

My Homelab

All my digital life behind the fridge

2026-02-10

Gui (sitegui)

Home what?

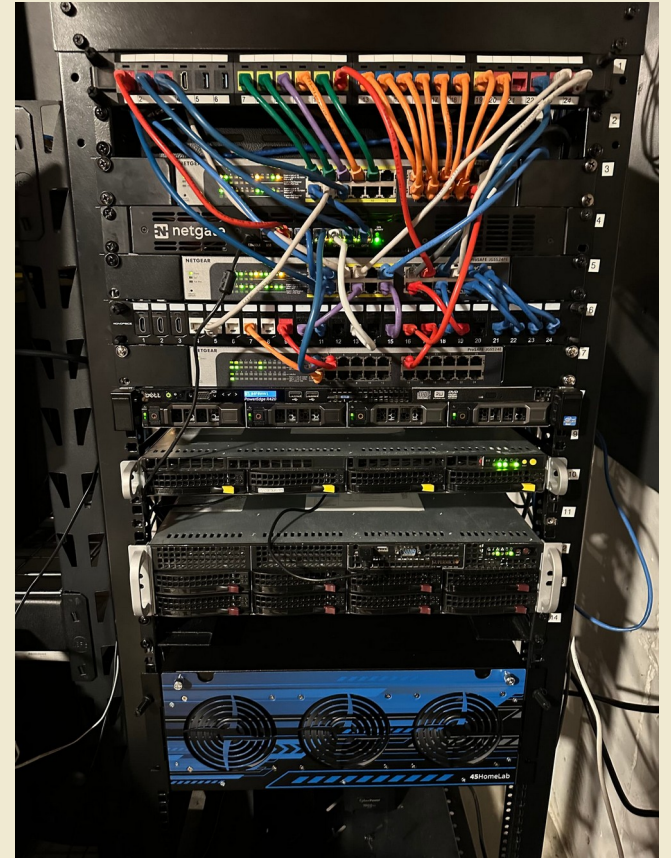
Everyone has their own definition, but we can start with:

You own the hardware and the data,

You configure the software and the networkd.

But in reality, it's *your* homelab.

Do like you feel, name it like you want!



Home what?

At my home, it's less flashy:

- an Internet connection
- an external disk unit
- a notebook from 2018



A homelab, good for what?

It's *your* digital creative workshop. So each their own projects and ambitions!

At home, it's:

- files and photos storage (like Google Drive)
- agenda, contacts, tasks, notes
- media center (to watch films on the computer and TV)

A homelab, good for what?

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At home, it's:

- files and photos storage (like Google Drive)
- agenda, contacts, tasks, notes
- media center (to watch films on the computer and TV)
- websites (my blog, gameboard club, dancing club)
- git forge
- game servers (the factory must grow!)
- ad and tracker blocker
- other stuff

Make your own stock cubes



The industrial cube

Practical
OK taste

The homemade cube

Fun to make
You control the salt
Best taste in town



Make your own stock cubes



The industrial cube

Practical
OK taste

Controls your digital life

Resists big tech oligopoly

A light touch of
digital sovereignty

The homemade cube

Fun to make
You control the salt
Best taste in town



(chicken stock in four steps)

1. collect chicken bones in the freezer for months



(chicken stock in four steps)

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2. in a pressure cooker :
water, onion, garlic, herbes



(chicken stock in four steps)

3. after 30 minutes, open and reduce water



(bouillon de poulet en quatre étapes)

3. after 30 minutes, open and reduce water



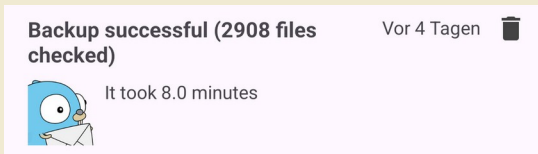
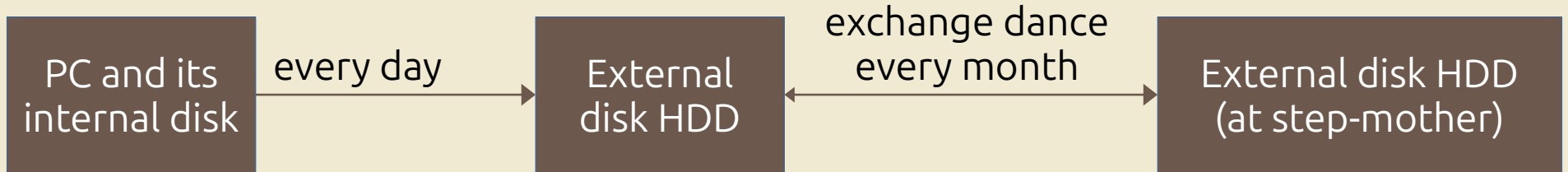
4. freeze in cubes



