AREDN: Snom Setup

Direct Call / Peer to Peer SIP Calls

Author: HB9GVM / Status: v0.1 (Aug 20, 2023) / Reference: -

Devices

This guide was written based on a Snom D120 with firmware version 10.1.54.24.

It was confirmed working for the following other Snom phone / firmware combinations:
-

Setup

General advice: Apply/save the changes after each step. This is not mentioned separately.

Identity

There are two potential ways to set this up:

1. **Run the phone without a registration**
   - Downside: The phone keeps displaying a welcome message instead of a nicer status display once the phone is registered. It will still place and receive phone calls though.

2. **Set up an actual SIP server or SIP Proxy**
   - Note: A fake server like SipServer does **not** suffice.
   - Downside: This is a more complex setup and depends on the SIP server.

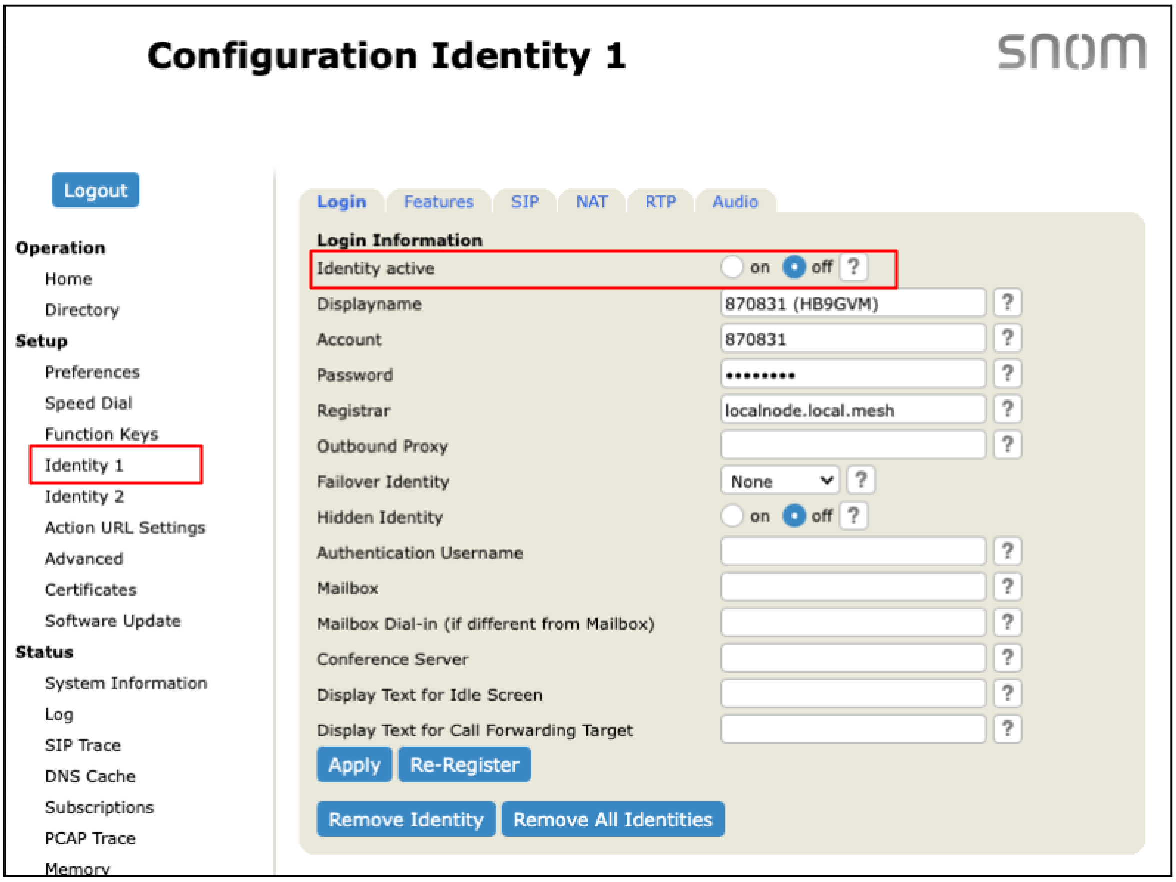
Rationale: When the Snom phone places a call, as long as a registration is active, it will send the SIP INVITE call message to the SIP Server even if the target is an identity not registered at the same SIP server.

