain contacts, apply changes
Reception	Switchboard, Call list, Contacts, My phone, Forwarding, Voicemail	transfer calls, maintain contacts
Read only	Overview, Call list, Contacts	view
Self-service	My phone, My calls, Contacts, Forwarding, Voicemail	use their own extension

Language

At the top right, and on the sign-in page, you switch between **DE** (German) and **EN** (English). Everyone chooses for themselves; the choice is saved with the account. Until then the browser's language applies. What you hear and read on the phones is set separately for the whole system, see Phone system language.

Part A – For all users

Signing in

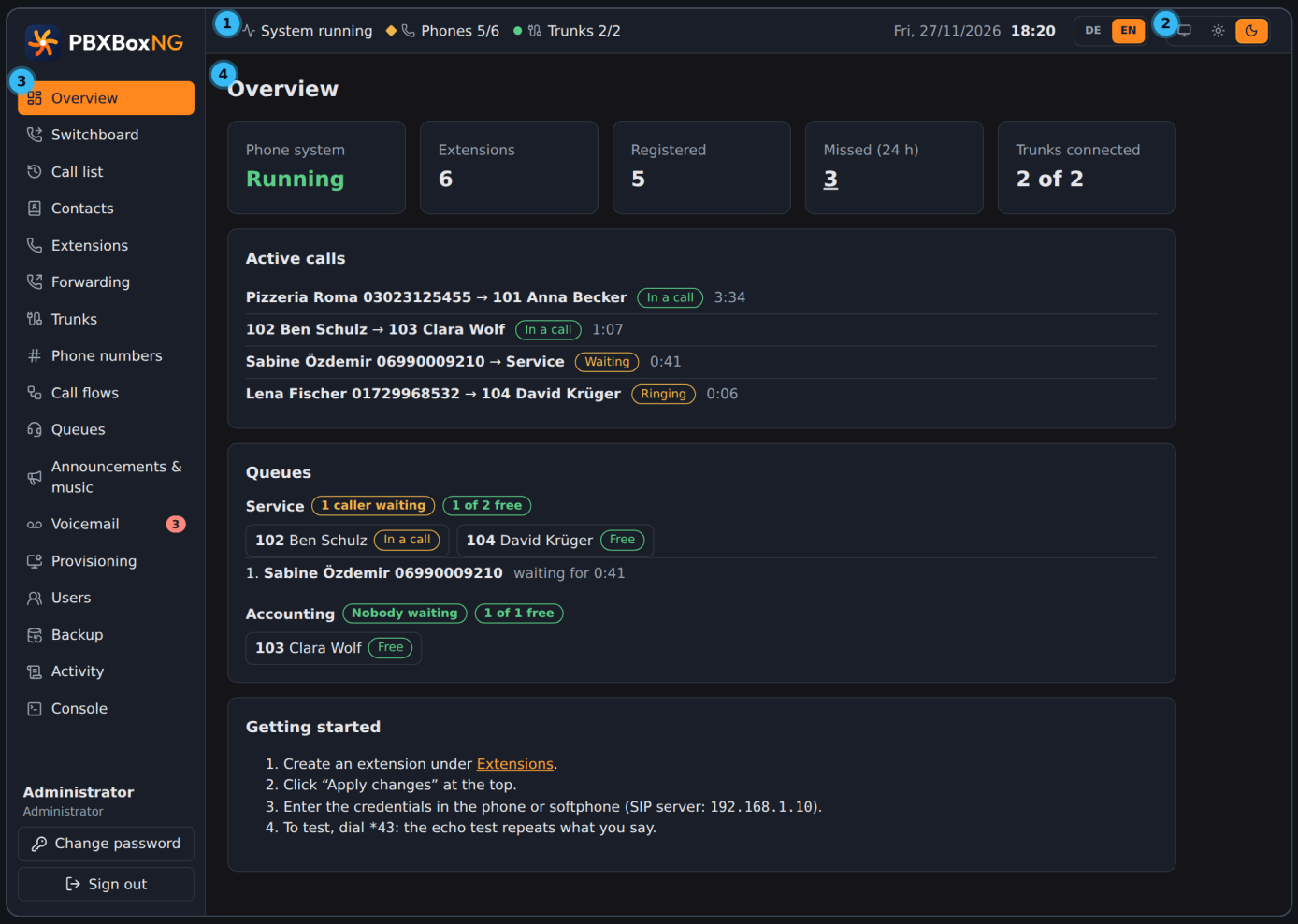


Sign-in page

1. Open the address of the system in your browser, for example `https://192.168.1.10`.
2. Enter user name and password and choose **Sign in**. If sign-in via Active Directory is set up, your Windows account works too.

- After five wrong attempts per account the system waits five minutes.
- With a self-made certificate the browser warns you on the first visit. If in doubt, ask your administrator before confirming the warning.

The interface



Overview with active calls

No.	Area
1	**Status bar:** is the system running, how many phones and trunks are connected?
2	**Appearance:** same as system, light or dark; next to it the language
3	**Navigation:** the pages your role may see
4	**Content** of the chosen page

At the bottom left are your name, your role, **Change password** and **Sign out**.



Status bar

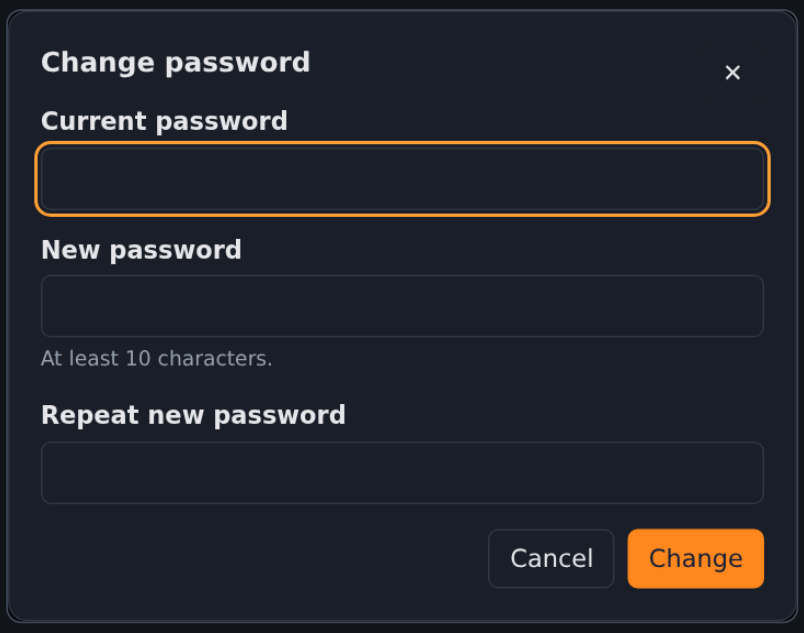
A green dot means everything is fine. A yellow diamond shows that something is only partly right, for instance not every phone is registered. On the right is the system's time; time controls follow it.



Appearance switch

The three symbols stand for **Same as system**, **Light** and **Dark**. The browser remembers the choice.

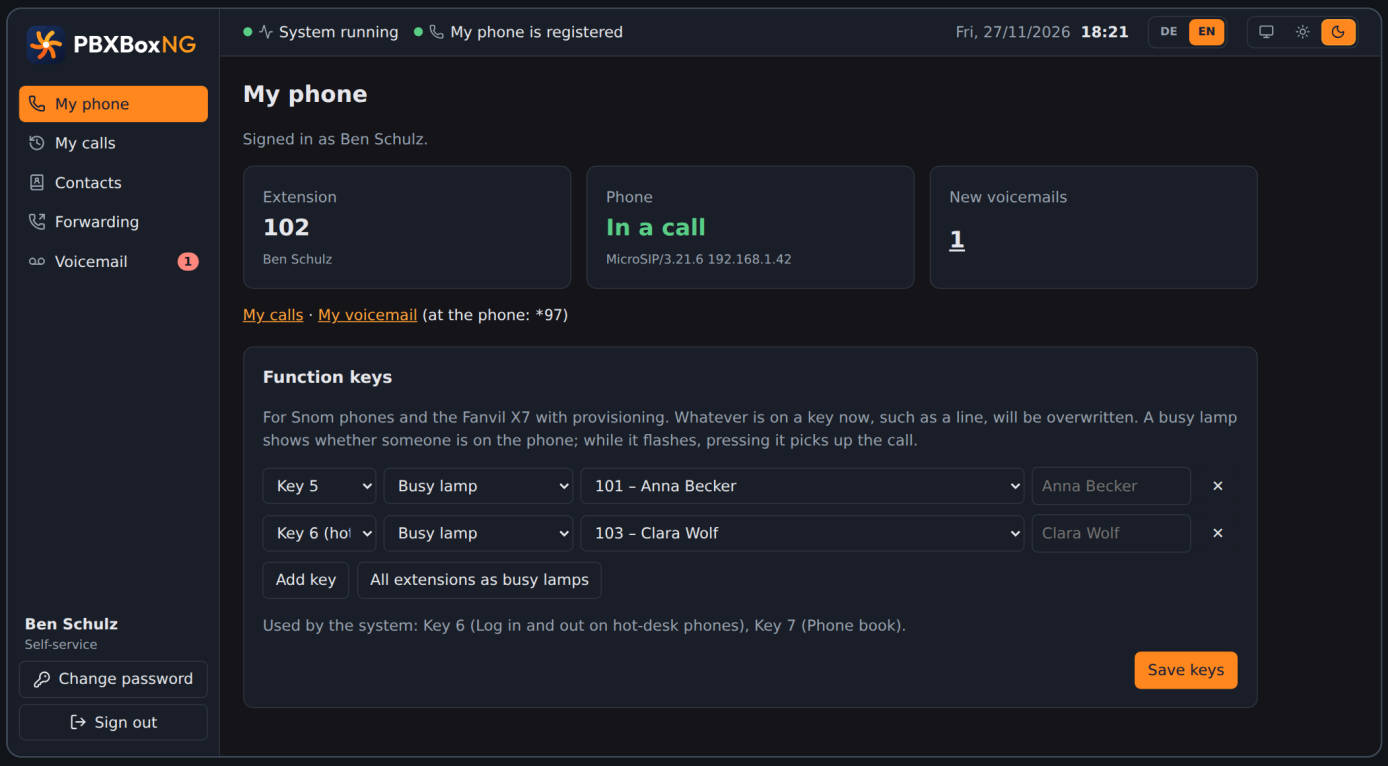
Changing your password



Change your own password

Only local accounts change their password here (at least 10 characters). You change the password of a Windows account in Windows as usual.

My phone

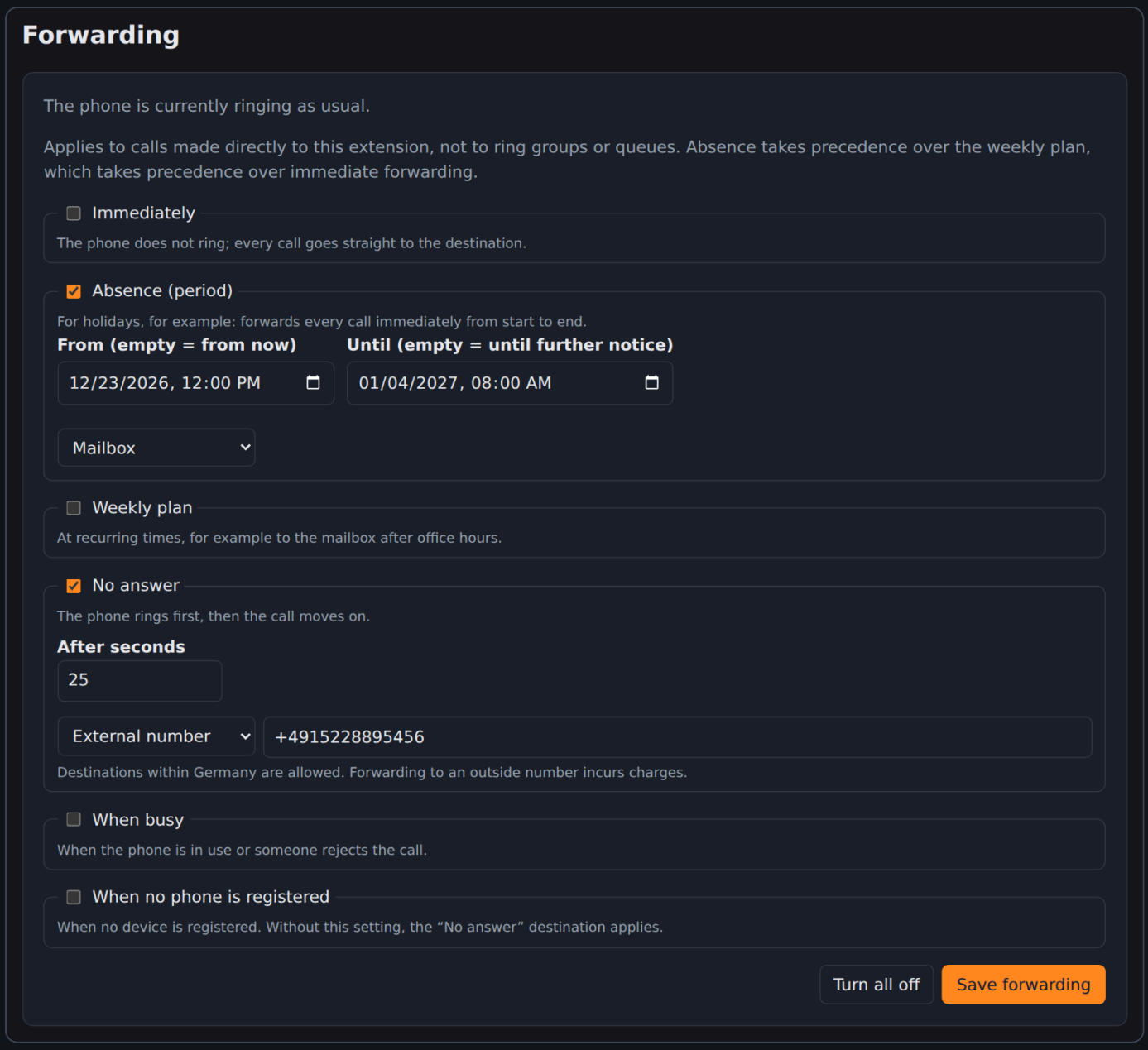


My phone

The page shows your extension, whether your phone is registered or in a call, and how many new voicemails you have. If the extension is missing, your administrator assigns it to you under **Users**.

Below, you set the **function keys** of your phone yourself, as described under Function keys. If a forwarding is in effect, it is shown at the top of the page.

Forwarding



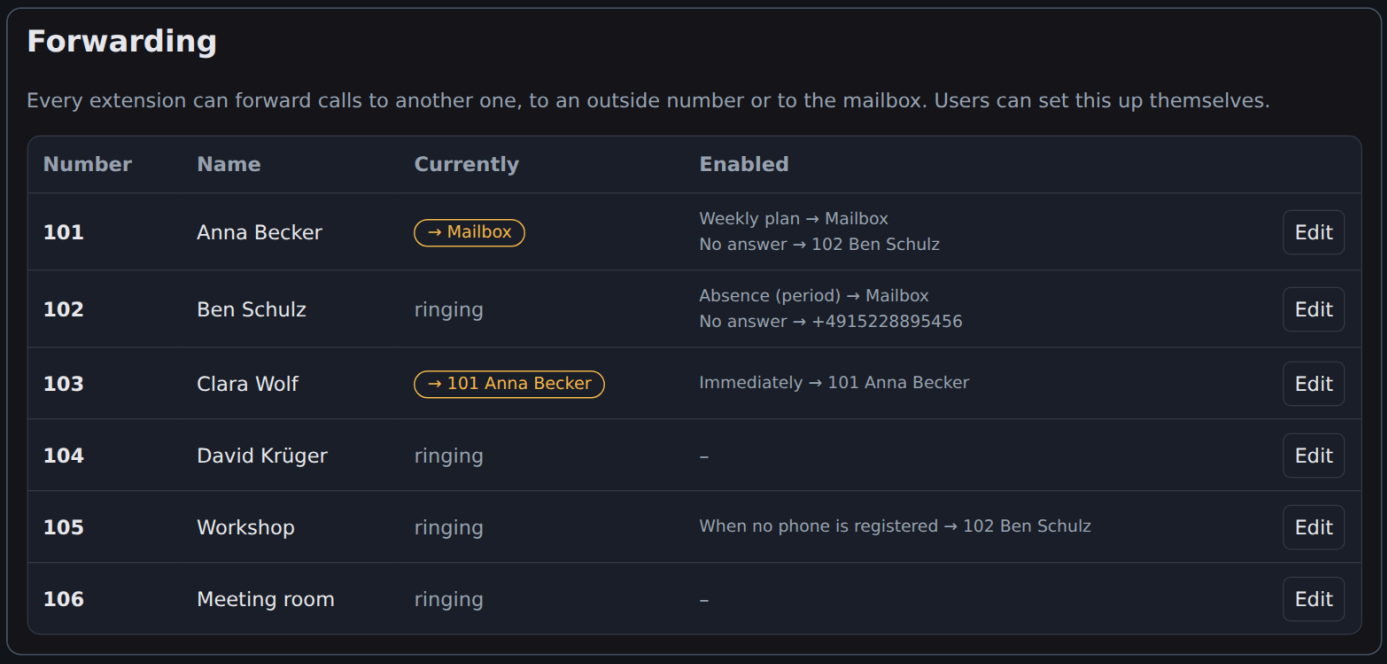
Your own forwarding

Under **Forwarding** you decide where your calls go when you are not there: to the **mailbox**, to an **extension** or to an **external number** (you can also find it by name in the contacts). Tick the box, choose the destination, **Save forwarding**; the setting applies immediately.

Rule	When the call is forwarded
Immediately	always, your phone does not ring
Absence (period)	from start to end, for example during holidays
Weekly plan	at recurring times, for example to the mailbox after office hours
No answer	after it has rung for the set time
When busy	when you are on the phone or reject the call
When no phone is registered	when no device is reachable

- If several apply, **Absence** takes precedence over the **Weekly plan**, which takes precedence over **Immediately**.
- If “to” is earlier than “from” in the weekly plan, the window runs into the next day. 00:00 to 00:00 is the whole day.
- Forwarding applies to calls meant for you personally, not to ring groups and queues. There you log out or take a break.
- **External destinations cost money.** Allowed is wherever your extension may call itself.
- **Turn all off** and save ends every forwarding; the destinations are kept.

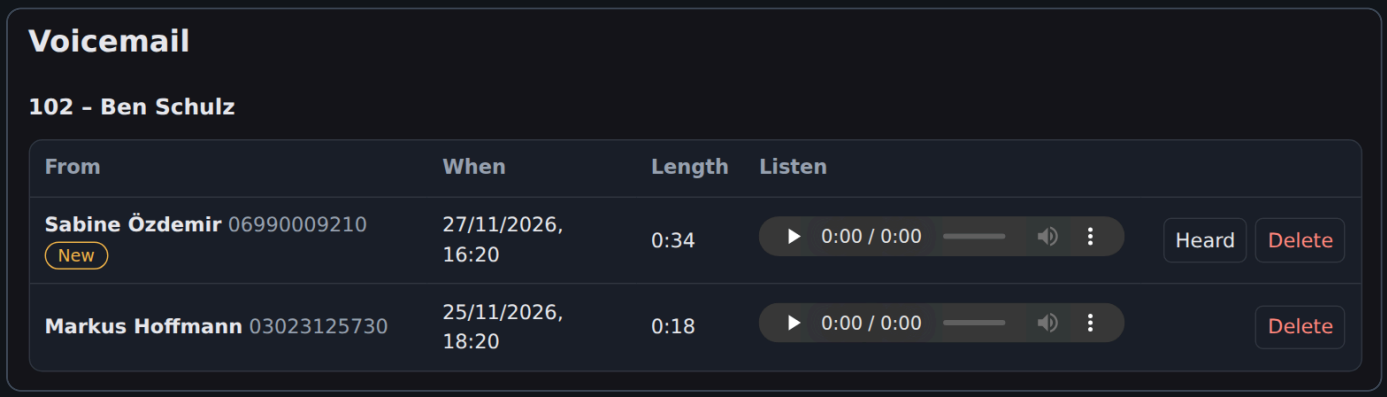
Administrators and operators see all extensions under **Forwarding** and can change them there:



Forwarding of all extensions

> Forwarding has been tested with simulated phones, not yet with real lines.

Voicemail



Your own voicemails

Under **Voicemail** you listen to messages directly in the browser.

- **Heard** marks a new message as listened to.
- **Delete** removes it permanently.