The basis: a good backup system

I've implemented the 3-2-1 pattern:

- each file has 3 copies
- in 2 distinct media (HDD and SSD)
- 1 copy physically elsewhere

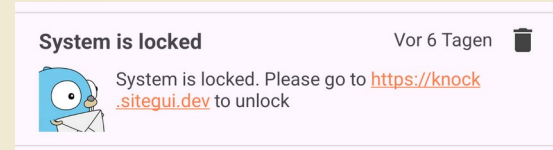


The encryption

The 2 external disks are fully encrypted (LUKS).

The internal disk has one encrypted folder that holds all the data for the non-critical apps.

When the PC restarts, it sends me a notification to type in the encryption password in a web page.



The execution

I use Ubuntu Server 24.04

I run most part of the software using Podman
(a rootless alternative to Docker)

I declare my containers as systemd units:

All examples here:

<https://git.sitegui.dev/sitegui/home-lab/src/branch/main/config>

```
[Unit]

[Service]
Restart = always
RestartSec = 30

[Container]
ContainerName = factorio
Image = docker.io/factoriotools/factorio:2.0.72
Pull = never
AutoUpdate = local
UserNS = keep-id:uid=845
Volume = %h/protected/factorio/data:/factorio
PublishPort = 34197:34197/udp

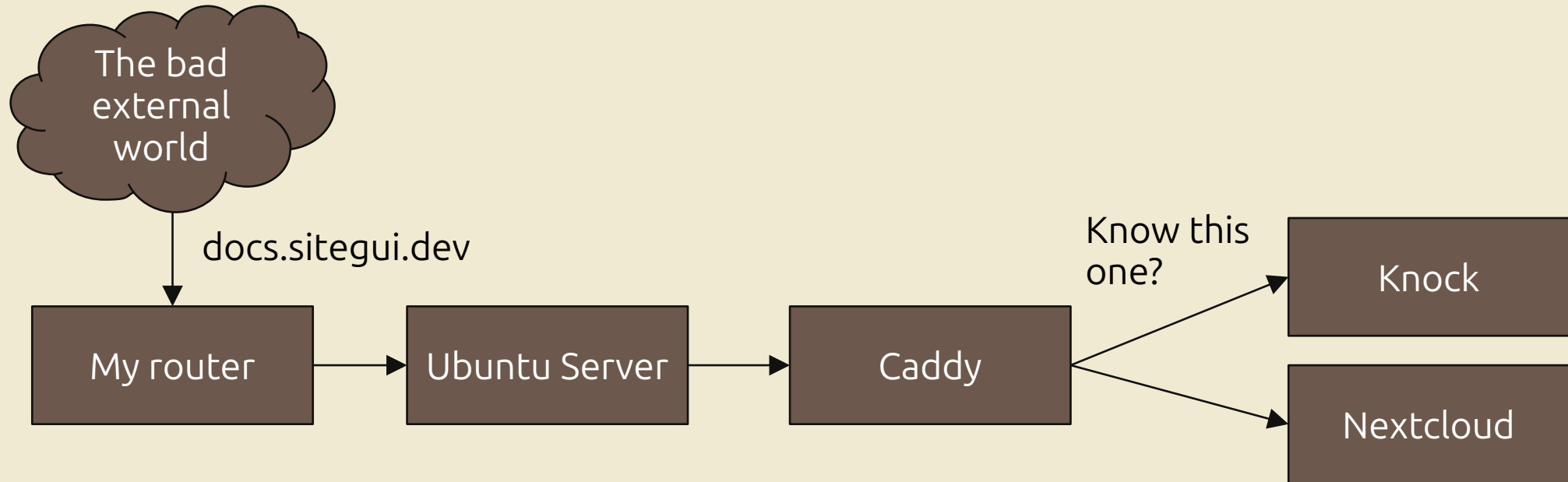
[Install]
WantedBy = protected.target
```

The body guard: knock

I can access my services even while on the road, on different devices.
And my friends and family as well!