The rest of this section is accordingly split up to describe the two approaches. Pick one and follow only that guidance. We suggest using *Approach 1* for now.

Approach #1: Login

In "Identity 1", make at least the following changes:
- Identity active: off

Note: The phone will keep displaying the "Welcome! Press a key to log on." message. If you know how to turn this off, let us know. The phone can still be used to dial from the directory and can be called. However, the display is somewhat useless. Do **not** log on on the phone itself as that will activate the identity and thus outgoing calls won't work anymore.

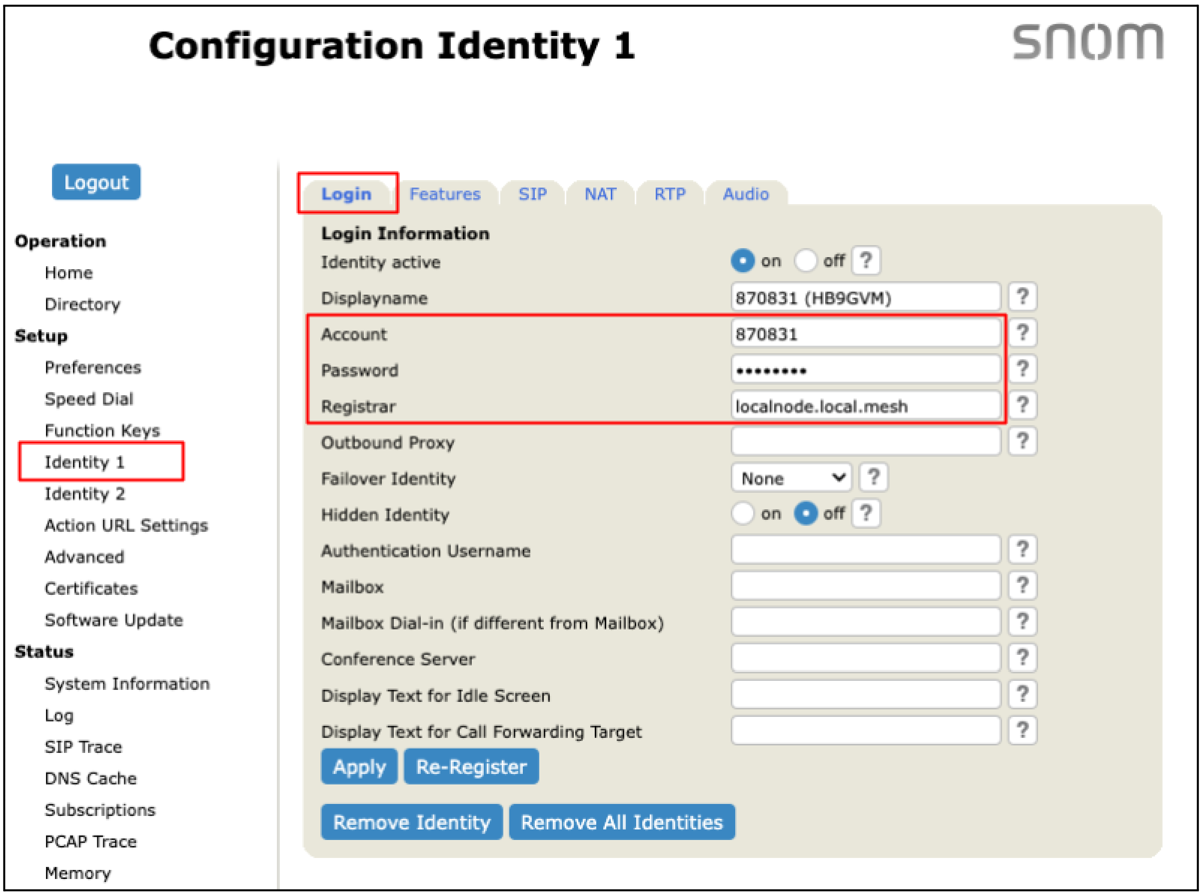


Approach #2: Login

Note: This assumes that you have already set up a SIP Server or Proxy on your AREDN Node. Note that this has not been tested fully (testing only with SipServer which permitted incoming calls to work but outgoing calls did not function).