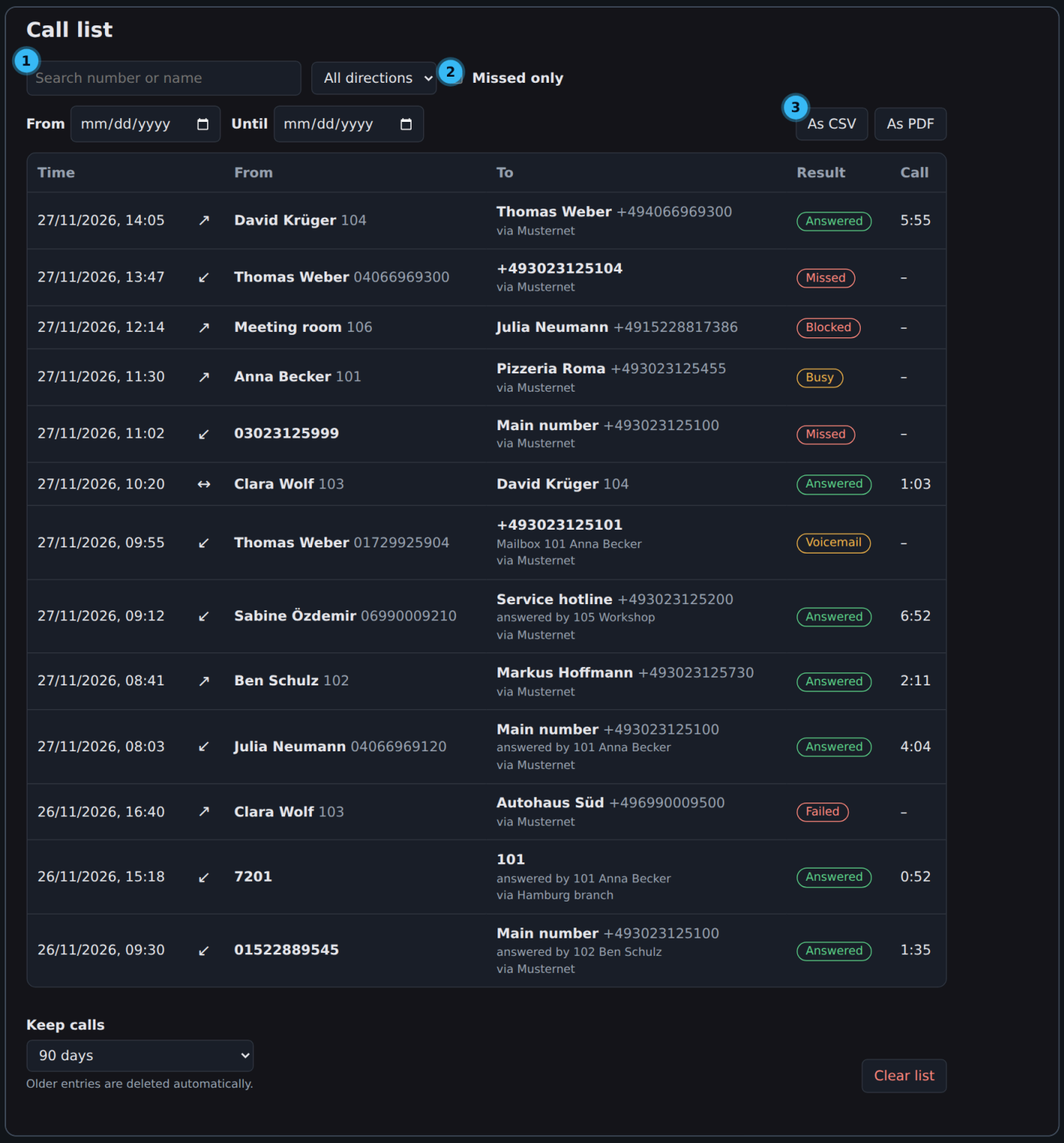
- The red number in the navigation counts new messages.

At your own phone:

What you want	How to do it
Listen to messages	dial `*97`, PIN and `#`, then follow the announcements
Record your own greeting for absence	`*97`, PIN, then `0` and `1`

The PIN can only be changed in the web interface (by an administrator). A message lasts at most 3 minutes.

Call list



Call list

No.	Function
1	Search by number or name
2	**Missed only:** incoming calls that nobody answered personally
3	Download the shown selection as **CSV** or **PDF**

You can also choose direction and period (**From**, **To**). The arrows mean: ↙ incoming, ↗ outgoing, ↔ internal. A call appears a few seconds after hanging up. With the self-service role the page is called

My calls and shows only your own calls.

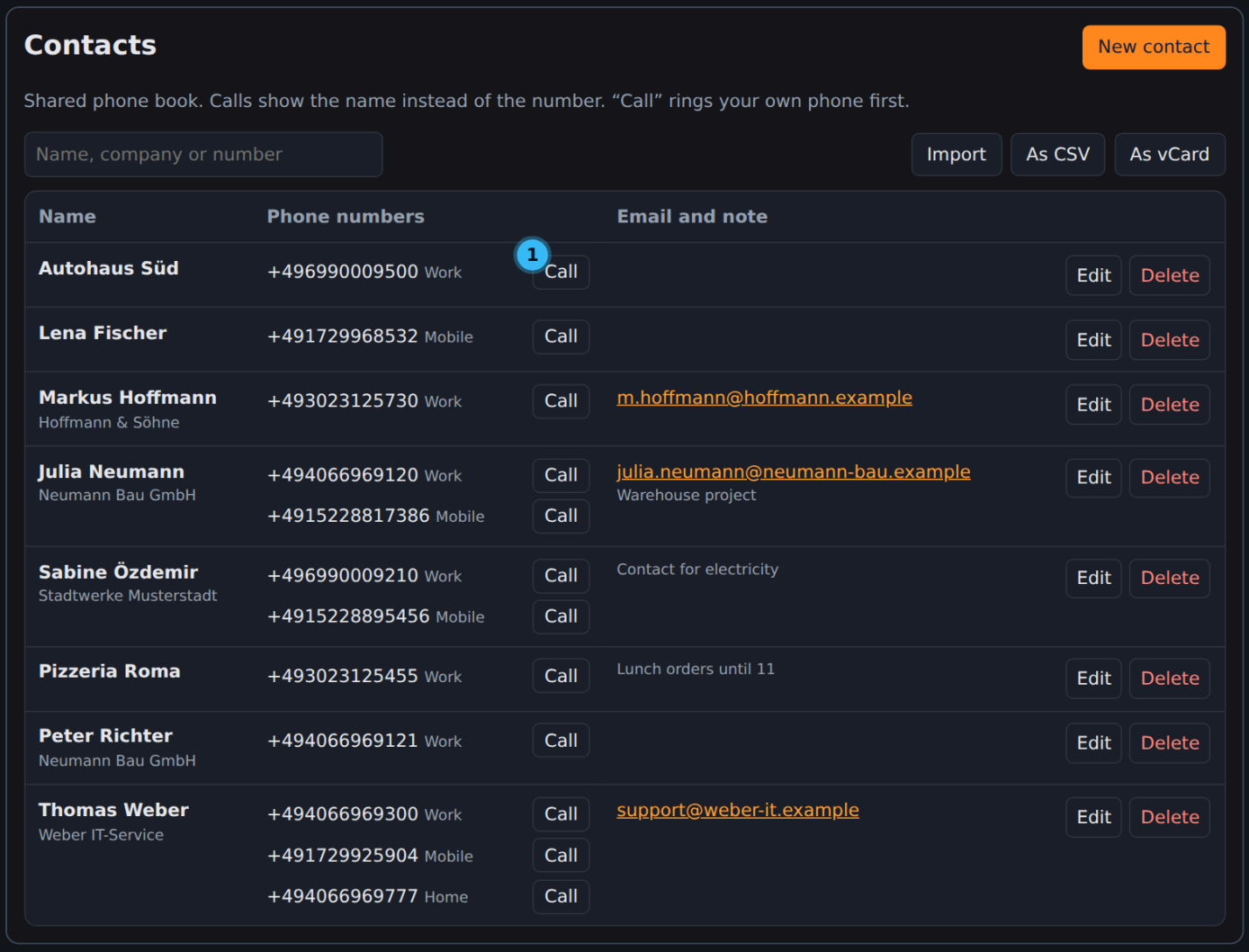
Result	Meaning
Answered	someone picked up
Voicemail	the caller was handed over to a mailbox
Missed	nobody picked up
Not reached	your own call that the other side did not answer
Busy	the other side was busy
Failed	the call did not go through, for instance because of a fault
Blocked	your dialling permission prevented the destination

- Exports contain all matches, not just the visible page (PDF: at most the latest 5000). They contain personal data.
- By default calls are deleted after 90 days. The administrator sets the period at the bottom of the page.
- Calls to key codes (`*43`, `*97` and the like) are not recorded.

Contacts

The **Contacts** page is the shared phone book. Everyone sees it; administrators, operators and reception maintain it. When a stored number calls, the **name** appears instead of the number on the phone, in the call list, in the overview and on the switchboard.

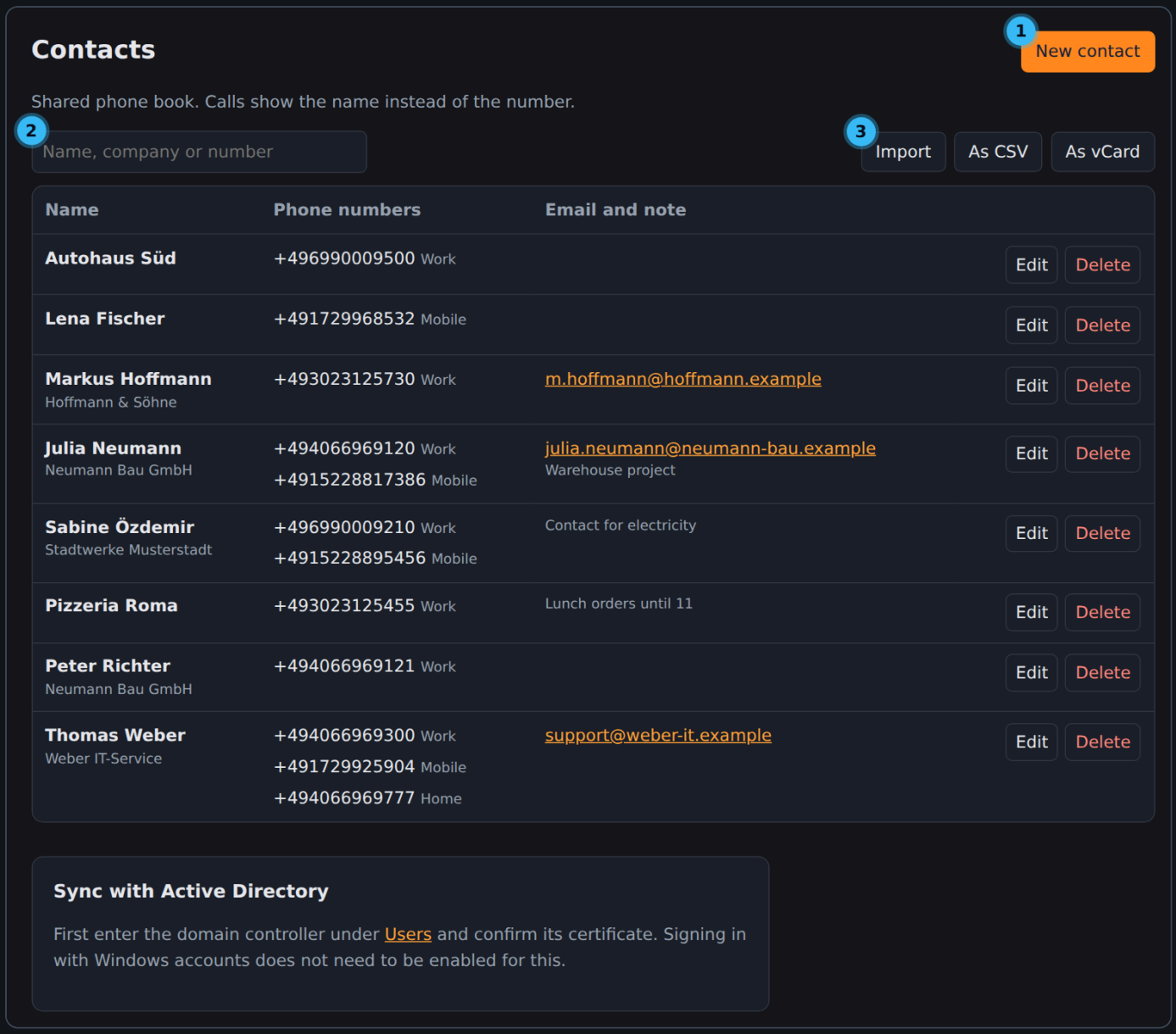
Searching and calling



Contacts with the Call button

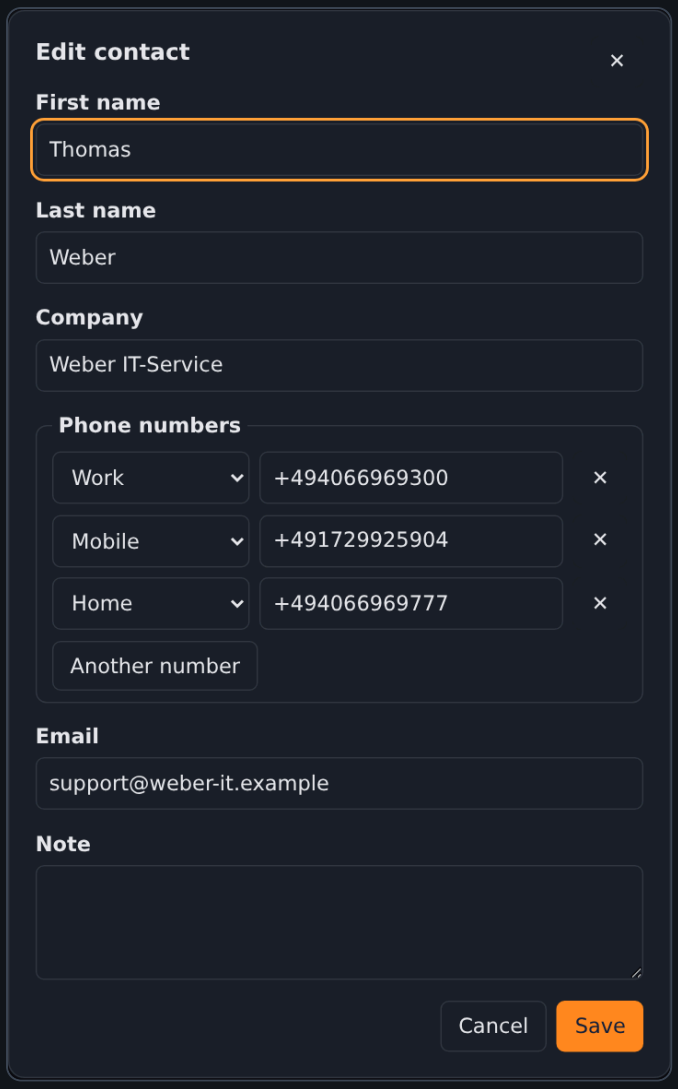
- The search finds names, companies, email, notes and numbers in any spelling.
- **Call** (**1**) makes **your** phone ring first. Answer it, then the contact is dialled. You need your own extension for this; its dialling permission applies.

Maintaining

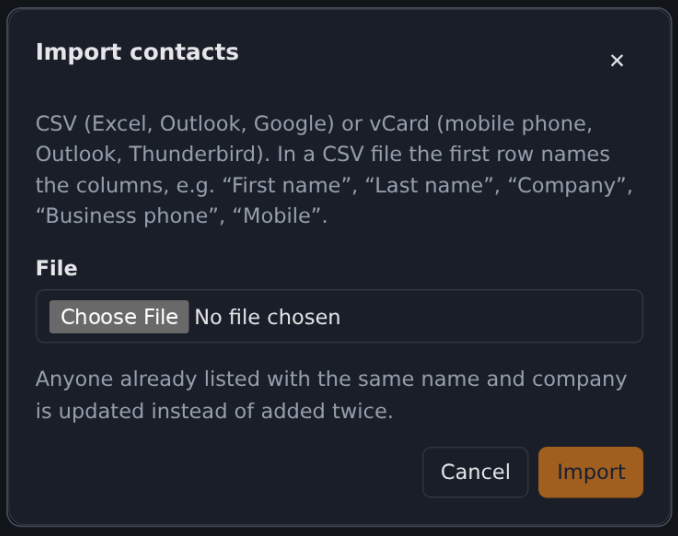


Maintain contacts

No.	Function
1	**New contact**
2	Search
3	**Import** and export **As CSV** and **As vCard**



Edit contact



Import contacts

- Enter numbers preferably with area code (`040 123456` or `+49 40 123456`). Numbers without a leading 0 or + count as internal numbers, for example of a linked system.
- Up to ten numbers per contact are possible: work, mobile, home, other.
- **Import:** CSV (Excel, Outlook, Google) or vCard (`.vcf`), at most 4 MB. In a CSV file the first row names the columns, for example `First name;Last name;Company;Business phone;Mobile;Home;Email;Note` .
- Anyone already listed with the same name and company gets the new numbers added. Importing never deletes anything. Afterwards you see what was not taken over.
- Entries marked **AD** come from Active Directory and are maintained there.

At the phone

Key codes

Code	Function
`*43`	Echo test: you hear yourself, good for checking microphone and speaker
`*97`	listen to your own mailbox
`*45`	log in to the queues
`*46`	log out of the queues
`*47`	start a break in all queues
`*48`	end the break
`*8` + number	pick up a call ringing at that extension, e.g. `*8102`
`*11`	log in at a hot-desk phone
`*12`	log out of the hot-desk phone

Calling outside

- Always dial outside numbers **with the area code**. If your system requires a digit for the outside line (usually `0`), it comes first.
- Every extension may dial `110`, `112`, `115`, `19222`, `116116` and `116117`.
- Numbers starting with `0900` and `0137` are always blocked.

> **Emergency calls:** They only work if a trunk is connected and power and internet are available. Always keep a mobile phone at hand. Do not dial 110 or 112 for testing.

Hot-desk phones

At a hot-desk phone you log in with your own extension. Then your number rings there, with your permissions and your message lamp.

1. On the free phone press the **Log in** key or dial `*11`.
2. Your number and `#`, then your hot-desk PIN and `#`.
3. When leaving, **Log out** or `*12`. This works from any phone of your extension.

- Each extension is logged in on at most one hot-desk phone.
- Usually the system logs everyone out at night.
- After five wrong entries logging in is locked for 15 minutes.
- Call lists and contacts stored on the device are **not** deleted.

Phone book on the Snom

If the **Phone book** key is set up:

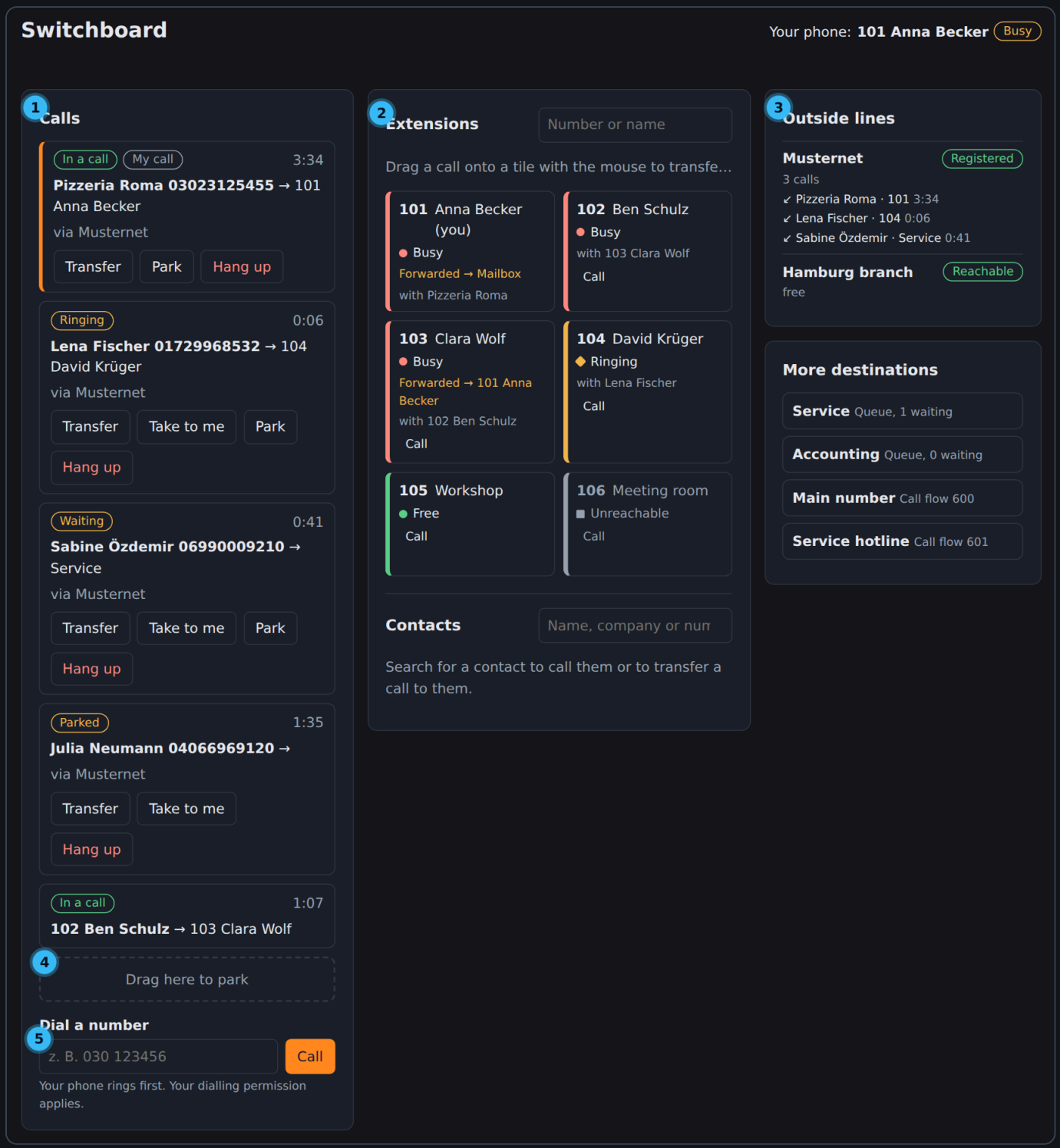
1. Press the **Phone book** key briefly.
2. Under **Name or number** enter a part and confirm (without input all contacts appear, at most 40).
3. Choose a result to call.