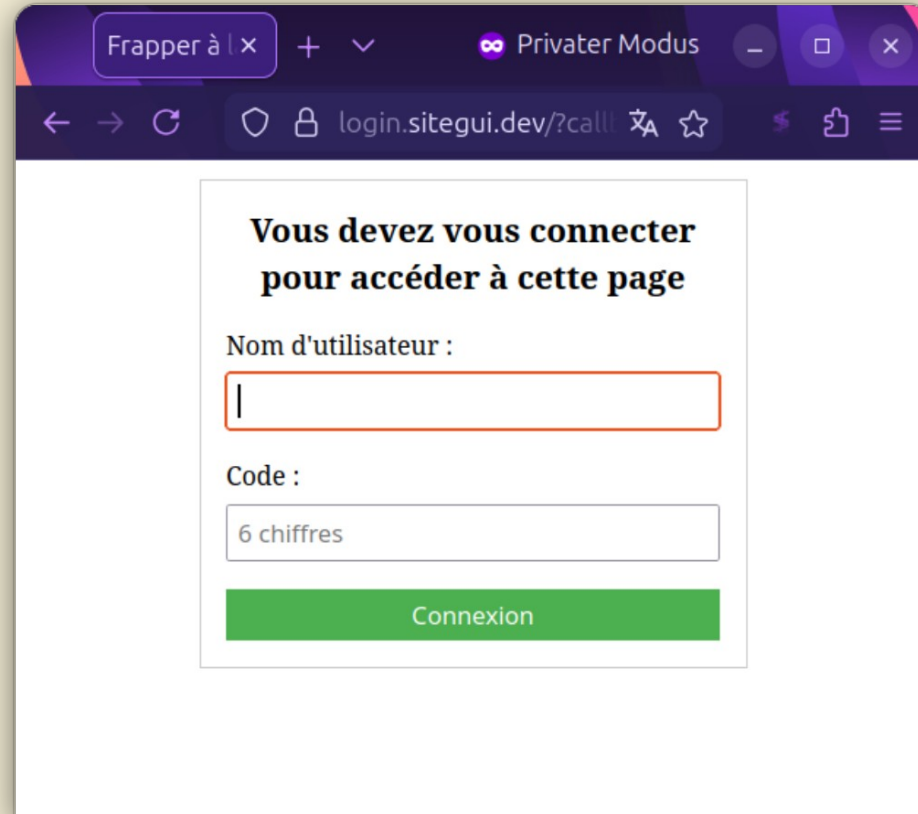
To increase safety, I reduce the exposition of the internal services ;

So I've created knock: git.sitegui.dev/sitegui/home-lab







Knock – Web access

The person has to login with a unique code (TOTP)