In "Identity 1", make at least the following changes:

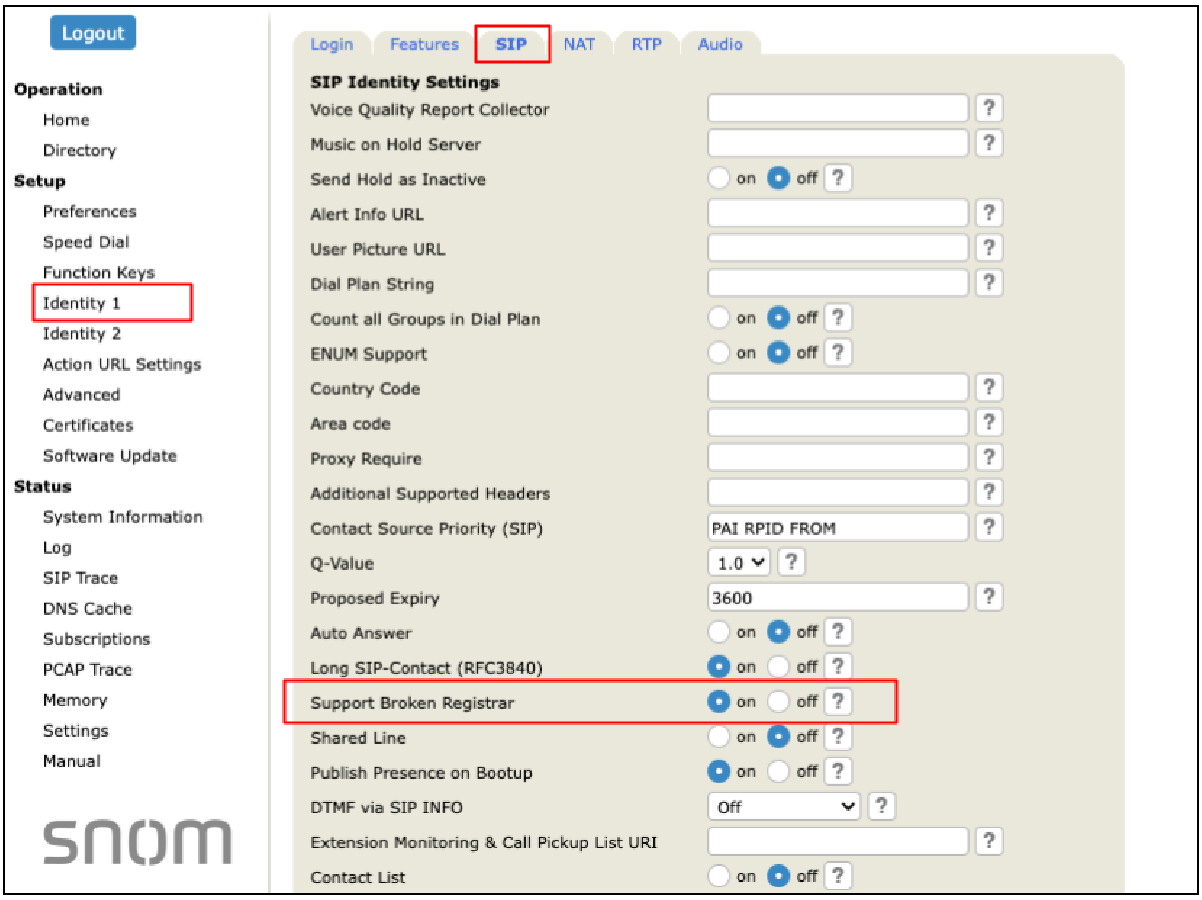
- Identity active: on
- Account: <your phone number>
- Registrar: localnode.local.mesh



SIP

In the "SIP" tab, make at least the following changes:

- Support Broken Registrar: on
  Otherwise calls directed at "<number>@<number>.local.mesh" will not be accepted because the phone is registered at "<number>@localnode.local.mesh".