If the directory has also been switched on, you find the contacts on the device under **Contacts → PBXBoxNG** as well.

Part B – Reception

Switchboard

The **Switchboard** page shows all active calls, all extensions and the outside lines. Your user needs its **own extension**: the phone you are sitting at. At the top right you see which one that is.

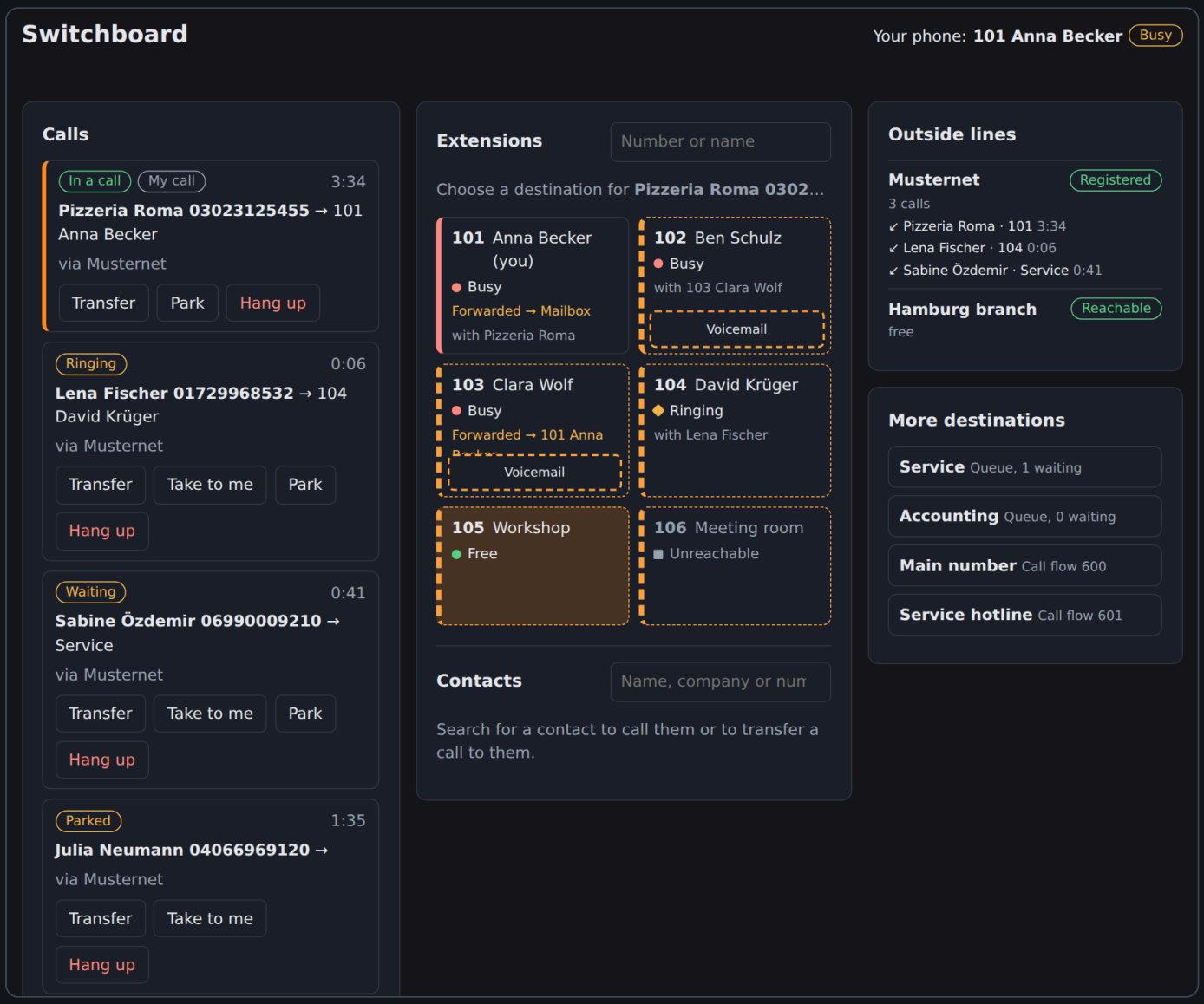


Switchboard

No.	Area
1	**Calls:** each with state, duration and the possible actions
2	**Extensions:** free, ringing, busy, on hold or unreachable
3	**Outside lines:** state of each trunk and the calls on it
4	**Park:** drag a call here
5	**Dial a number:** first your phone rings, then the number is dialled

You can change **your** calls and **ringing, waiting and parked** calls. Other people's calls you can only see.

Transferring with the mouse



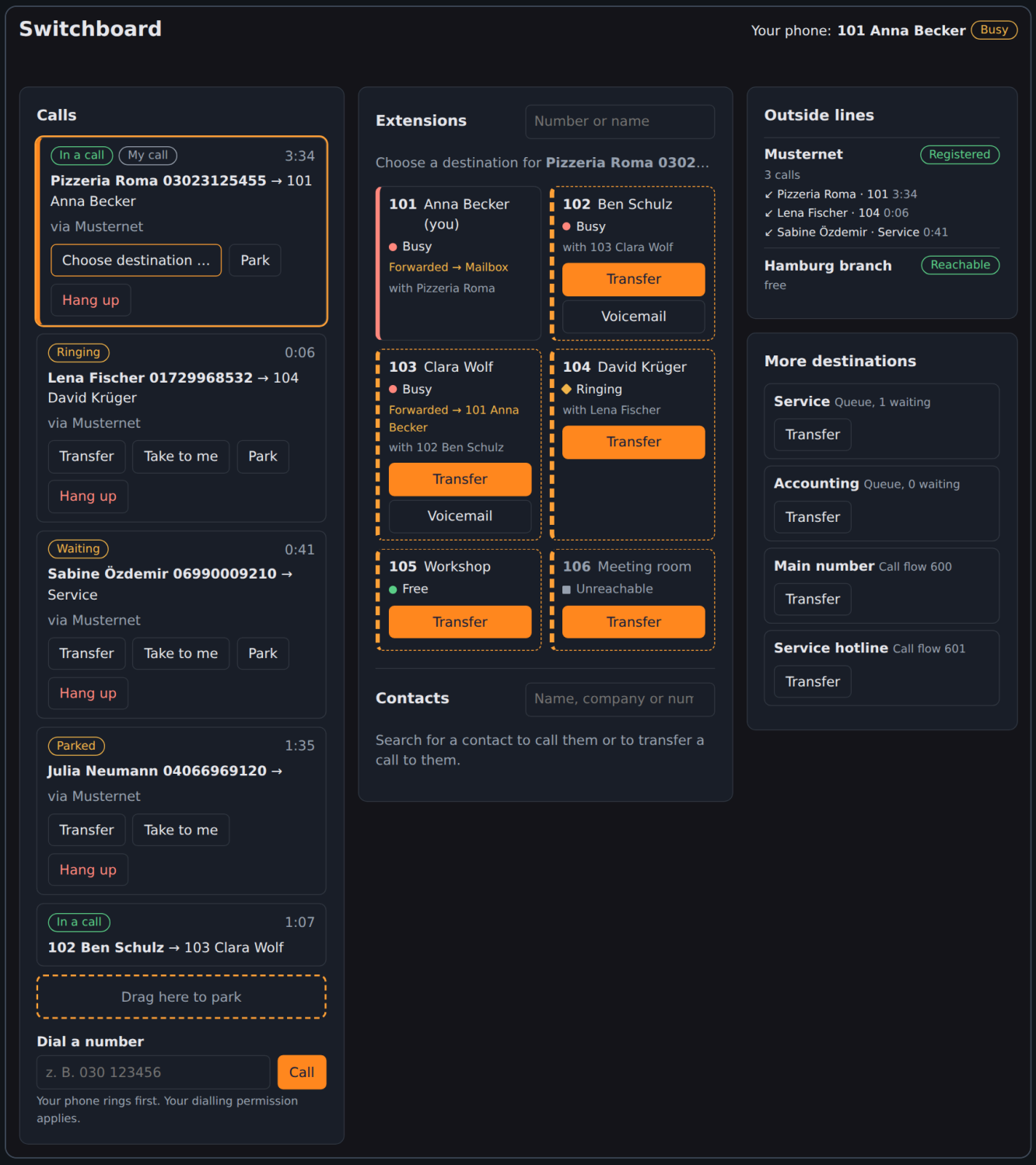
Drag a call onto an extension

Drag a call from the left column onto a tile and let go:

- onto the **tile**: transfer directly
- onto **Consultation**: talk to the destination yourself first

- onto **Voicemail**: into the mailbox of the extension
- onto **your own tile**: take the call to yourself
- onto a **queue** or a **flow** on the right: hand it over there

Transferring by click



After clicking Transfer the destinations appear

Instead of dragging: choose **Transfer** on the call and then click **Transfer**, **Consultation** or **Voicemail** on the destination.

Consultation

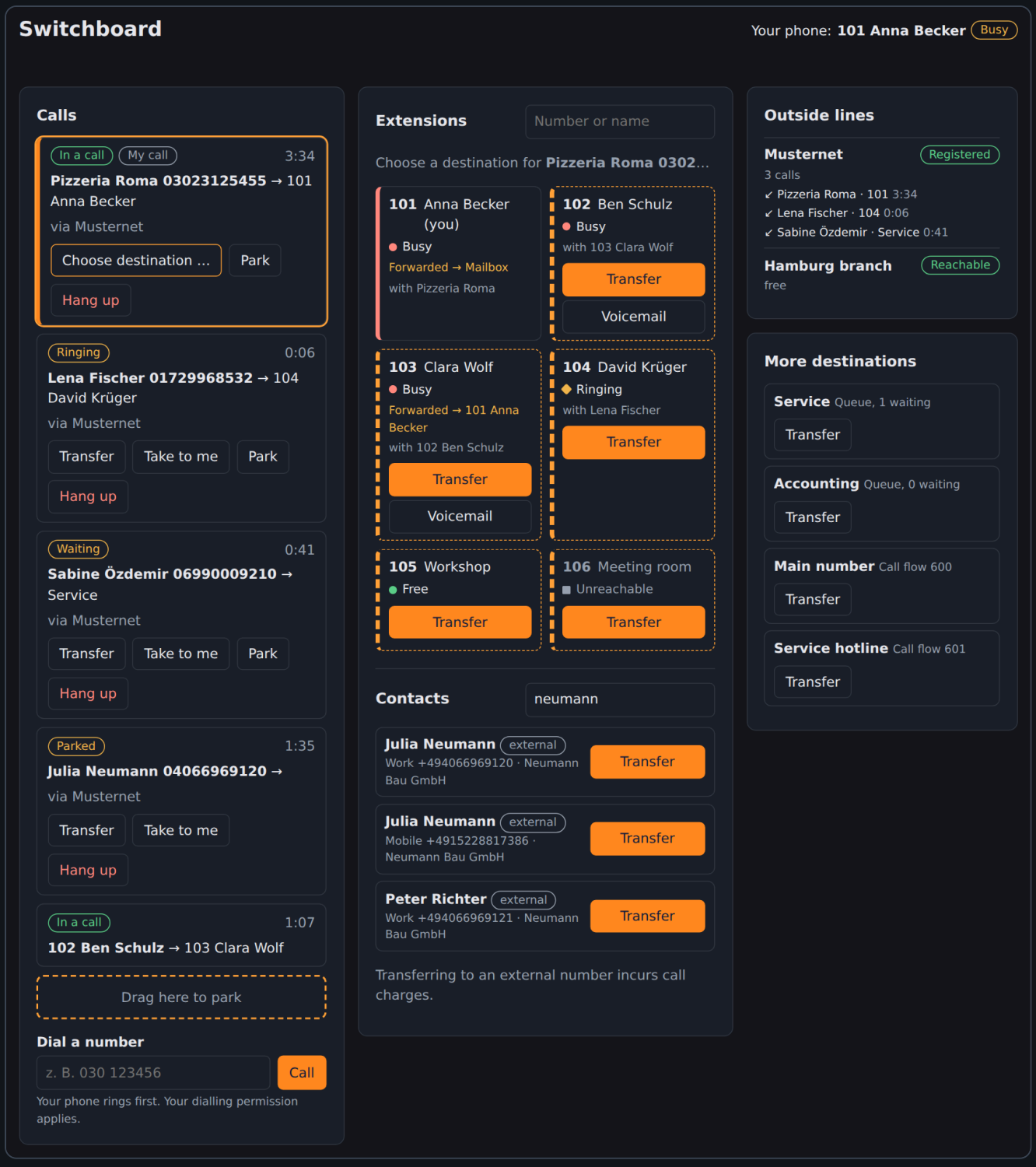
1. Drag the call onto **Consultation** of an extension. The caller hears hold music.
2. Talk to the destination.
3. **Hand over** (or hang up on the phone) connects both. **Back to the caller** disconnects the destination and you talk to the caller again.

If you hang up while the destination is still ringing, the call is transferred without consultation.

Parking, picking up, hanging up

- **Park** puts a call on hold. After 3 minutes it comes back to you.
- **Take to me** makes your phone ring and connects you with the caller.
- **Hang up** asks first.

To contacts and external numbers



Contact search on the switchboard

Search under **Contacts** at the bottom of the middle column. Drag the call onto a number or choose **Transfer**.

> **Costs:** Transferring to an external number costs the same as a call of your own. The permission and phone number of your extension apply. If nobody answers there within 45 seconds or it is busy, the call comes back. A mailbox of the other side counts as answered. There is no consultation with external destinations.

If nobody answers

The call comes back to you marked **“Returned: …”**. If you do not answer either, your voicemail follows or the announcement “unreachable”.

Part C – Setup

Installation and first start

PBXBoxNG runs in Docker. For permanent operation a small Linux VM is suitable (for example Debian, 2 cores, 2 GB RAM, 20 GB) with a fixed IP address. For trying it out, Docker Desktop on Windows is enough.

On a Linux server

1. Install `docker.io`, `docker-compose` and `docker-buildx`, create the folder `/opt/trixboxng`.
2. Transfer the program from your development computer. The first time the start stops because `.env` is still missing.

```
sh deploy/aktualisieren.sh user@192.168.1.10
```

3. Create the file `.env` on the server in `/opt/trixboxng`:

```
EXTERNAL_ADDRESS=192.168.1.10
SIP_BIND=192.168.1.10
PROVISION_BIND=192.168.1.10
HTTPS_BIND=192.168.1.10
COOKIE_SECURE=true
COMPOSE_FILE=docker-compose.yml:docker-compose.https.yml
```

4. Create the certificate and start:

```
sh deploy/zertifikat.sh 192.168.1.10
```

```
sudo docker compose up -d --build
```

The interface is then available at `https://192.168.1.10`.

Trying it out on Windows

```
cp .env.example .env
```

Enter the address at `EXTERNAL_ADDRESS` in `.env`, then:

```
docker compose up -d --build
```

The interface is at `http://localhost:8080`.

Important settings in `.env`

Name	Meaning
`EXTERNAL_ADDRESS`	address under which the phones reach the system
`SIP_BIND`	address for telephony; `0.0.0.0` = all
`PUBLIC_ADDRESS`	fixed public IP address, empty for most connections
`TRUNK_BIND`	set to `0.0.0.0` only for fixed remote sides
`WEB_BIND`, `WEB_PORT`	where the web interface is available
`PROVISION_BIND`, `PROVISION_PORT`	port for the configuration of the desk phones
`TIMEZONE`	time zone, default `Europe/Berlin`

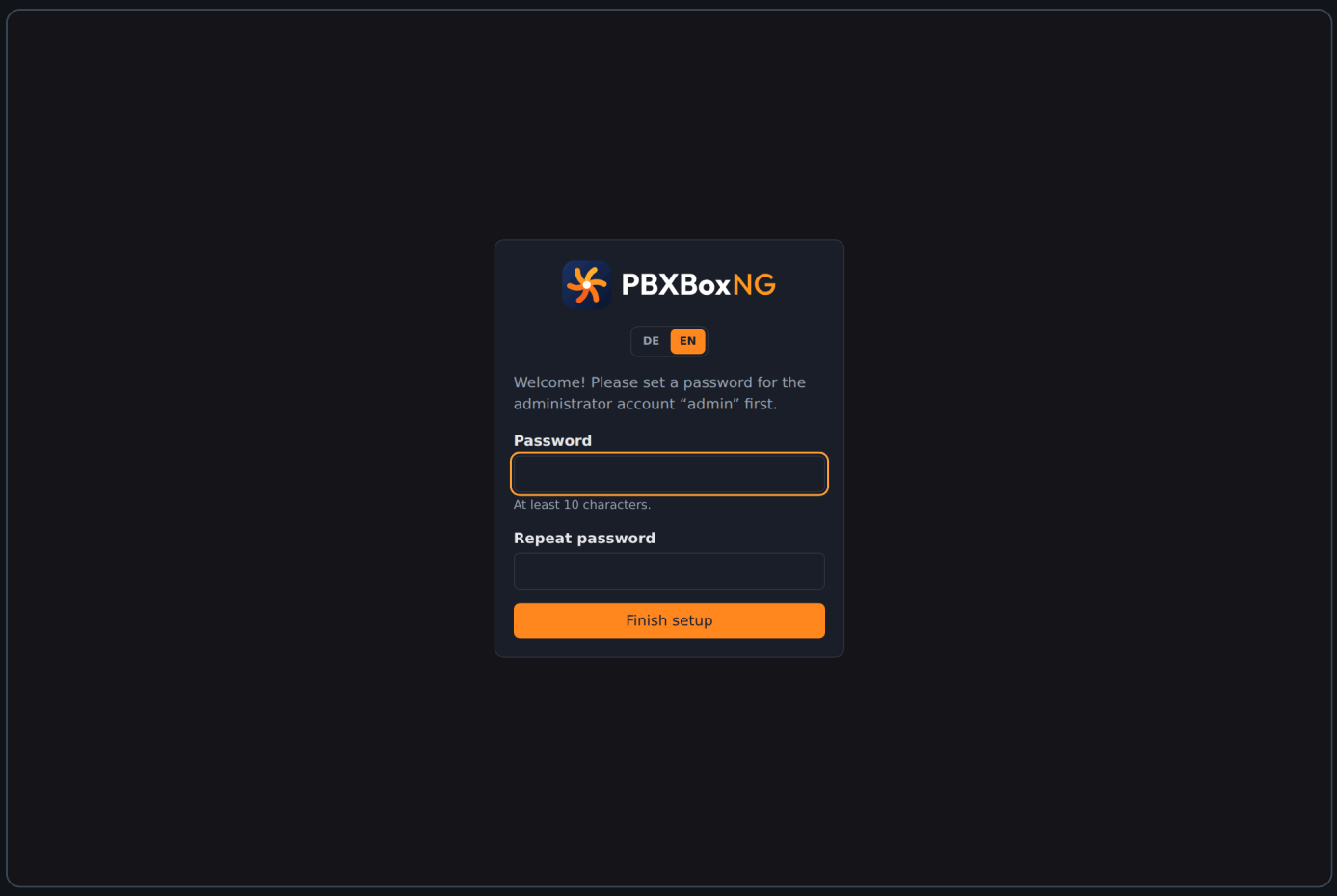
After changes to `.env`: `docker compose up -d`.

Network and firewall

Direction	Ports	Purpose
phones → system	UDP 5060	registration and call setup
phones ↔ system	UDP 16384–16484	voice
phones → system	TCP 8081	configuration (provisioning)
browser → system	TCP 443 or 8080	web interface

> **Security:** Port 5060 and the configuration port must **never** be reachable from the internet. So far trunks use UDP without encryption only.