Frapper à | x + v Privater Modus

← → ↻  login.sitegui.dev/?call   

**Vous devez vous connecter
pour accéder à cette page**

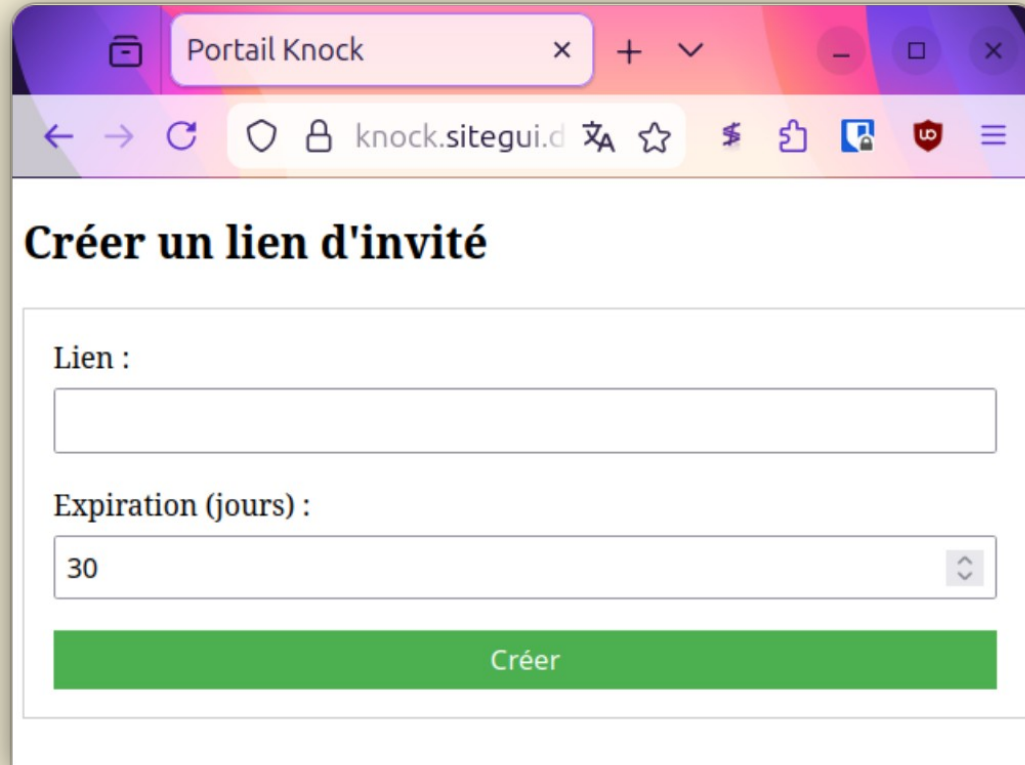
Nom d'utilisateur :

Code :

Connexion

Knock – guess access

An user can create guess links



The screenshot shows a web browser window with the title 'Portail Knock'. The address bar displays 'knock.sitegui.d'. The main heading is 'Créer un lien d'invité'. Below the heading, there are two input fields: 'Lien :' with an empty text box, and 'Expiration (jours) :' with a dropdown menu showing '30'. At the bottom, there is a green button labeled 'Créer'.

Portail Knock

knock.sitegui.d

Créer un lien d'invité

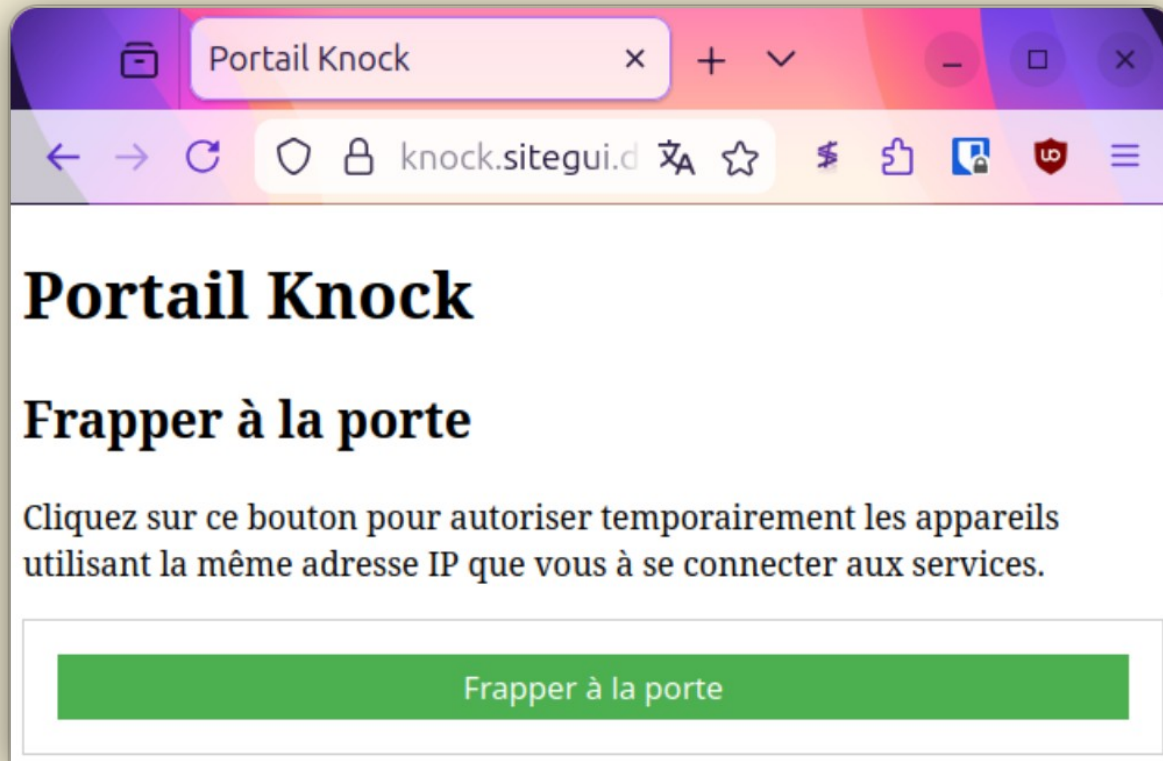
Lien :