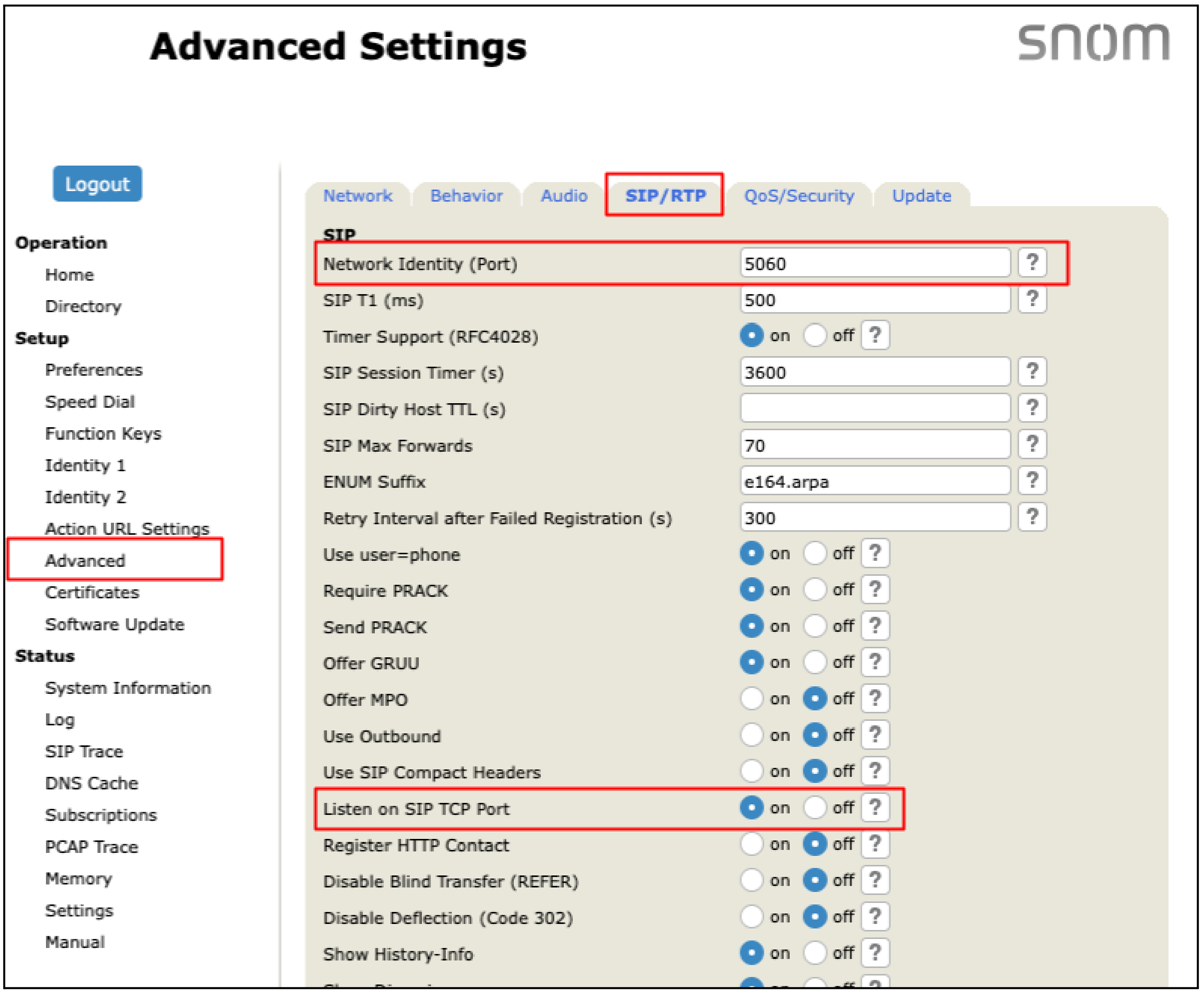


Advanced

SIP/RTP

In the "SIP/RTP" tab, make at least the following changes:

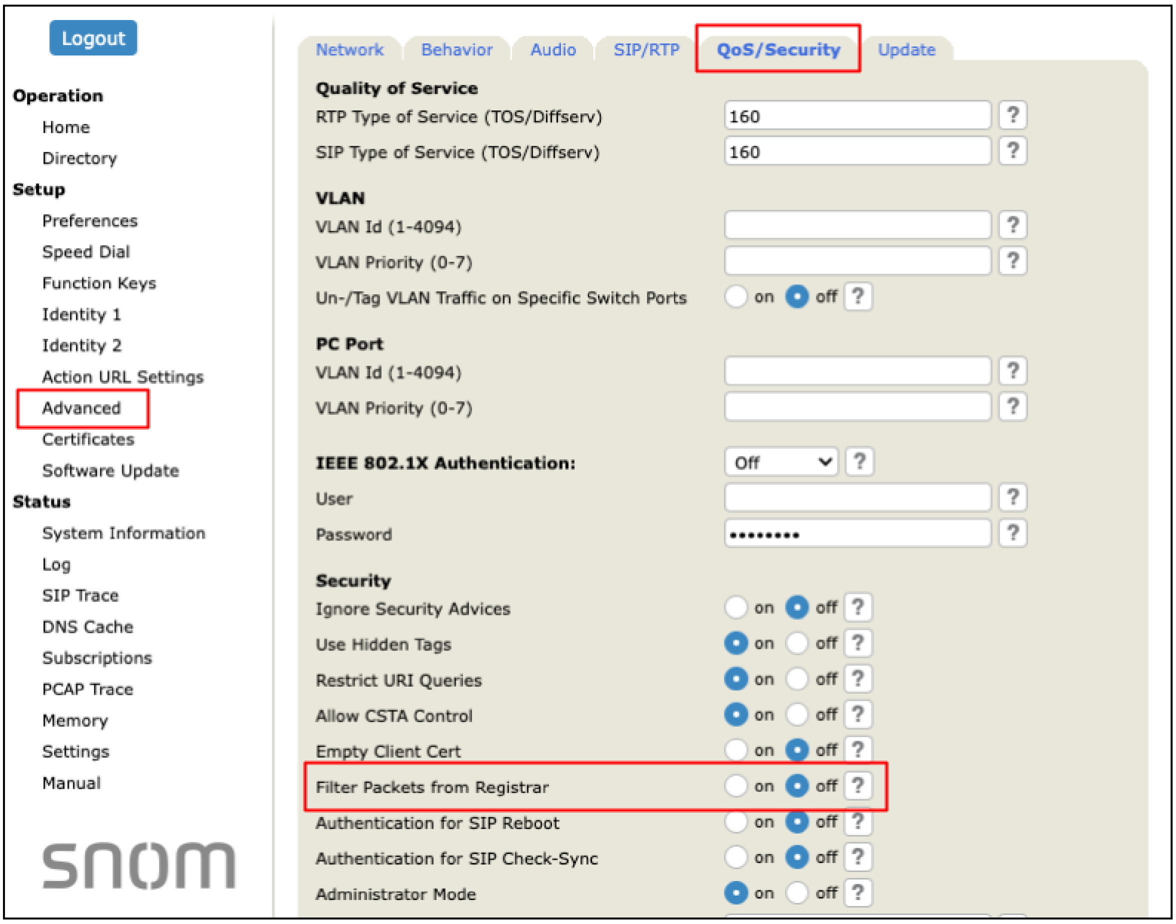
- Network Identity (Port): 5060
  https://service.snom.com/display/wiki/network_id_port
- Listen on SIP TCP Port: on
  https://service.snom.com/display/wiki/tcp_listen



QoS/Security

In the "QoS/Security" tab, make at least the following changes:

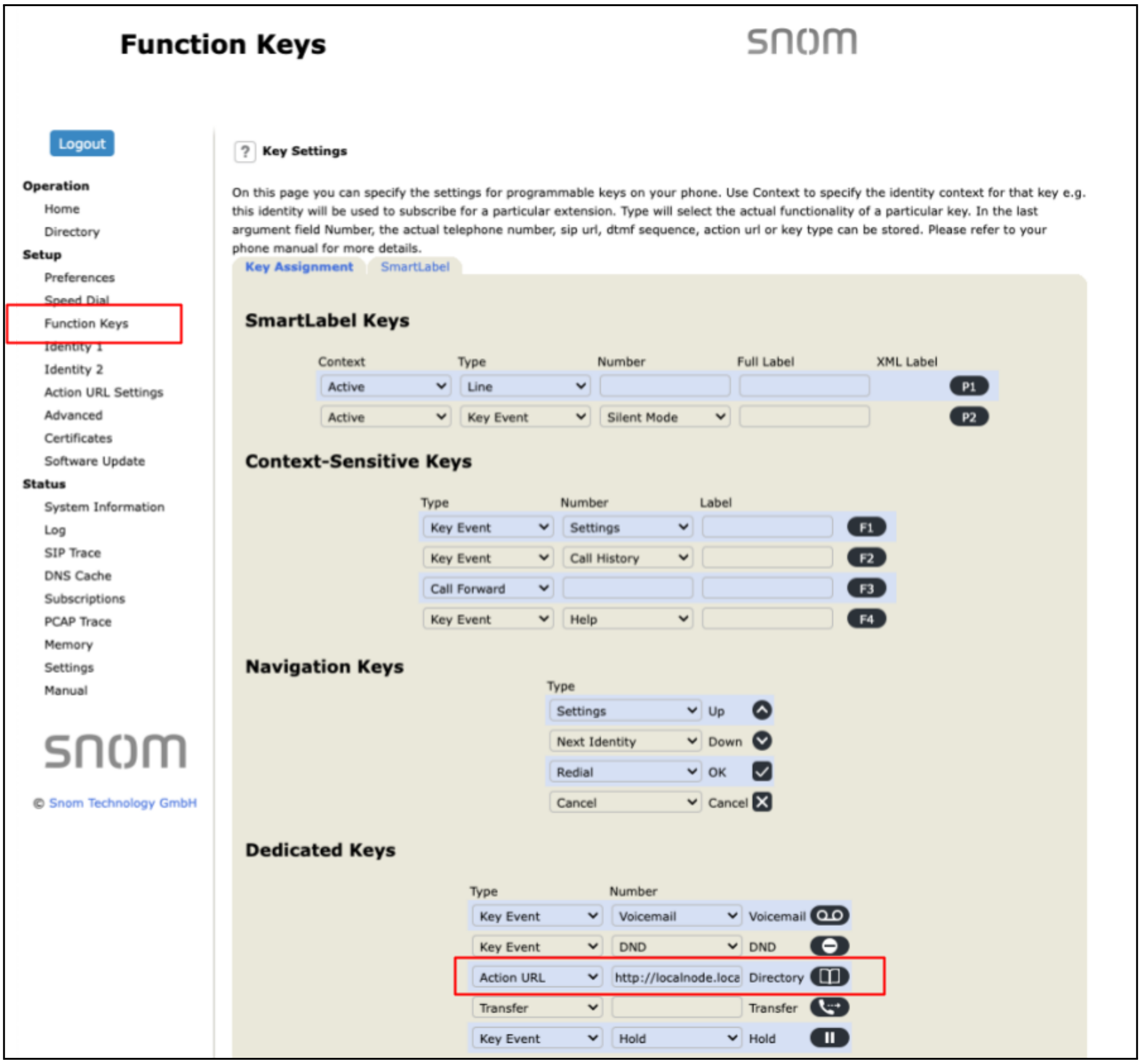
- Filter Packets from Registrar: off
  https://service.snom.com/display/wiki/filter_registrar



Phonebook / Directory

Note: This assumes that you have set up the phonebook as described in https://github.com/dhamstack/AREDNstack/blob/main/Documentation/Installation%20of%20phonebook%20replication%20on%20hap%20router.pdf and that you have enabled "snom" as an output in settings.txt.

Under "Function Keys", set the "Directory" button to type "Action URL" and set the URL to "http://localnode.local.mesh/phonebook_snom_direct.xml". This way, whenever the directory button is pressed, it will load the directory from the given URL and display it.



References

- Snom on peer to peer calling
  https://service.snom.com/display/wiki/Can+I+establish+pure+IP%2CPeer-to-peer+calls+with+snom+Phones
- AREDN CH Documentation
  https://github.com/dhamstack/AREDNstack/tree/main/Documentation