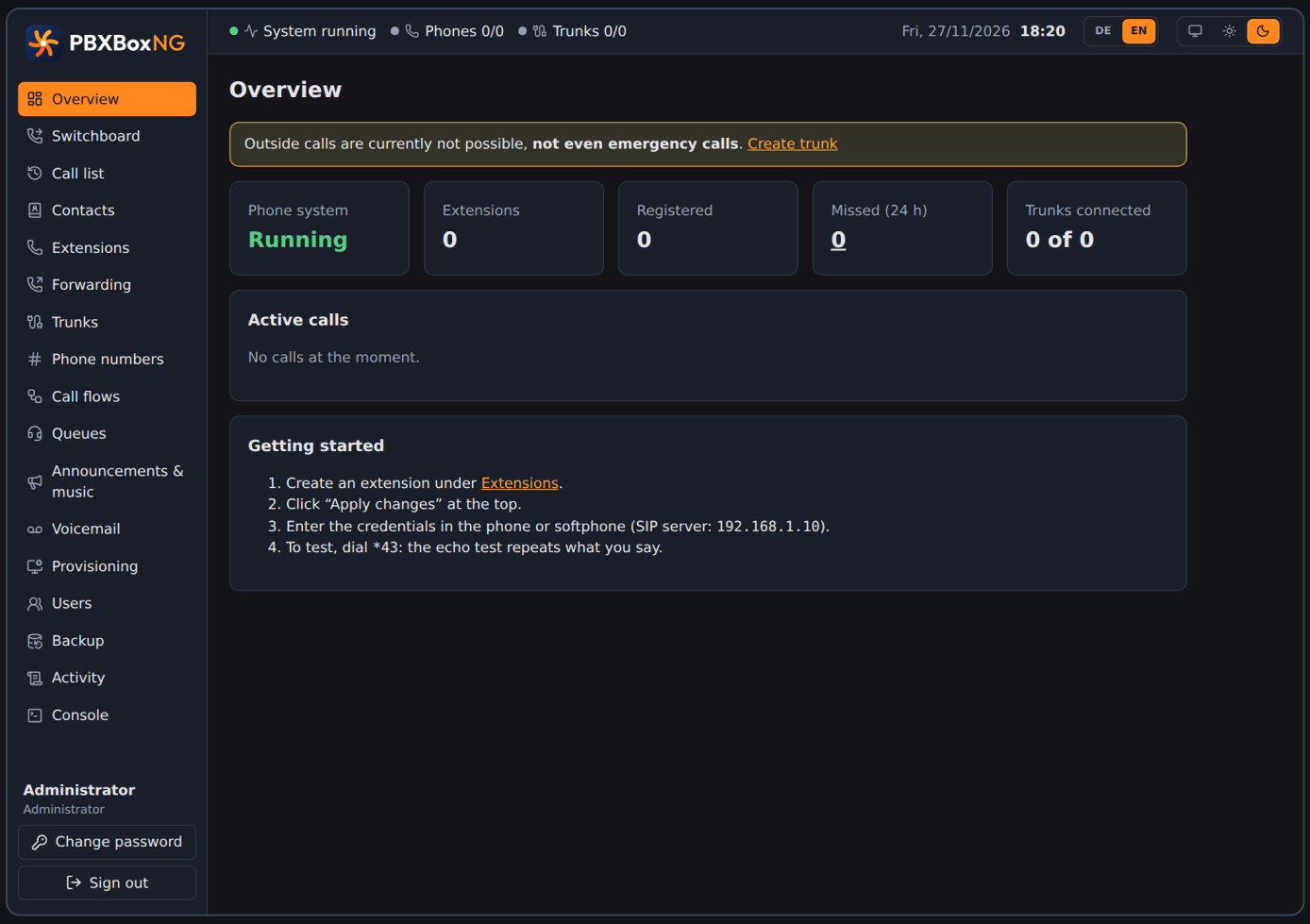
Creating the administrator account



First-time setup

On the first visit you set the password for the account `admin`. Do this **before** others can reach the interface. This local account is your emergency access.

Quick start: to your first call

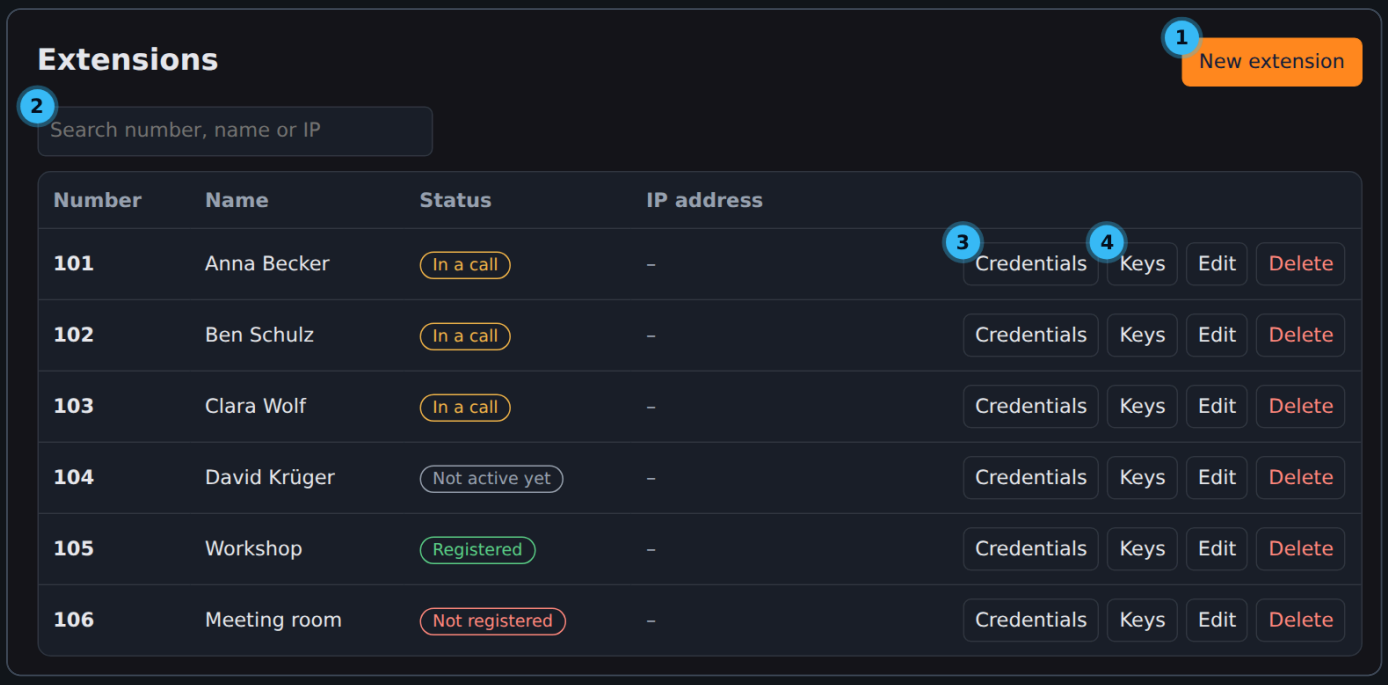


Empty system after setup

1. **Extensions → New extension:** number, name and password, then **Save**.
2. **Apply changes** at the top.
3. Open the extension's **Credentials** and enter them in the phone or softphone.
4. Dial `*43`: if you hear yourself, voice works.
5. **Trunks → New trunk** with your provider's data, then apply.
6. **Phone numbers:** decide where your numbers ring, and apply.
7. Try one call to the outside and one from outside.

Apply changes: As soon as something is not yet active, a notice with this button appears at the top. Health check, users and backups take effect immediately, changes to contacts as well once changes have been applied once after an update.

Extensions

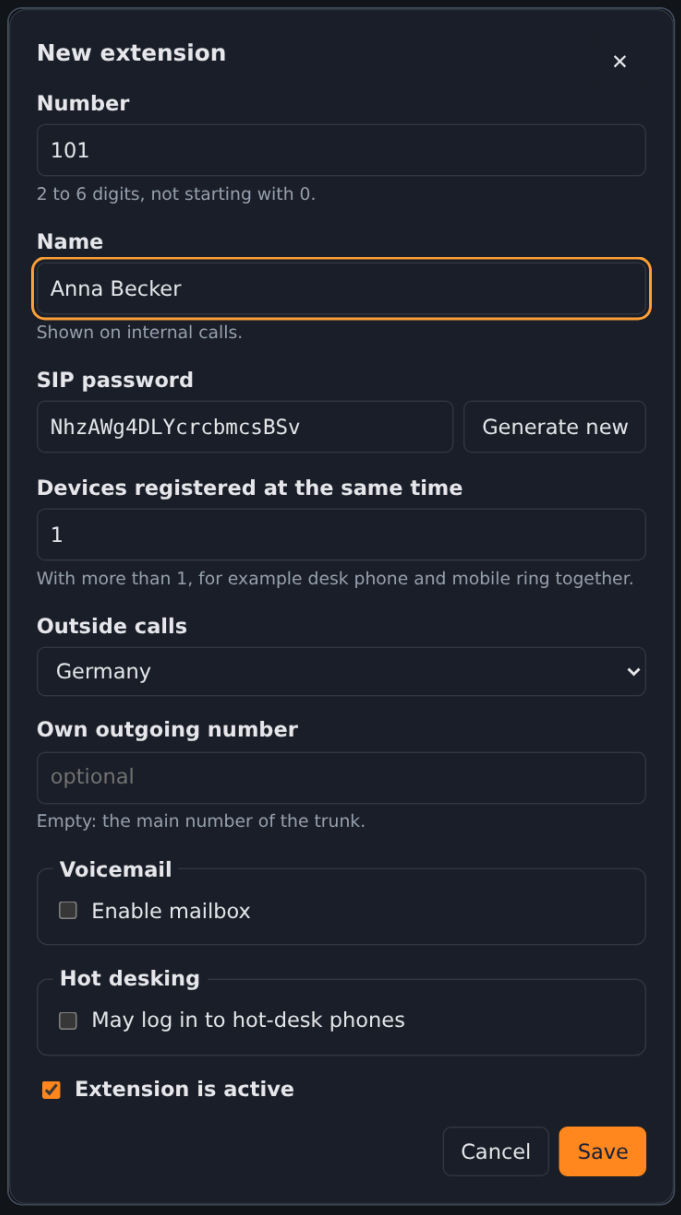


List of extensions

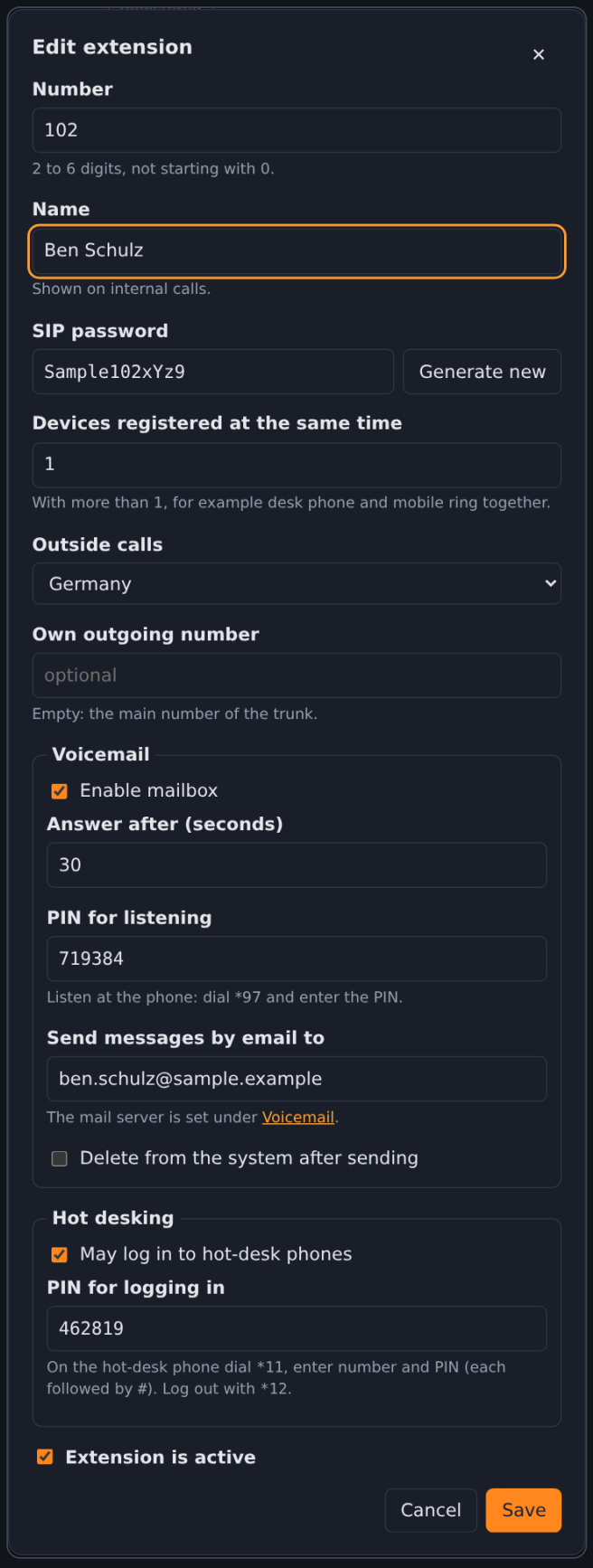
No.	Function
1	**New extension**
2	Search by number, name or IP address
3	Show the **Credentials** for the phone
4	Assign function keys

The columns show whether a device is registered, its IP address and its type. For desk phones in the local network a click on the address opens their web interface.

Creating and editing an extension



New extension

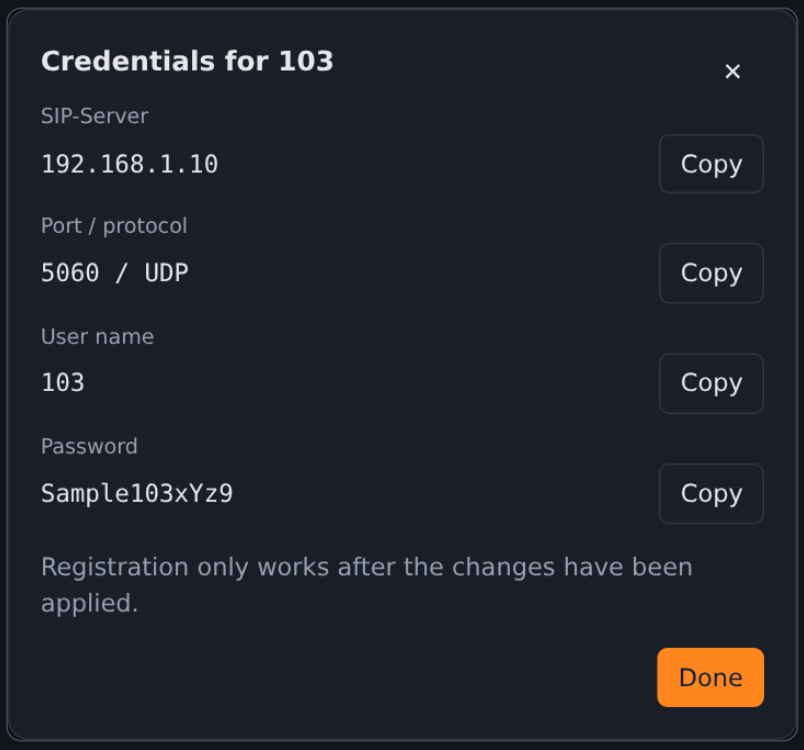


Edit extension

Field	Explanation
Number	2 to 6 digits, not starting with 0, not an emergency number

Field	Explanation
Name	shown on internal calls
SIP password	at least 12 characters; **Generate new** suggests one
Devices registered at the same time	more than 1 if, say, desk phone and mobile should ring together
Outside calls	emergency only, Germany or also abroad (protection against toll fraud)
Own outgoing number	empty = main number of the trunk
Enable mailbox	voicemail with ring time, PIN and optionally delivery by email
Hot desking	may log in at shared phones, with a PIN of its own
Extension is active	when switched off, nobody can register

Credentials for the phone

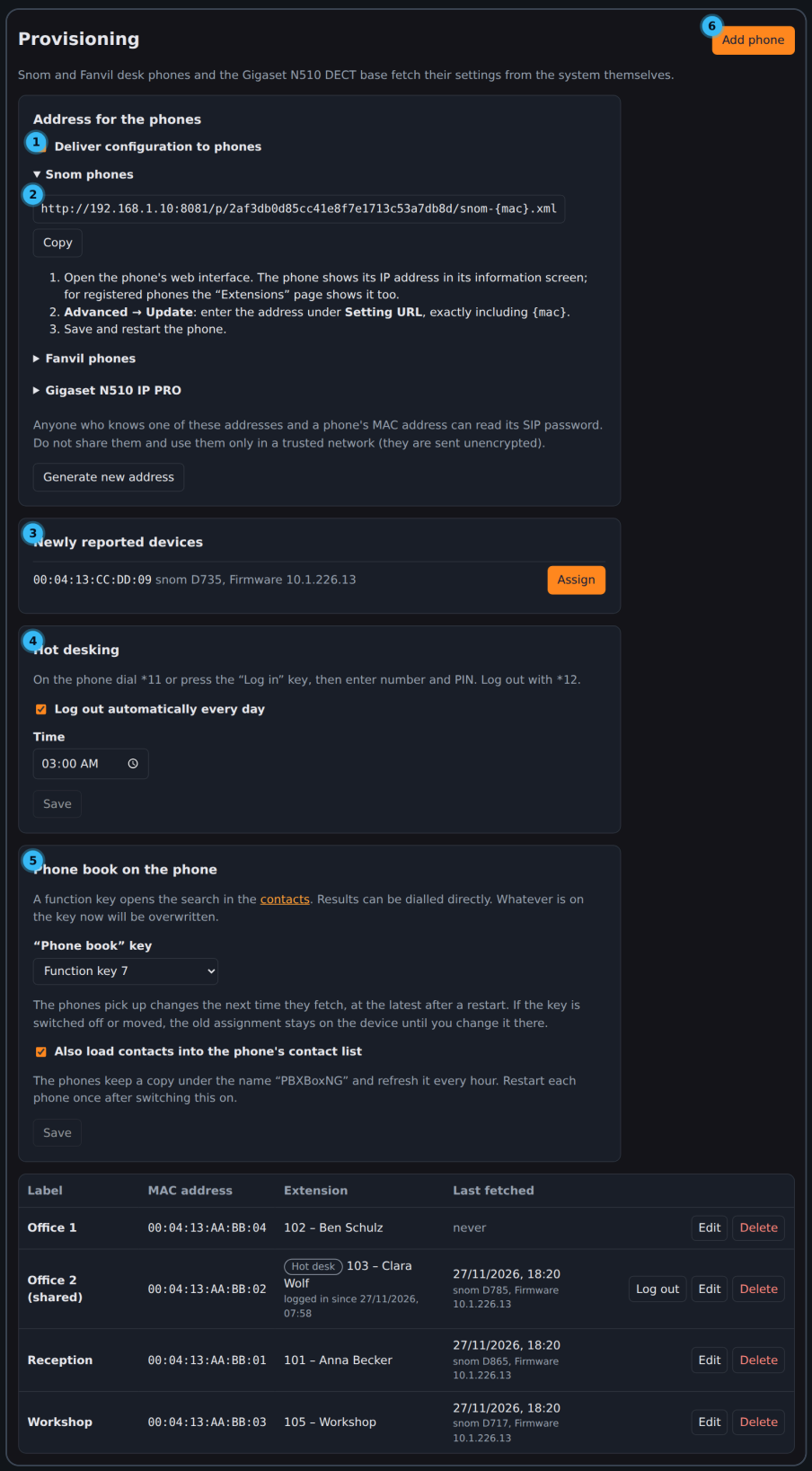


Credentials

In the phone or softphone (for example MicroSIP or Linphone) you enter SIP server, user name (the number) and password, protocol **UDP**. Registration only works after **Apply changes**.

Provisioning (Snom D series)

Snom desk phones fetch extension, password, language and keys from the system themselves. Administrators only.

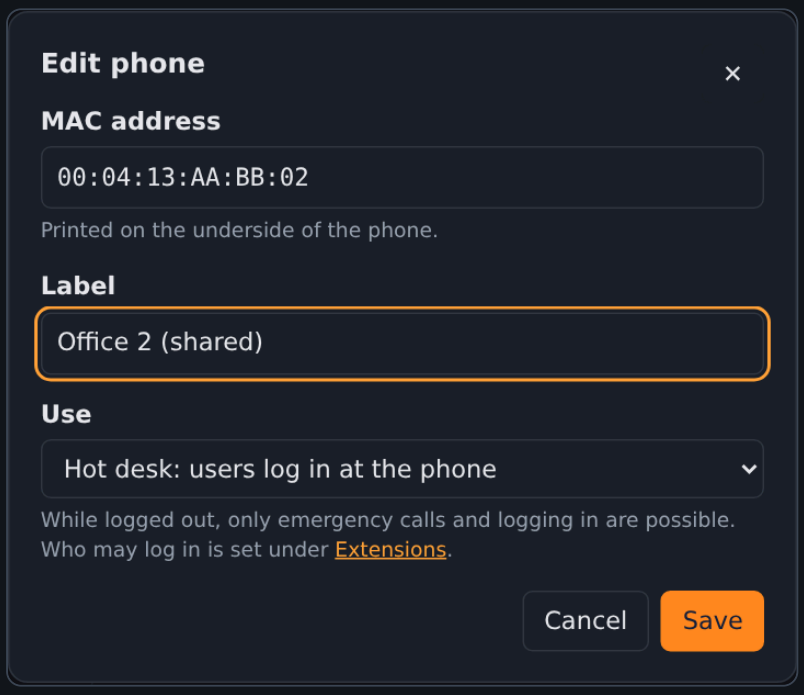


Provisioning

No.	Area
1	Switch delivery on or off
2	**Secret address** to enter in the phone, in the expandable section **Snom phones**
3	**Newly reported devices** to assign
4	**Hot desking:** time for automatic logout
5	**Phone book on the phone**
6	Add a phone by hand

Setting up a phone

1. Switch on **Deliver configuration to phones**.
2. Expand the section **Snom phones** and enter the shown address in the phone's web interface under **Advanced → Update → Setting URL**, exactly including `{mac}`. Save and restart.
3. The device appears under **Newly reported devices**. Choose **Assign** and restart the phone once more.



Edit phone

Under **Use** you choose a fixed extension or **Hot desk**. After changes to an extension, apply first, then restart the phone. If a device was already set up elsewhere, resetting it to factory settings helps.