Expiration (jours) :

Créer

Knock – mobile app access

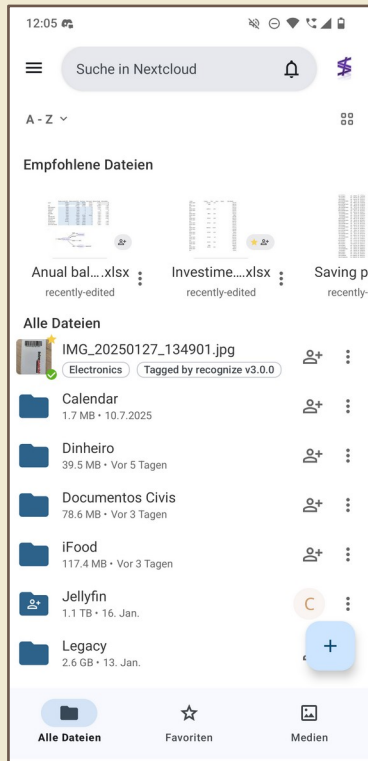
For a first access, the user has to announce their presence (« knocking »).
The knock service listen to the requests of the app and remembers the auth token.



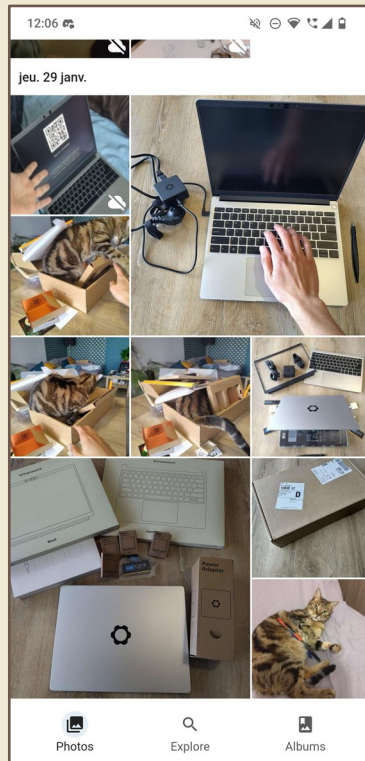
Nextcloud

An very competitive and open-source alternative to Google Drive, Docs, Photos, etc

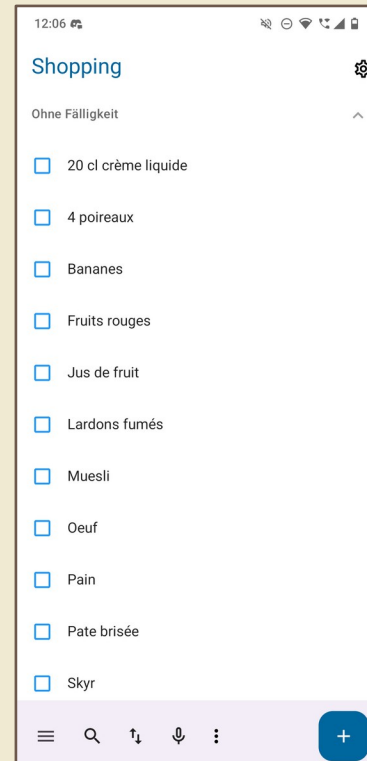
Files



Photos



Tasks



Calendar



Obrigado !



Gui Souza : loves software stuff

Come, we can talk:

Email: oi arobase sitegui.dev

My blog: sitegui.dev (proudly served from behind the fridge)

Profile: <https://linkedgui.com/in/sitegui>