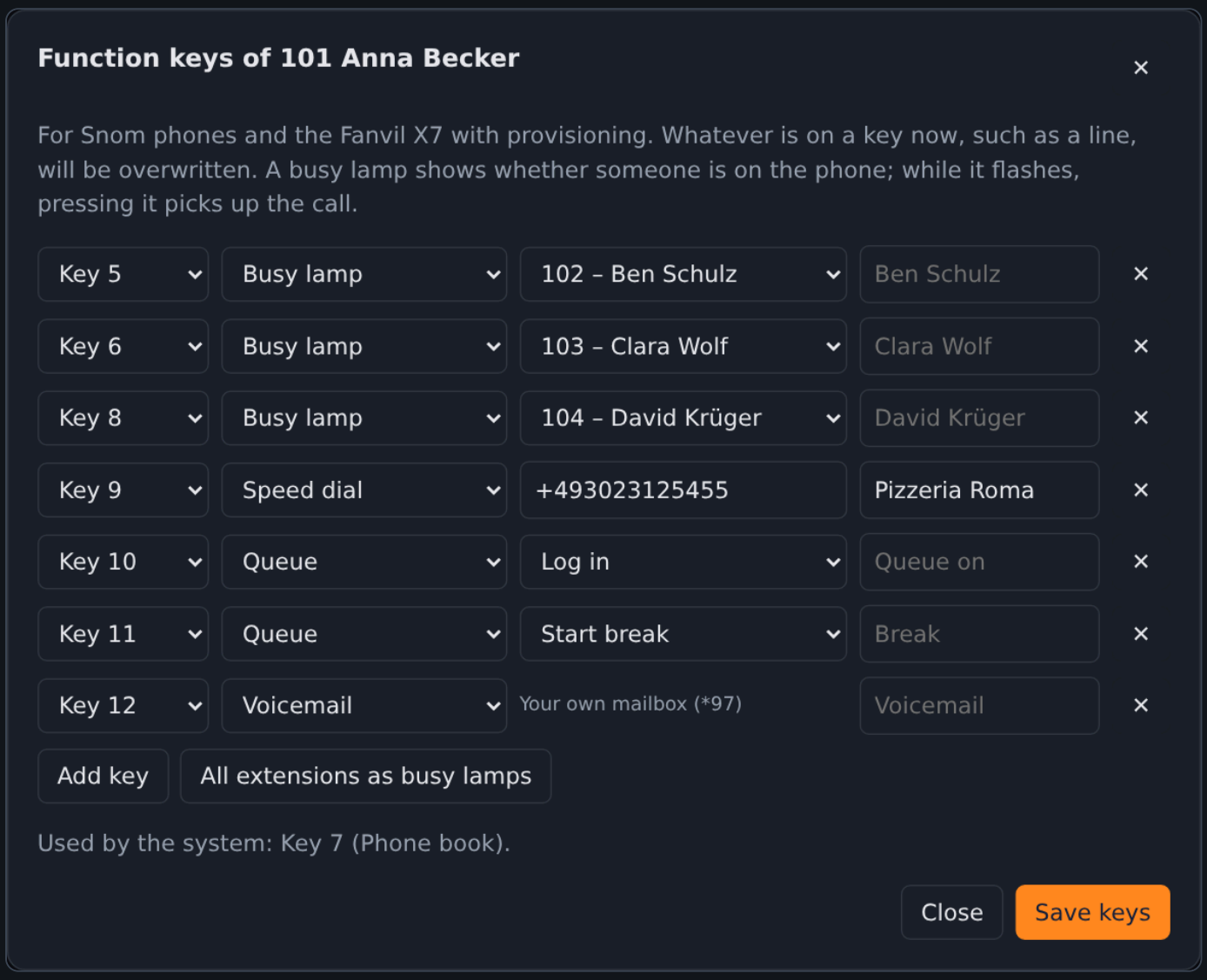
Security: The configuration is transferred unencrypted and contains the SIP password. Anyone who knows the address and the MAC address can read it. Use it only in your own, trusted network.

Switching on hot desking

1. Under **Extensions**, for each permitted extension set **May log in to hot-desk phones** and a PIN.
2. Under **Provisioning**, enter the phone as **Hot desk**.
3. **Apply changes** and restart the phone (or wait up to 5 minutes).

A free phone can only dial emergency numbers and log in. Who is logged in is shown in the phone list; you can also **Log out** there.

Function keys



Assign function keys

Under **Extensions → Keys** (or yourself under **My phone**) you assign the keys of an extension. **Add key** takes the next free key from number 5, **All extensions as busy lamps** adds one for every other extension. With **Save keys** the phones load the new assignment.

Type	Effect on the phone
Busy lamp	shows whether someone is free or on the phone; a press calls. If it flashes, a press picks up the call

Type	Effect on the phone
Speed dial	dials a number; instead of the number you can search a name in the contacts
Queue	log in or out, start or end a break (without lamp)
Voicemail	calls your own mailbox

- The assignment belongs to the extension: on a hot-desk phone it appears after logging in and disappears on logout.
- An assigned key overwrites whatever was on it and cannot be changed on the device. Removed keys are cleared and free again.
- The keys for phone book and hot-desk login take precedence.

> Tested with a D865 and firmware 10.1.226.13. The queue keys have not been tried on the device yet.

Phone book on the Snom

A current firmware is required. Tested with a D865 and 10.1.226.13; with 10.1.135.0 the display stayed empty when pressing the key.

- **“Phone book” key:** choose a free function key (5 or 7 to 12, key 6 belongs to hot desking). A previous assignment is overwritten. The search runs on the system and is always up to date.
- **Load contacts into the contact list** (from firmware 10.1.178.0): the phone stores a directory “PBXBoxNG”, refreshes it hourly and after a restart, at most 1000 entries. The copy also stays on a logged-out hot-desk phone. Restart each phone once after switching this on.

> Whether changed and deleted contacts are replaced cleanly in the phone's directory has not been tested on a device yet.

Provisioning (Fanvil)

1. Switch on **Provisioning** and expand the section **Fanvil phones**.
2. In the phone's web interface under **System → Auto Provision → Static Provisioning Server**, enter the server address, `$mac.cfg` as file name, protocol **HTTP**, periodic download. Save and restart.
3. Assign the device under **Newly reported devices**.

Account, language and time are set up, as well as the phone book “PBXBoxNG”. So far only the **X7** gets function keys and the hot-desk key (keys 1 to 11 on the side, 12 to 40 on the first key page).

After assigning, trigger **Autoprovision Now** on the phone once. From then on the X7 takes over changed keys immediately when you save. Assignments left on the device by an earlier system stay until you assign the key in PBXBoxNG.

> Tested with an X7, firmware 2.4.13: registration, busy lamp including pickup, speed dial, removing a key and phone book. Voicemail, queue and hot-desk keys have not been tried on the device yet.

Provisioning (Gigaset N510 IP PRO)

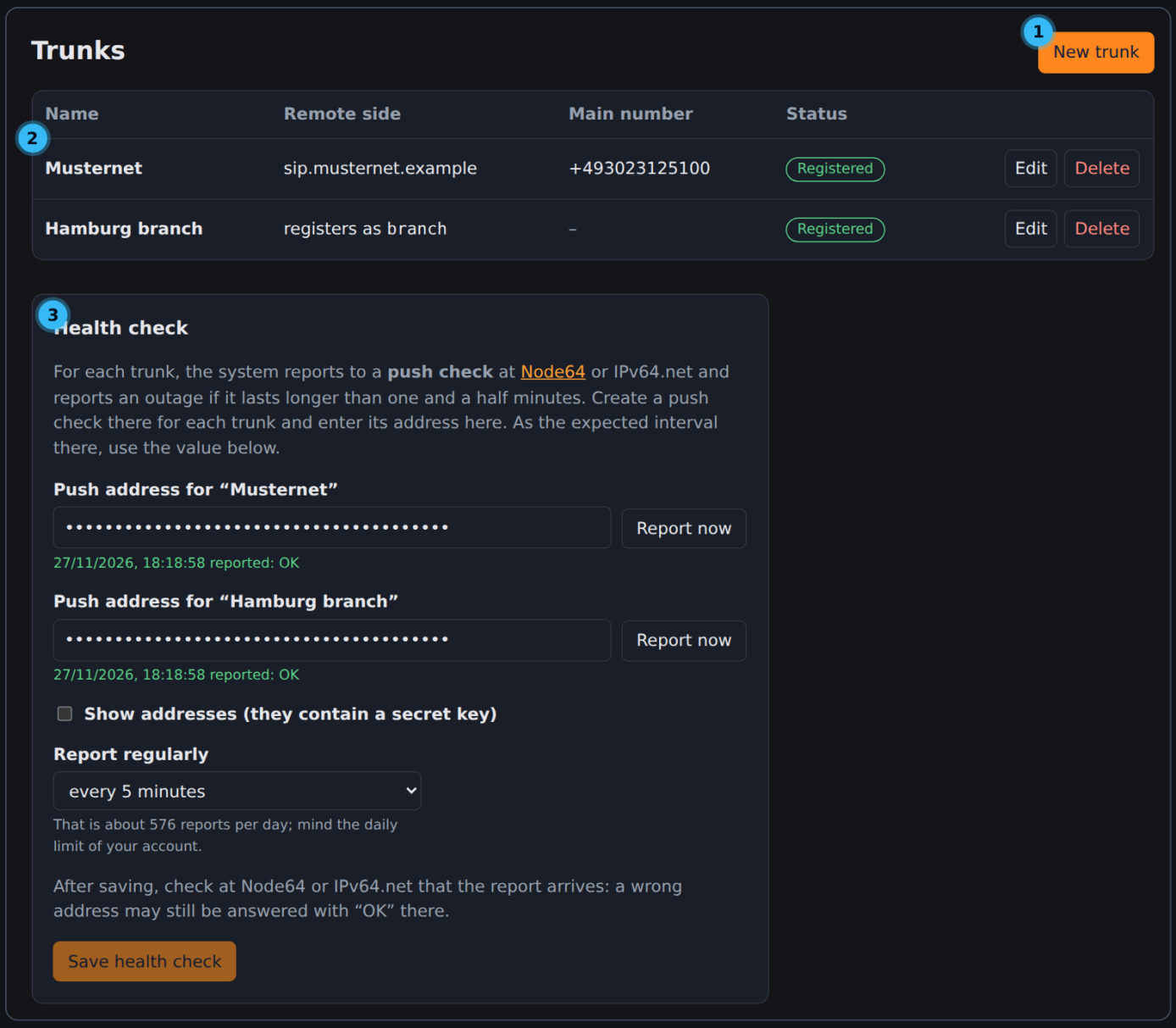
On the DECT base each of the up to six handsets gets its own extension.

1. Switch on **Provisioning** and expand the section **Gigaset N510 IP PRO**.
2. In the base's web interface, enter the shown address under **Configuration file (URL)**, exactly including `%MACD`.
3. On the **connection overview** page, at the bottom under **Provider or PBX profile**, set “Automatic check for profile updates” to **Yes**, click **Set** and then **Update profile**.
4. Assign the base under **Newly reported devices**, choose “DECT base” as **Use** and give every handset an extension. Handset 1 must be assigned.
5. **Apply changes** and click **Update profile** on the base once more.

A handset's number is the one under which it is registered on the base. Account, display name, handset name (at most 16 characters) and voicemail number are set up. Language, time and phone book stay as configured on the base. Hot desking is not available on the base.

> The system overwrites all six accounts of the base. Tested with two N510, firmware 42.262 and 42.263: downloading the file, registering the accounts, ringing per handset and names. The voicemail key has not been tried on the device yet. The menu names of the base are given as in its English interface and may differ slightly with your firmware.

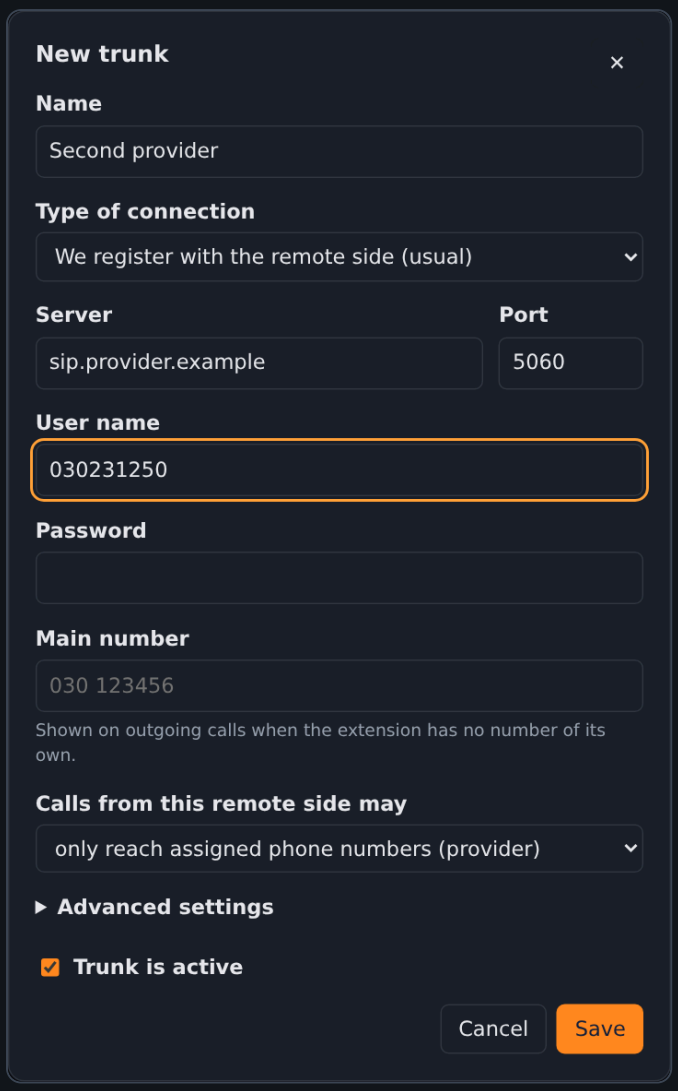
Trunks



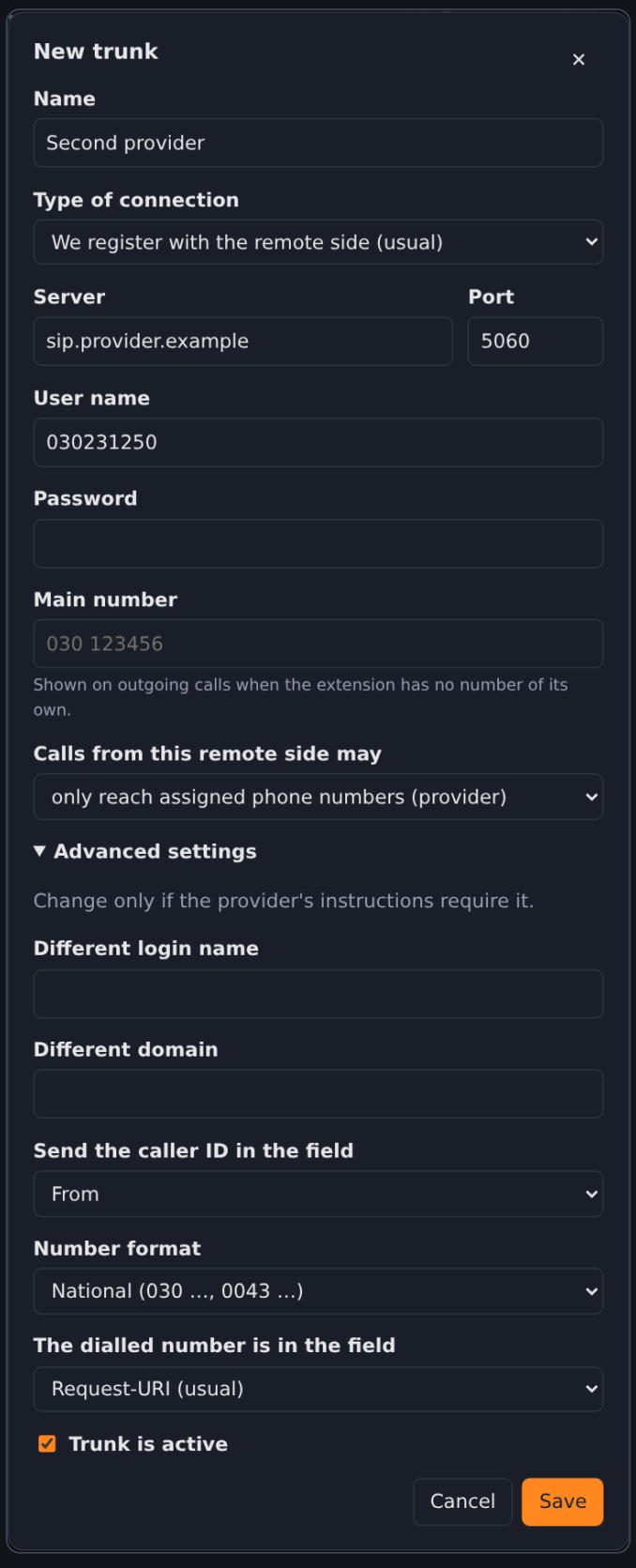
Trunks with health check

No.	Area
1	**New trunk**
2	Remote side, main number and state of each trunk
3	**Health check** for monitoring

Connecting a provider



New trunk

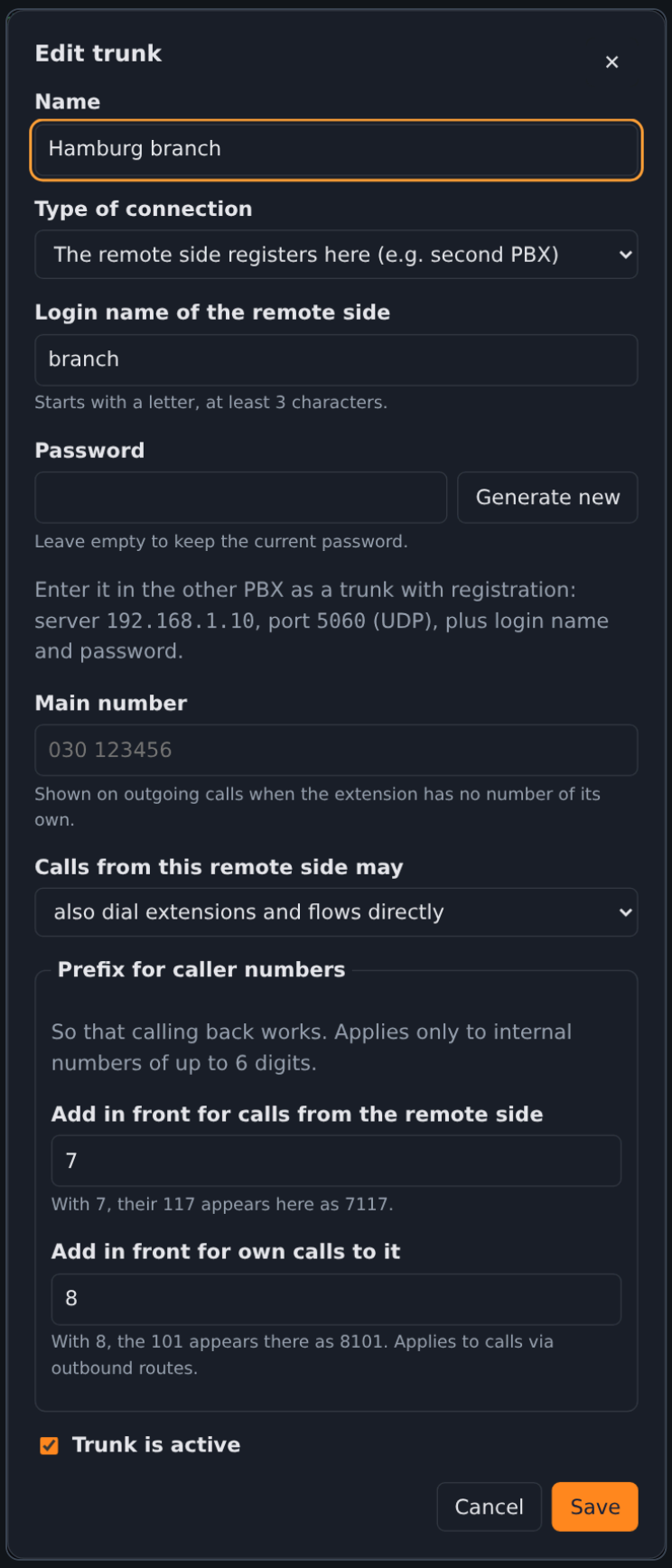


Advanced settings

1. **New trunk**, type **We register with the remote side**.
2. Server, user name, password and main number from the provider's documents.
3. Change **Advanced settings** only if the provider requires it.
4. Save, **Apply changes**. The state should show **Registered**.

If you hear nothing during calls and you have a fixed public IP address, enter it as `PUBLIC_ADDRESS` and forward UDP 16384–16484 in your router.

Linking a second system



Remote side that registers here

- **The remote side registers here:** assign a login name and password and enter them in the other system as a trunk with registration.
- **We register with the remote side:** as with a provider.

Calls from this remote side may	Possible
only reach assigned phone numbers	only what is listed under **Phone numbers** (provider)
also dial extensions and flows	internal numbers as well
additionally call outside	also place calls via your trunks

Prefix for caller numbers: So that calling back works, the system puts digits in front of internal caller numbers (in the example the branch's 117 becomes 7117 here). To call the other system, create an outbound route.

> “Calling outside” costs you money and is meant only for your own systems.

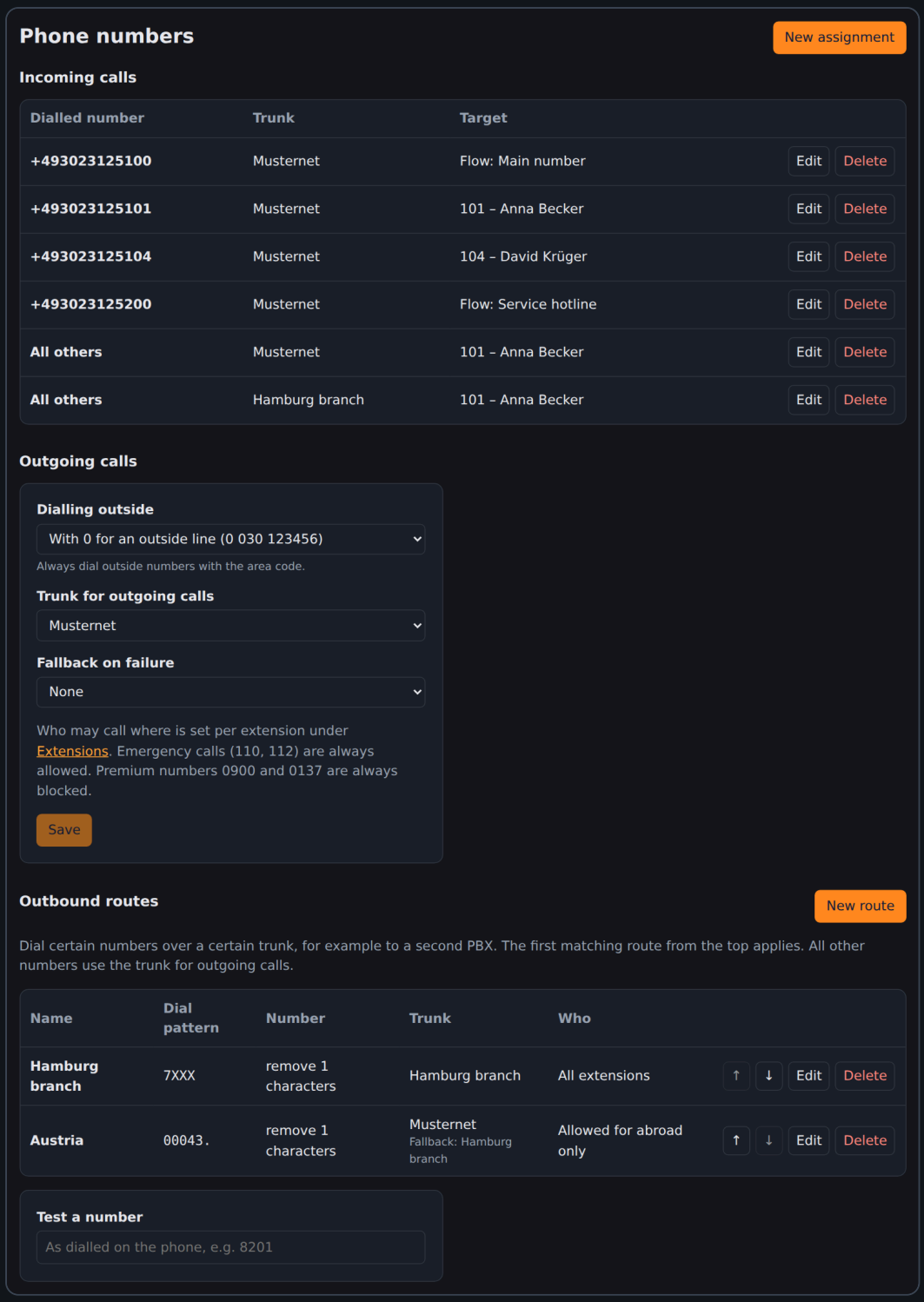
Health check

The system reports the state of every trunk to a **push check** at Node64 or IPv64.net; the notifications come from there.

1. Create a push check there for each trunk (expected interval as in PBXBoxNG, say 300 seconds; grace period about 600 seconds).
2. Enter the push address under **Trunks → Health check** and save.
3. **Report now** and check at the service that the report arrived.

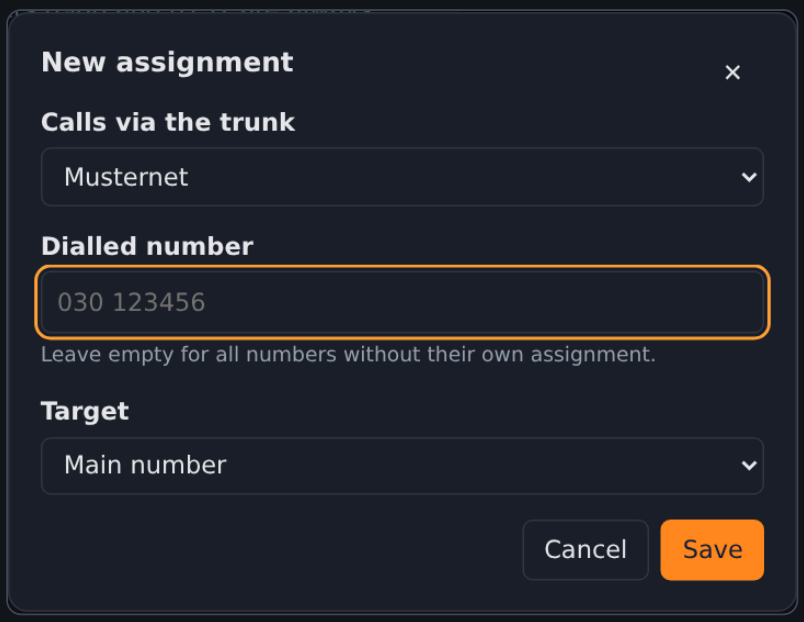
Situation	Report
trunk fine	regularly “OK”
faulty for more than 90 seconds	immediately “Outage” with cause
system not responding	“Outage” for every trunk
server down	no more reports; the check raises the alarm by itself
trunk disabled	no report; pause the check at the service

Phone numbers and outgoing calls



Phone numbers

Incoming calls



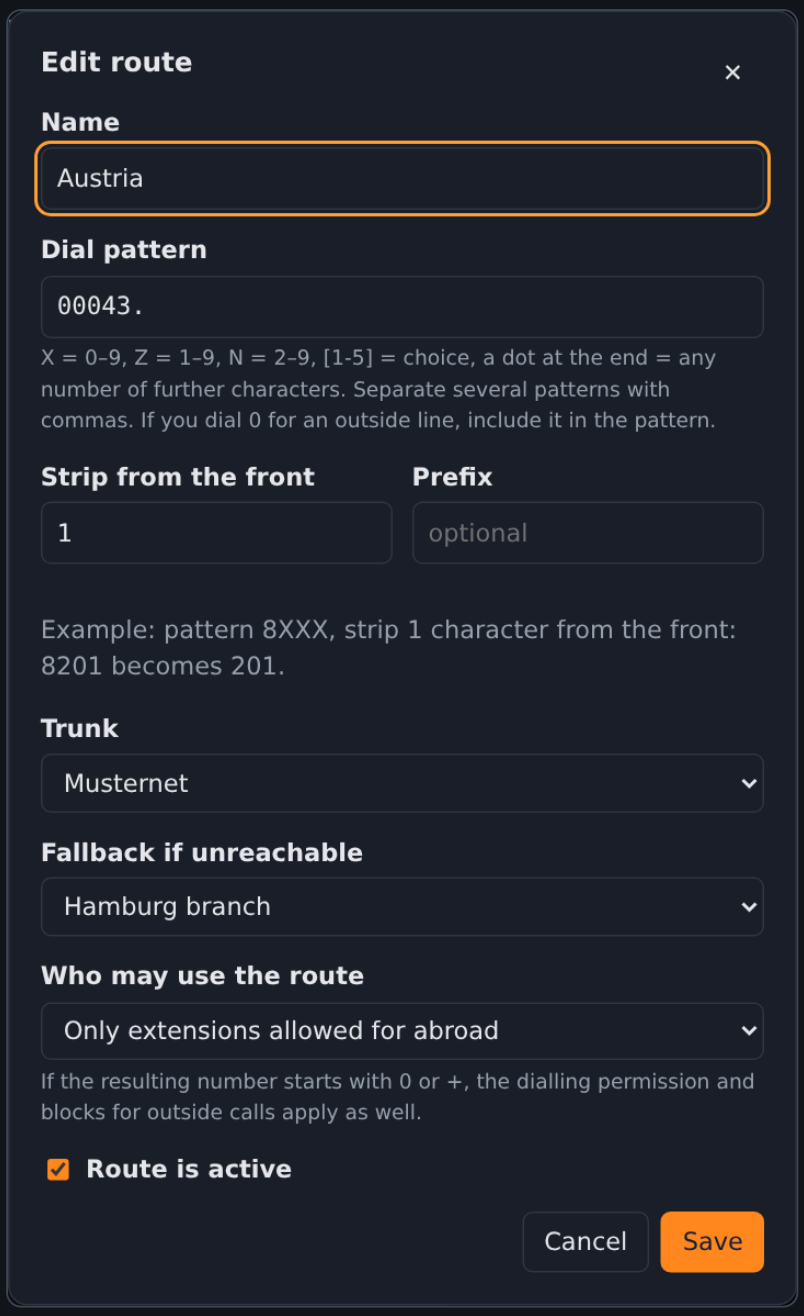
New assignment

With **New assignment** you decide where a dialled number rings: at an extension or in a call flow. Without a number, the assignment catches **all other** calls of this trunk. Whatever is not assigned is rejected.

Dialling outside

- **Digit for the outside line:** dial with `0` in front or directly.
- A **trunk for outgoing calls** and a **fallback on failure**.
- Who may call where is set per extension under **Extensions**.

Outbound routes



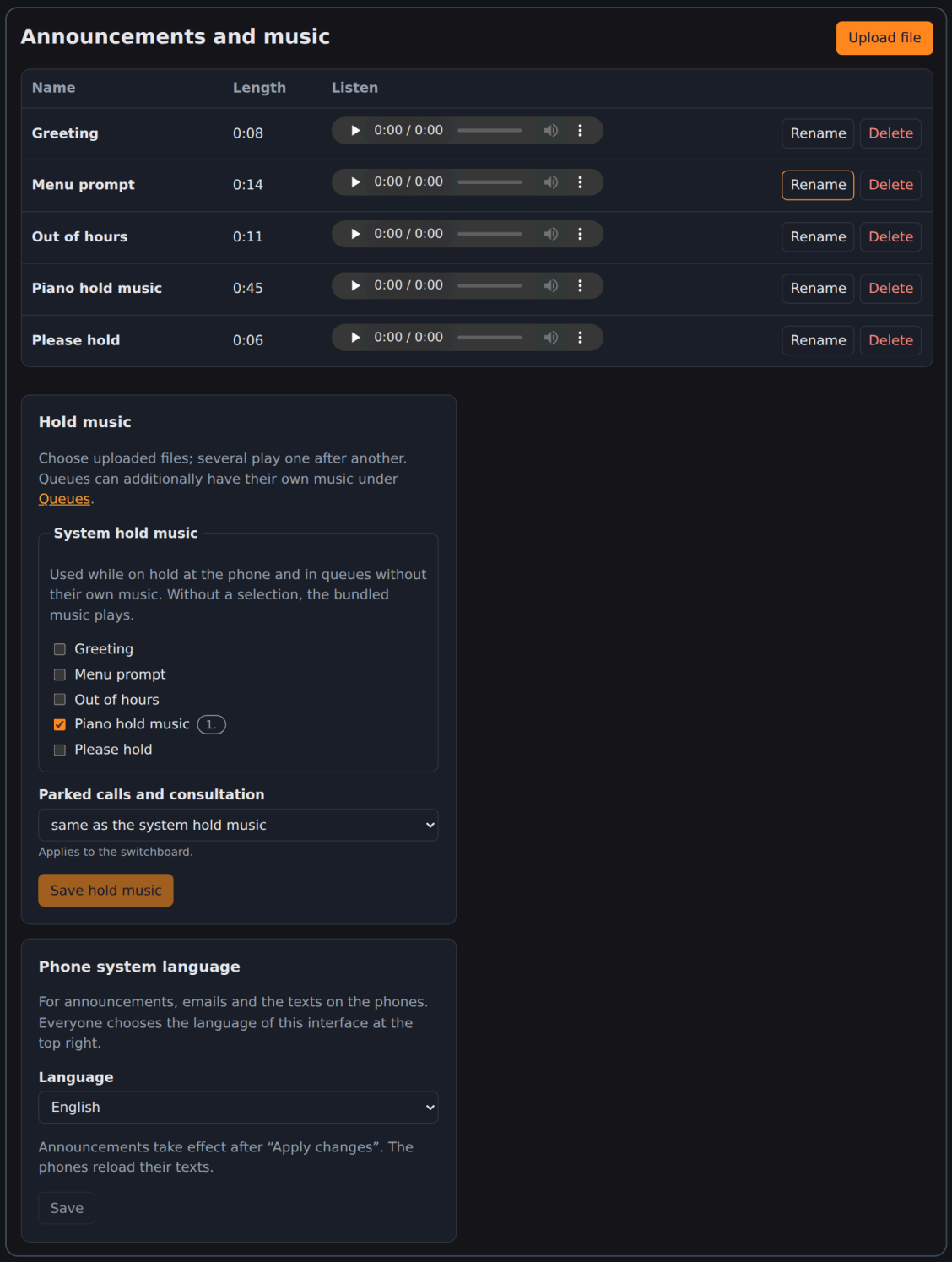
Edit route

Certain numbers go over a certain trunk. The **first matching route from the top** applies (order with ↑ and ↓); all other numbers use the trunk for outgoing calls.

Character	Meaning
`X`	one digit 0–9
`Z`	one digit 1–9
`N`	one digit 2–9
`[1-5]`	one digit from the selection
`.`	at the end: any number of further characters

Example: pattern `7XXX` with “strip 1 character from the front” turns 7201 into 201. Under **Test a number** you see beforehand where a number goes. Emergency calls, internal numbers and call flows always take precedence.

Announcements and hold music



Announcements and music

1. **Upload file** (WAV, MP3 and others, at most 10 minutes). The browser converts it into the system's format.
2. Under **Hold music** choose what plays on hold, in queues and when parking. Several files play in the order you ticked them.

3. **Save hold music** and **Apply changes**.

Setting	When it plays
System hold music	on hold and in queues without their own music
Parked calls and consultation	on the switchboard; without a choice the same as the system
Own music of a queue	only there, set with the queue

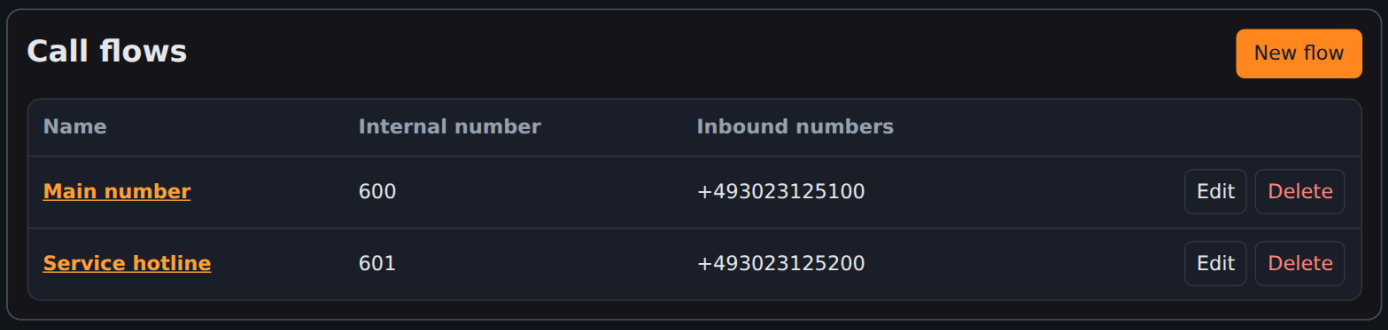
> For your own music you need the necessary rights. The bundled music is from Opsound (CC BY-SA 3.0).

Phone system language

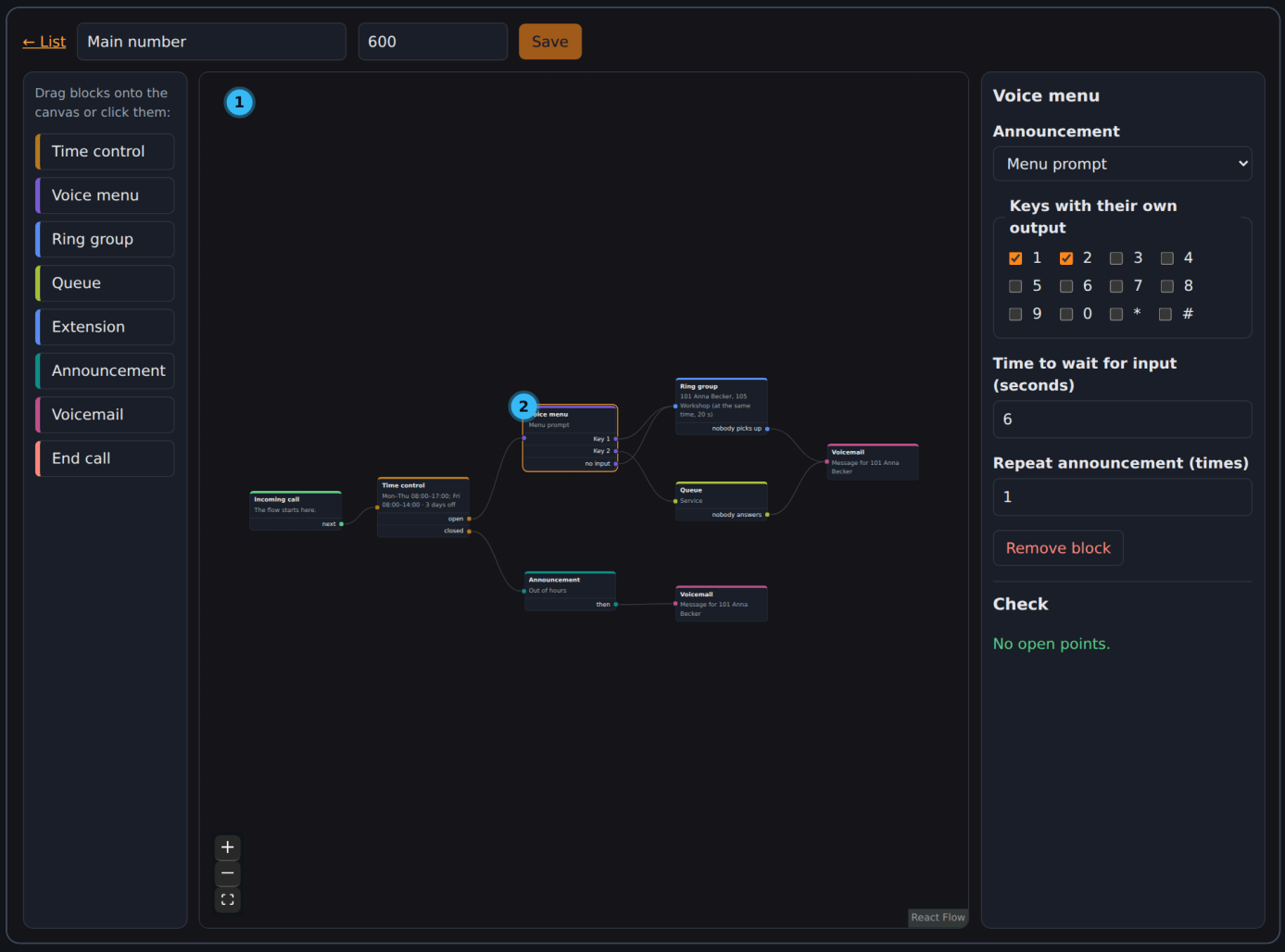
At the bottom of the page an administrator sets the **Phone system language** (German or English). It applies to announcements, voicemail emails, the reports to the health check and the texts and language of Snom and Fanvil phones. The Gigaset base keeps its own setting. The phones reload their settings right away; the announcements change after **Apply changes**. It is independent of the language each user chooses for the web interface.

> English announcements and the English phone language have not been tried on devices yet.

Call flows



List of flows



Call flow editor

No.	Area
1	**Canvas:** arrange and connect blocks
2	Selected block; its settings are on the right

Building a flow

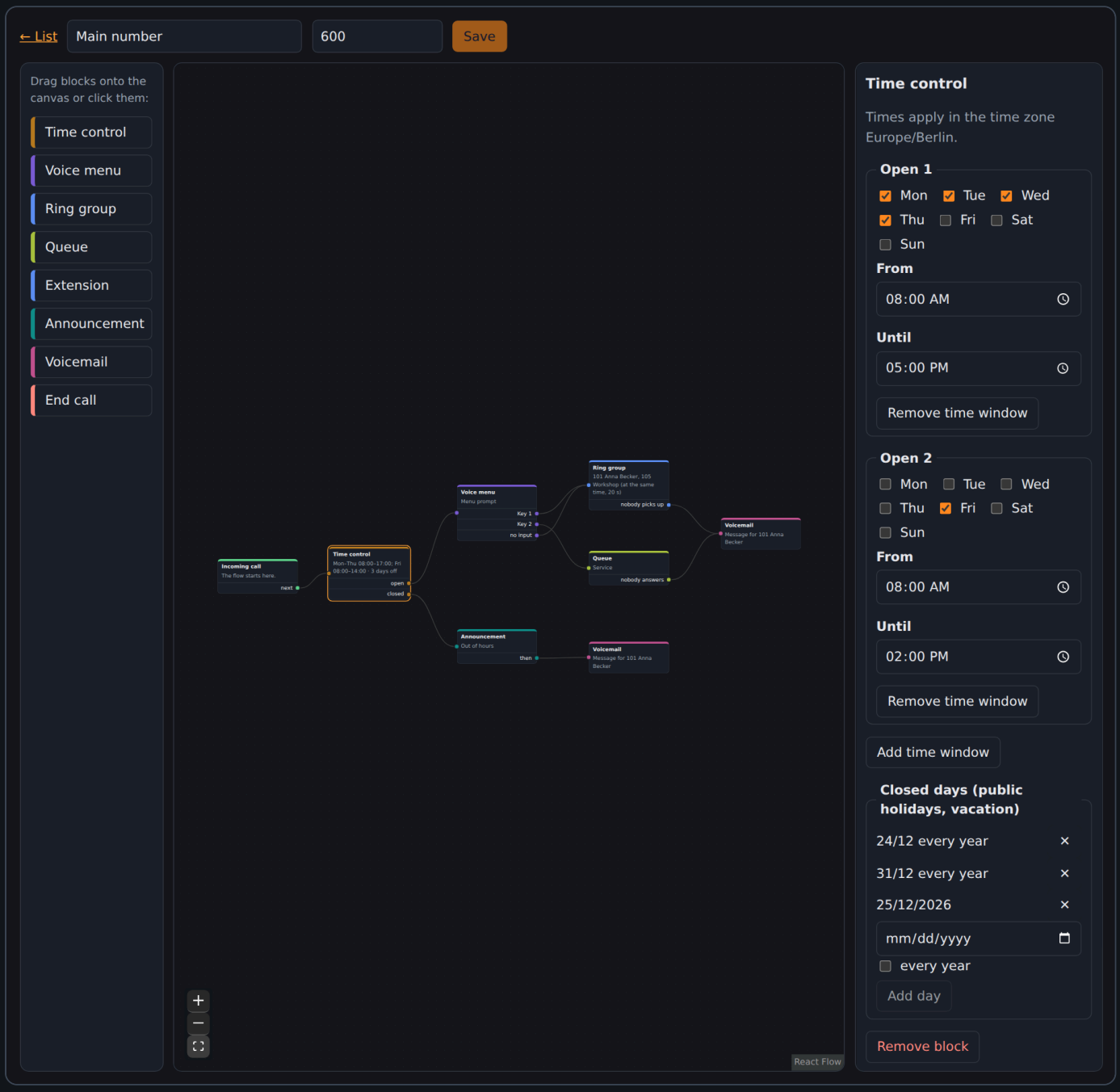
1. **New flow**, give it a name and, if you like, an internal number (for testing, say 600).
2. Drag blocks from the left onto the canvas or click them.
3. Drag from an output's dot to the next block. Each output has one connection; a new one replaces the old one.
4. Click every block and configure it on the right.
5. The **check** on the right shows errors (they prevent saving) and open ends.
6. **Save**, choose it as destination under **Phone numbers**, **Apply changes**.

To remove a block or connection, click it and use the button on the right or the `Del` key.

Block	Effect
Time control	branches by weekday, time and closed days
Voice menu	plays an announcement and branches by key

Block	Effect
Ring group	rings several extensions at once or one after another
Queue	the caller waits until a member is free
Extension	rings one extension
Announcement	plays an audio file
Voicemail	the caller leaves a message
End call	hangs up or plays the busy tone

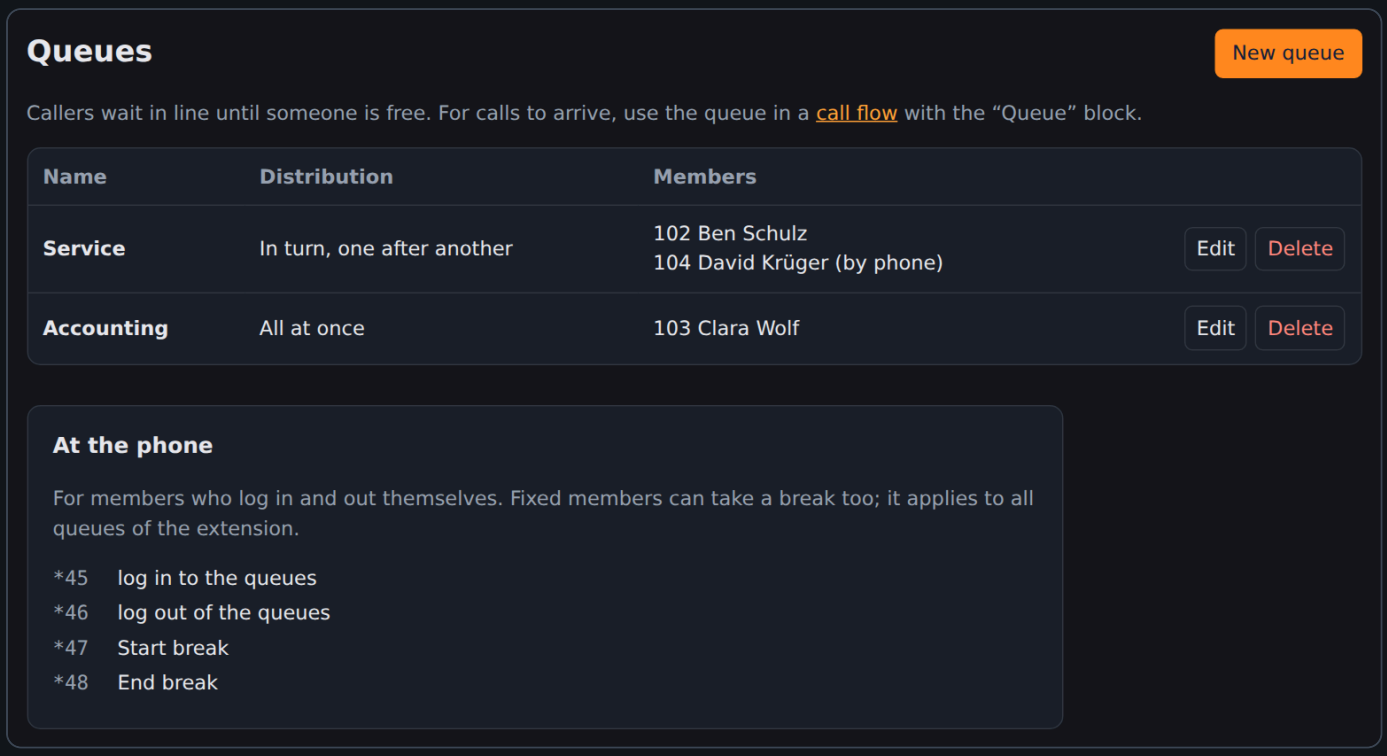
Opening hours



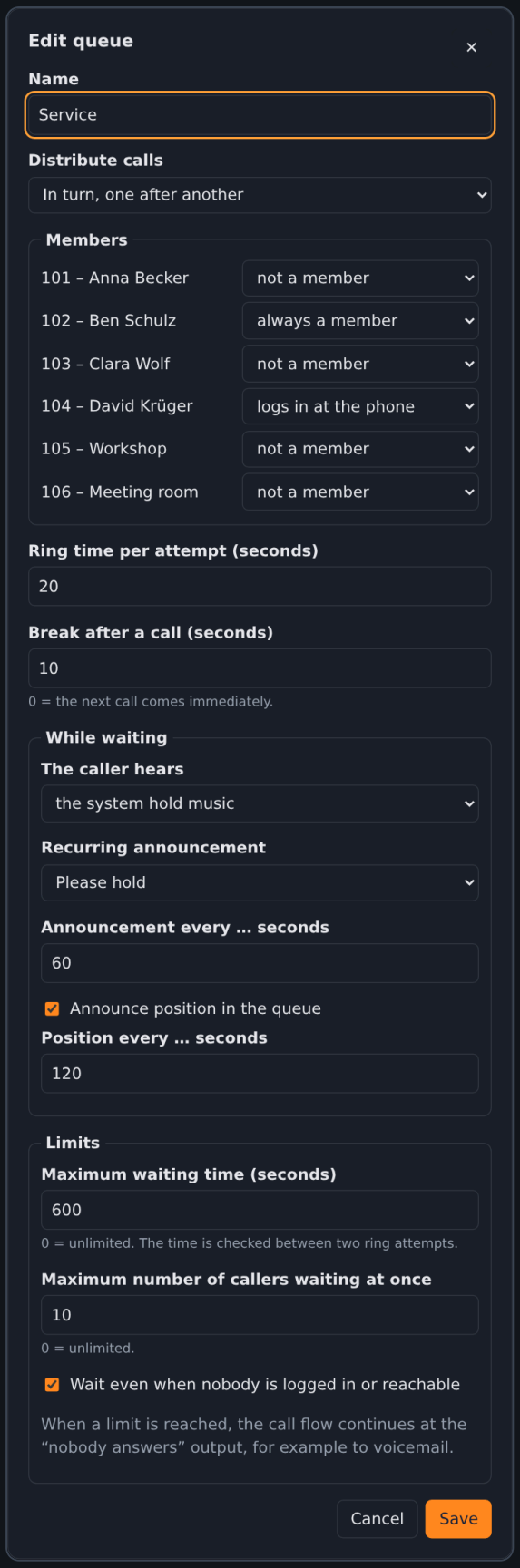
Time control

For each **time window** you choose weekdays, start and end. Under **Closed days** you enter public holidays and vacation, once or every year. The system does not know public holidays by itself.

Queues



Queues



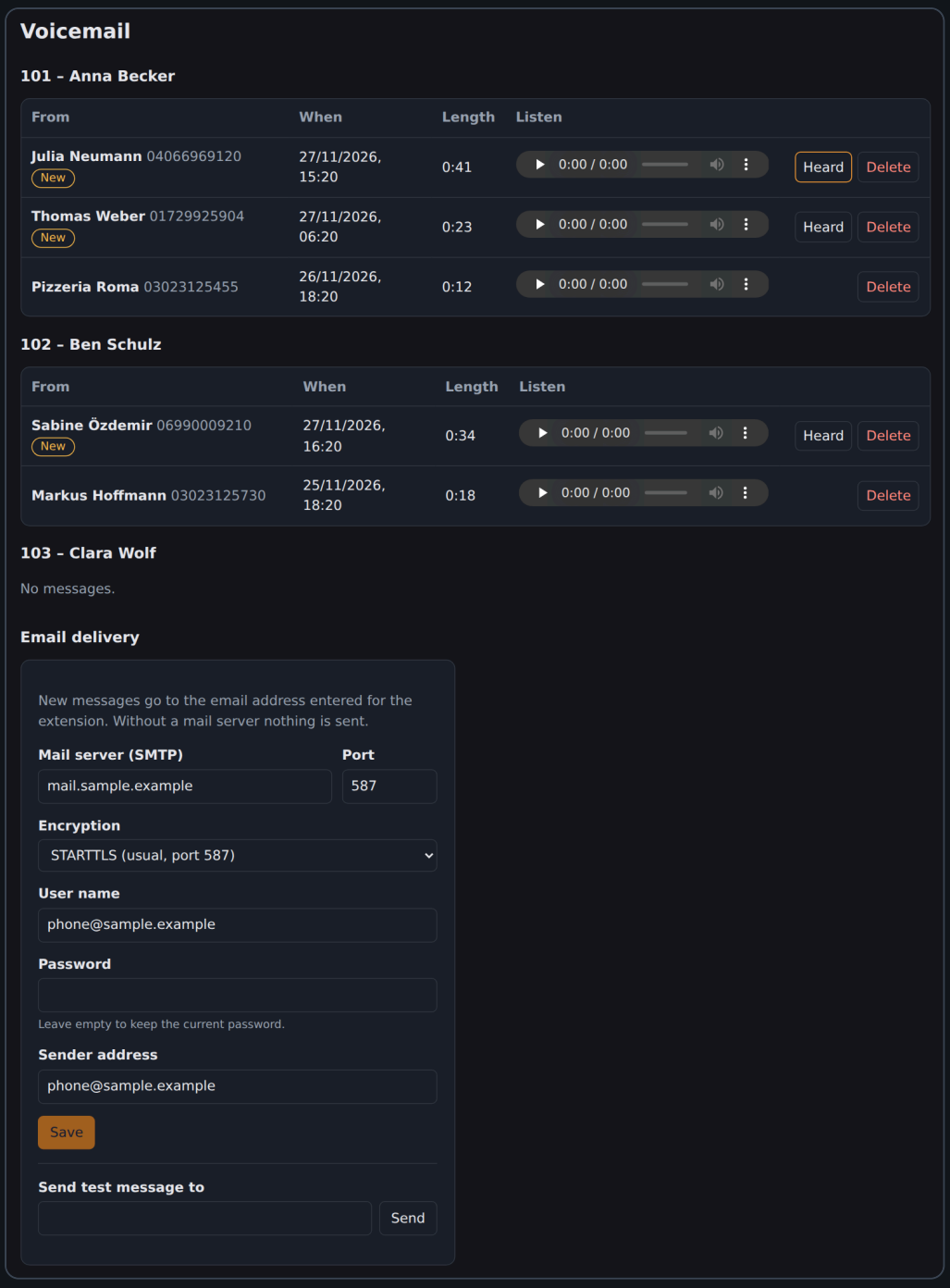
Edit queue

1. **New queue**, choose members: **always a member** or **logs in at the phone** (`*45` , `*46`).
2. Use the **Queue** block in a call flow and connect its output **nobody answers**, for example to a voicemail.
3. **Apply changes.**

Setting	Effect
Distribute calls	all at once, in turn, free longest or fewest calls
Ring time per attempt	afterwards it is the next member's turn
Break after a call	during this time no new call comes from the queue
The caller hears	hold music, own files or ringing tone
Announcement and position	played at the set interval
Limits	maximum waiting time and number of callers waiting
Wait even when nobody is reachable	otherwise the flow continues immediately

The **overview** shows waiting callers with their waiting time and the state of every member.

Voicemail and email delivery



Voicemail in administration

You enable the mailbox with the extension. It answers direct calls when nobody picks up, the line is busy or no phone is registered. In call flows this does not happen by itself: use the **Voicemail** block there. Administrators see all mailboxes.

Email delivery:

1. At the bottom, enter mail server, port, encryption, user, password and sender and save.
2. Check with **Send test message to**. Some providers require an app password.
3. The destination address is set with the extension.

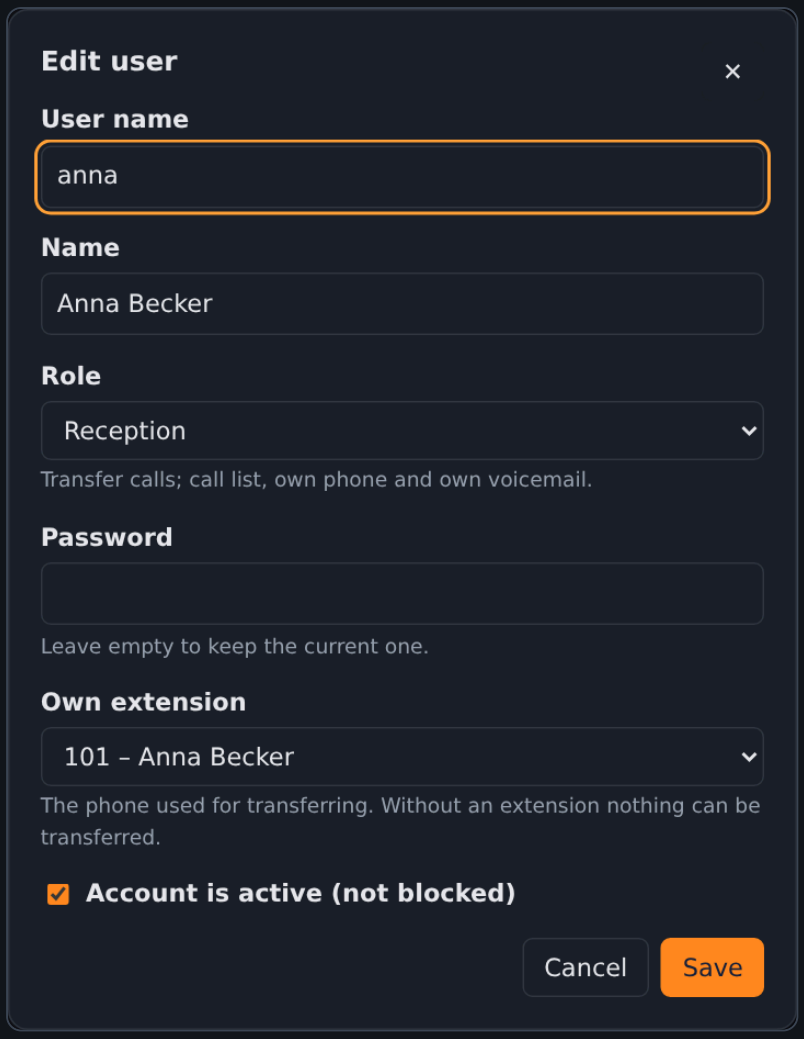
New messages go out within about 20 seconds. After an error the system tries again after 5 minutes.

Part D – Administration and operation

Users



Users

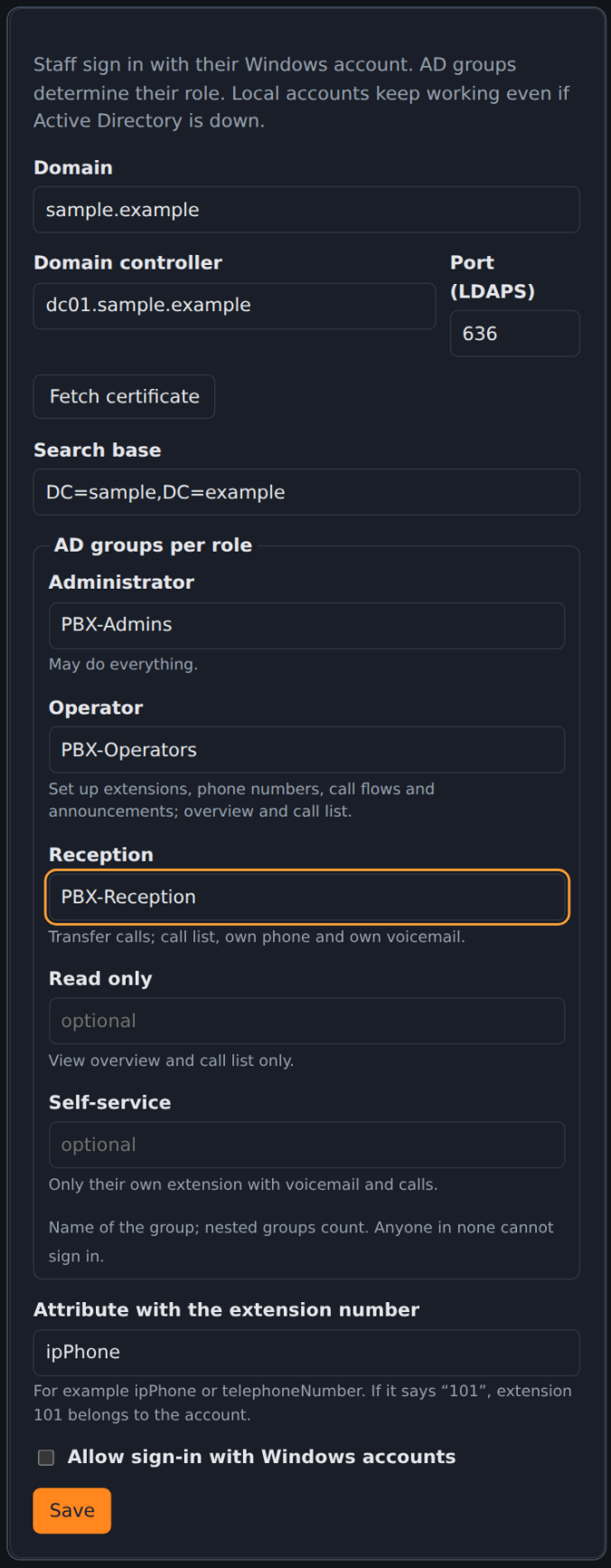


Edit user

With **New local account** you create accounts: user name, name, role, password and the **own extension** (needed for My phone, click-to-call and the switchboard).

- Blocked or changed accounts take effect immediately.
- The last local administrator account can neither be deleted nor blocked.
- Operators see SIP passwords and PINs and can change permissions, so they can also cause costs.

Signing in via Active Directory



Set up Active Directory

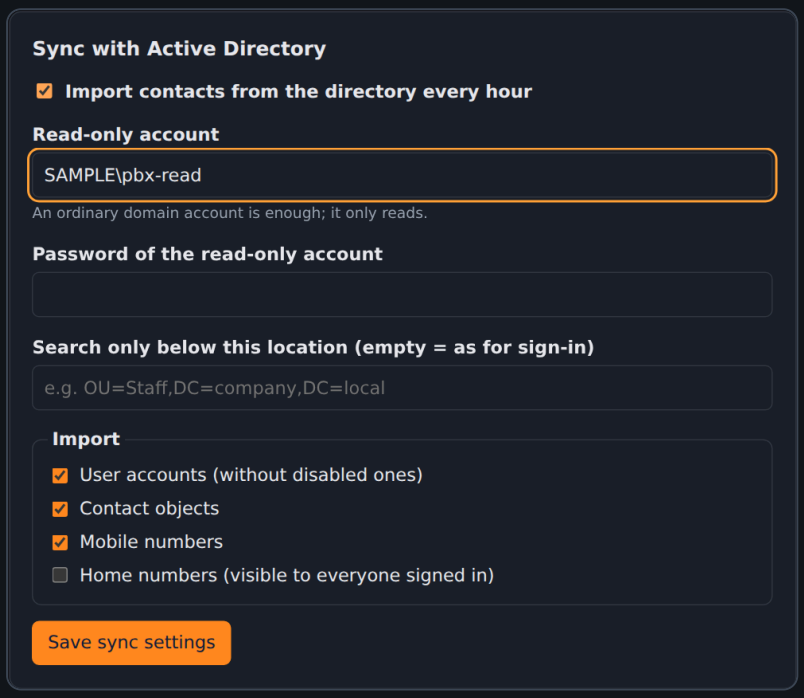
1. Enter domain and domain controller.
2. **Fetch certificate**, compare the fingerprint and confirm. On the domain controller this PowerShell line shows it, for example:

```
Get-ChildItem Cert:\LocalMachine\My | ForEach-Object { $_.Subject;
$_.GetCertHashString('SHA256') }
```

3. Enter the search base and one AD group per role. Nested groups count. Anyone in none cannot get in.
4. Choose the attribute with the extension number (usually `ipPhone`).
5. **Allow sign-in with Windows accounts**, save and test with **Test sign-in**.

The system needs no service account for this and stores no Windows passwords. An account locked only in AD keeps a running session for up to 12 hours.

Contacts from Active Directory



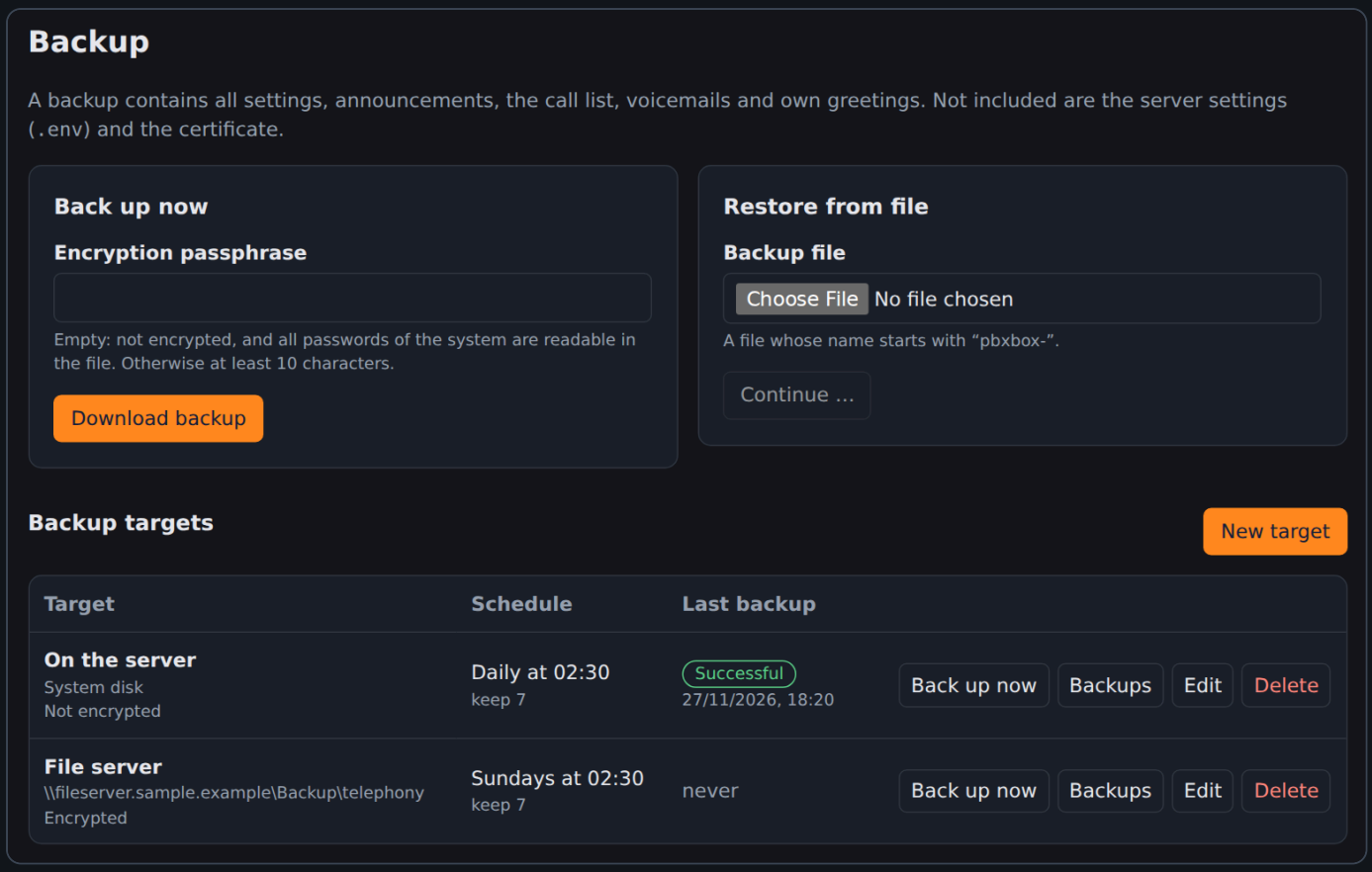
Contact sync

At the bottom of the **Contacts** page. The certificate must have been confirmed under **Users** first; Windows sign-in itself can stay switched off.

1. Switch on **Import contacts from the directory every hour**.
2. Enter a **read-only account** with password (a normal domain account, preferably its own).
3. Choose what is imported and, if you like, an organisational unit.
4. **Save sync settings**; **Sync now** starts it right away.

- Entries with a phone number are imported, disabled accounts are not.
- The entries follow the directory, including deletions. If it suddenly returns nothing, nothing is deleted.
- Home numbers are excluded by default. Switching the sync off removes the imported entries.

Backup and restore

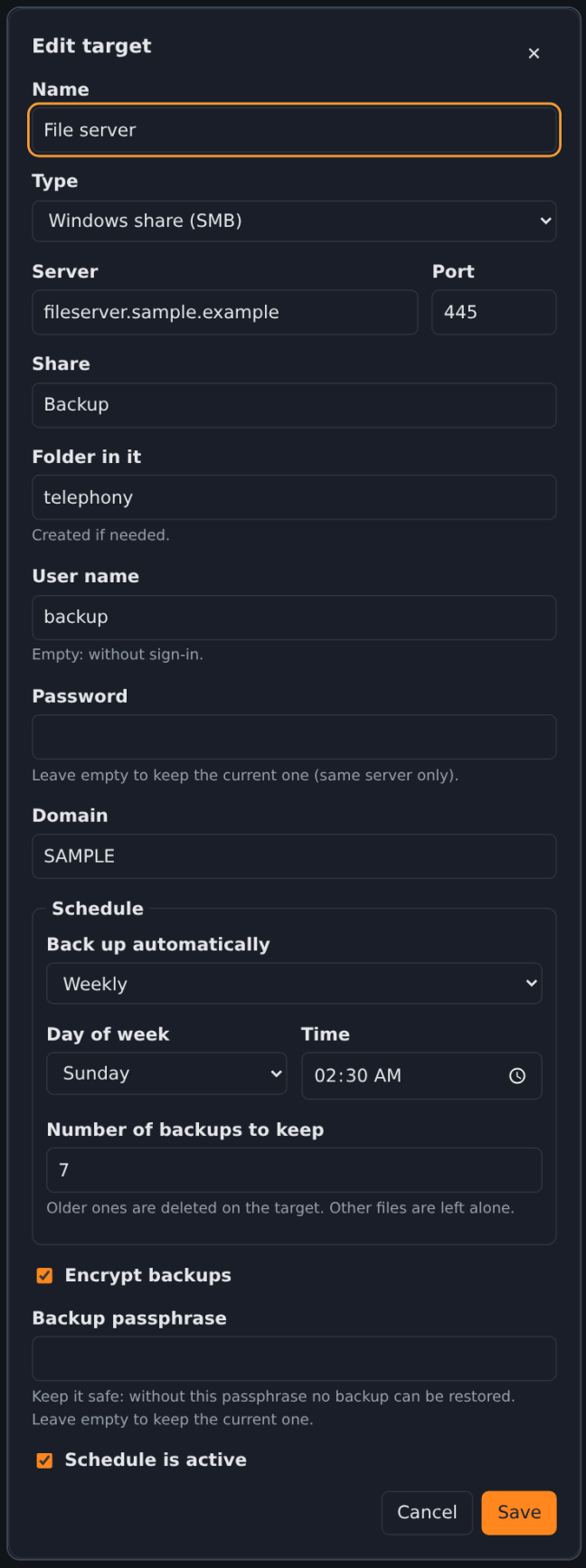


Backup

- **Back up now:** download a file, optionally encrypted with a passphrase.
- **Backup targets:** manual, daily or weekly.
- **Restore from file** or directly from a target.

Included are settings, announcements, call list, voicemails and greetings. Not included are `.env` and the certificate.

Setting up a target



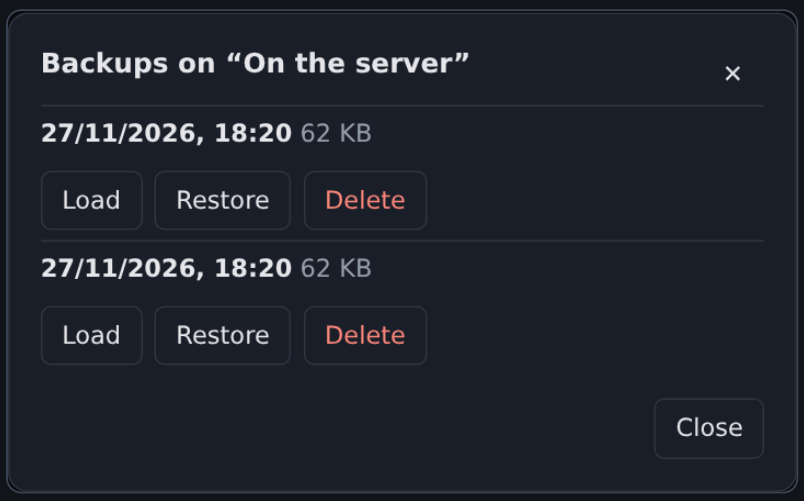
Backup target

Type	Details	Notes
On this server	–	does not help if the server fails

Type	Details	Notes
SMB (Windows share)	server, share, folder, user, domain	SMB 2 or newer
NFS	server, path, version, user and group ID	server must allow writing
FTP / FTPS	server, port, folder, user	can be intercepted without FTPS

Keep the passphrase safe: without it an encrypted backup is lost. Unencrypted backups contain all passwords in readable form.

Restoring

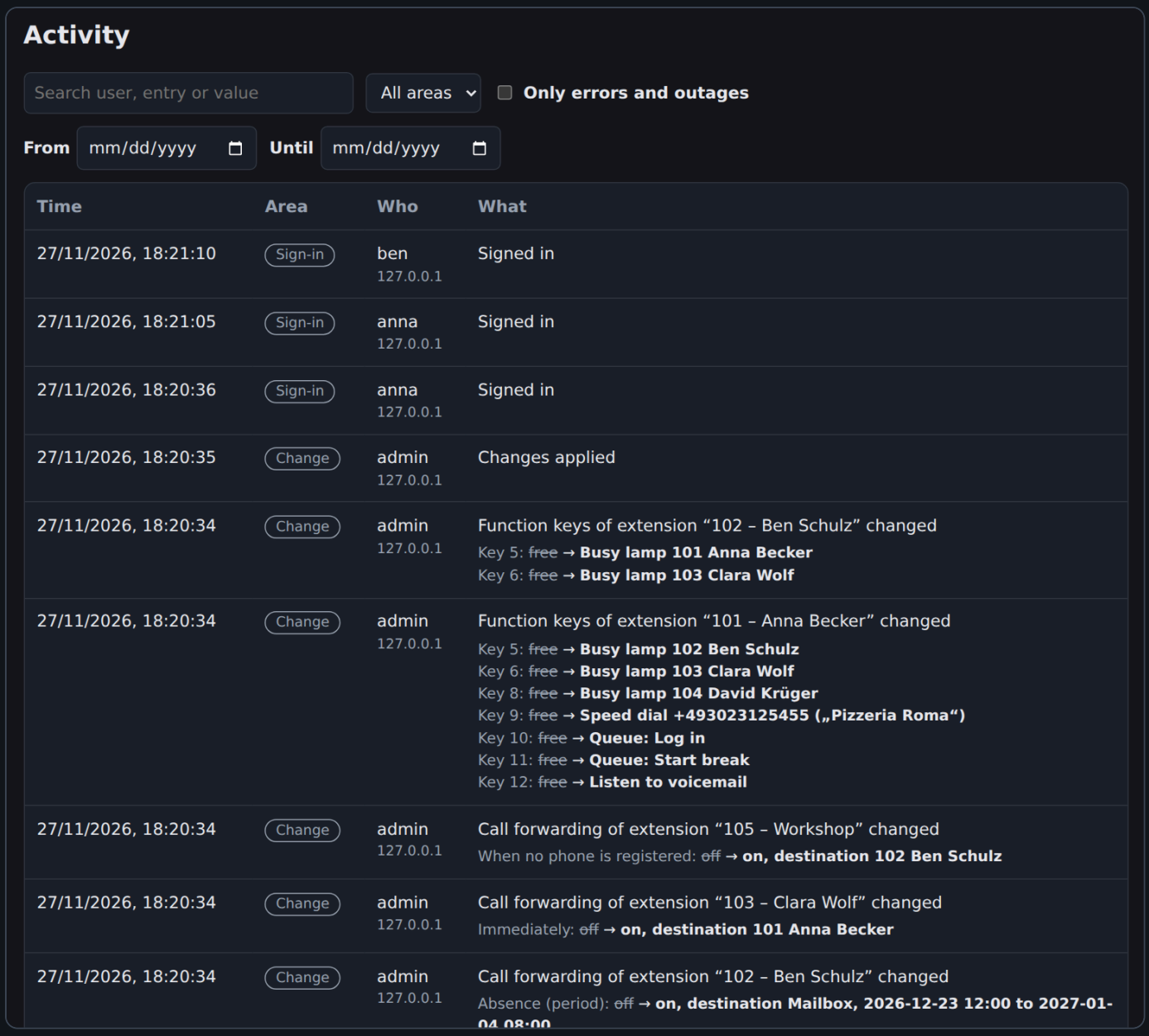


Existing backups

1. Open **Backups** on the target and choose **Restore** (or upload a file).
2. Enter the backup passphrase if necessary, tick **Yes, replace the current state** and **Restore**.
3. Sign in again, with the password from the restored state.

Before that the system keeps the previous state (the last five). Backups from a newer program version are rejected.

Activity



Activity log

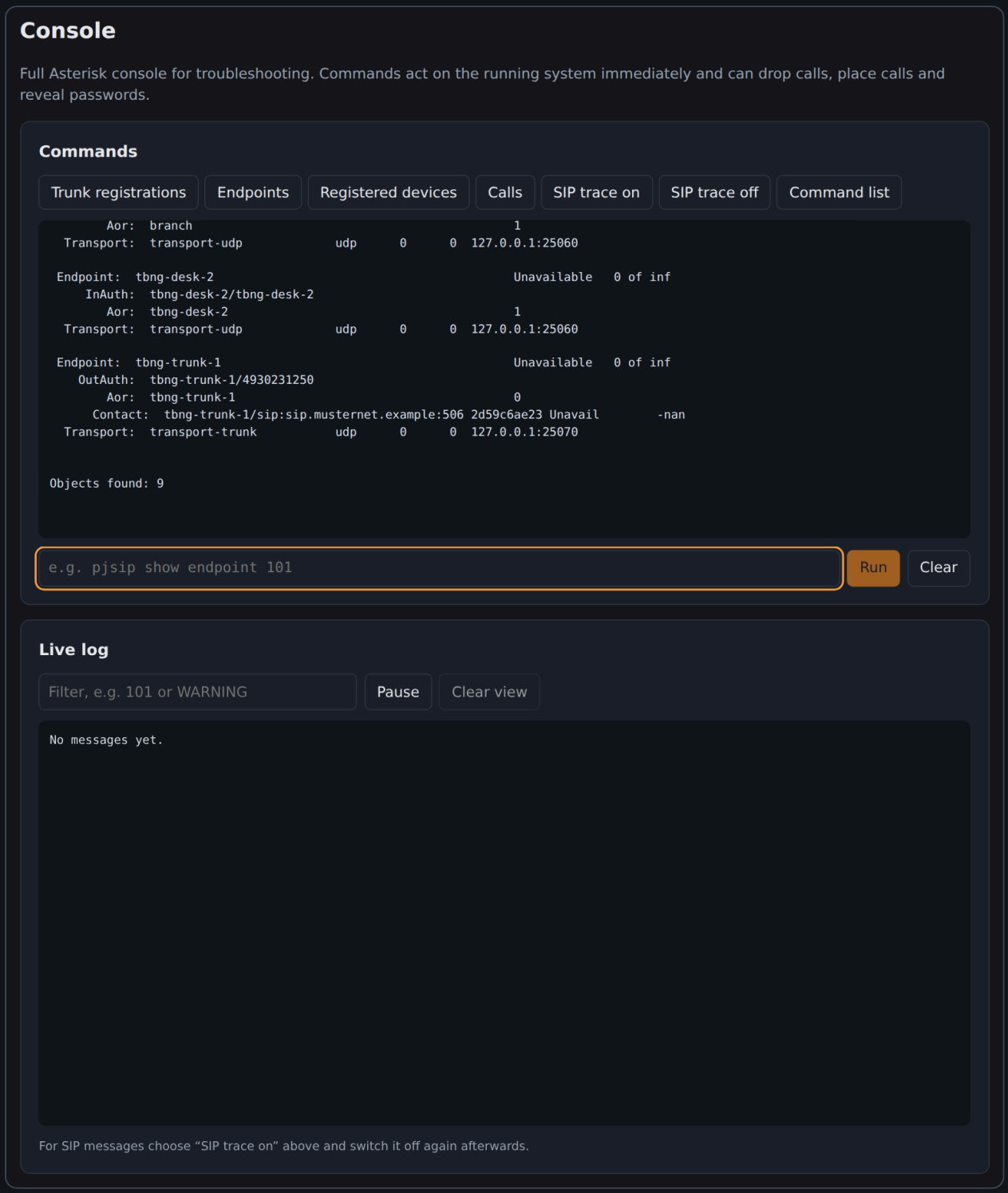
Who did what and when, and what happened to the system? Filter by area, period, search term and **Only errors and outages**.

Area	Entries
Change	create, change (old and new), delete, apply, backups, exports
Sign-in	successful and failed sign-ins, password changes
Phone	hot desking, queues, switchboard actions
System	outages of phones and trunks, scheduled backups

Passwords and PINs never appear in it. Entries are deleted after 90 days (adjustable).

> The log and the call list contain data about employees. In a company, clarify beforehand whether staff representatives or data protection officers have to be involved.

Console



Console

For troubleshooting: commands as in `asterisk -r`, buttons for frequent queries and the live log with a filter. For SIP messages choose **SIP trace on** and **off** again afterwards.

> **Full control:** commands can place calls, drop calls and reveal passwords.

Updating

1. First download a file under **Backup**.
2. Transfer the new version and start it:

```
sh deploy/aktualisieren.sh user@192.168.1.10
```

3. Sign in to the interface and **Apply changes** if the notice appears.

`.env`, certificate and data are kept. If telephony itself changes, it restarts and active calls are cut off.

Help with problems

Frequent questions

Problem	Check
Phone does not register	Changes applied? Server, number, password correct? Extension active? UDP 5060 open?
Not reachable after a restart	wait up to 5 minutes or restart the phone
No sound	`EXTERNAL_ADDRESS` correct? UDP 16384–16484 open?
Trunk “Rejected”	check user name and password with the provider
No calls from outside	number assigned? applied?
No calls to outside	permission of the extension, trunk connected, outside-line digit
No name on calls	number in the contact with area code? applied once since the update?
Snom key shows nothing	update firmware; key chosen under Provisioning?
Directory on the Snom empty	switch on, phone restarted?
No email for voicemail	send a test message; read the error on the page
New function missing	reload the page with `Ctrl+F5`
`ports are not available`	another program uses the port; for voice change `RTP_START` / `RTP_END`

Forgotten password

An administrator resets passwords of local accounts under **Users**. If nobody can get in any more, this command on the server removes the local administrator accounts; afterwards you create `admin` again:

```
sudo docker compose exec app node -e "require('better-sqlite3')
('/data/trixboxng.db').exec(\"DELETE FROM users WHERE source='local' AND role='admin'\")"
```

Limits

- Auto-provisioning for Snom D series desk phones, Fanvil (function keys X7 only) and the Gigaset N510 IP PRO.
- The country code is fixed to Germany (+49).
- Trunks without encryption (no TLS, no SRTP).
- No statistics over longer periods.
- `docker compose down -v` deletes all data including the backups on the server.