YOU AND A LAPTOP

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Nikhef
Computing Course 2022

OVERVIEW

- How to encrypt you laptop
- Connect with EduVPN
- What are the filesystems
- How to mount the filesystems
- How to backup and restore your data

ENCRYPTION

- ## Microsoft: Bitlocker
- ## Apple: FileVault
- ## Linux: ????
- Encrypt home folder
- LUKS (Linux Unified Key Setup)
- Others?

MICROSOFT BITLOCKER

- Settings->update security ->Device encryption
- Turn on Bitlocker
- Make sure you keep your recovery key safe!
- The helpdesk can keep a copy.
- Windows 10 and 11
- You should not use older Windows anyway

You and a Laptop
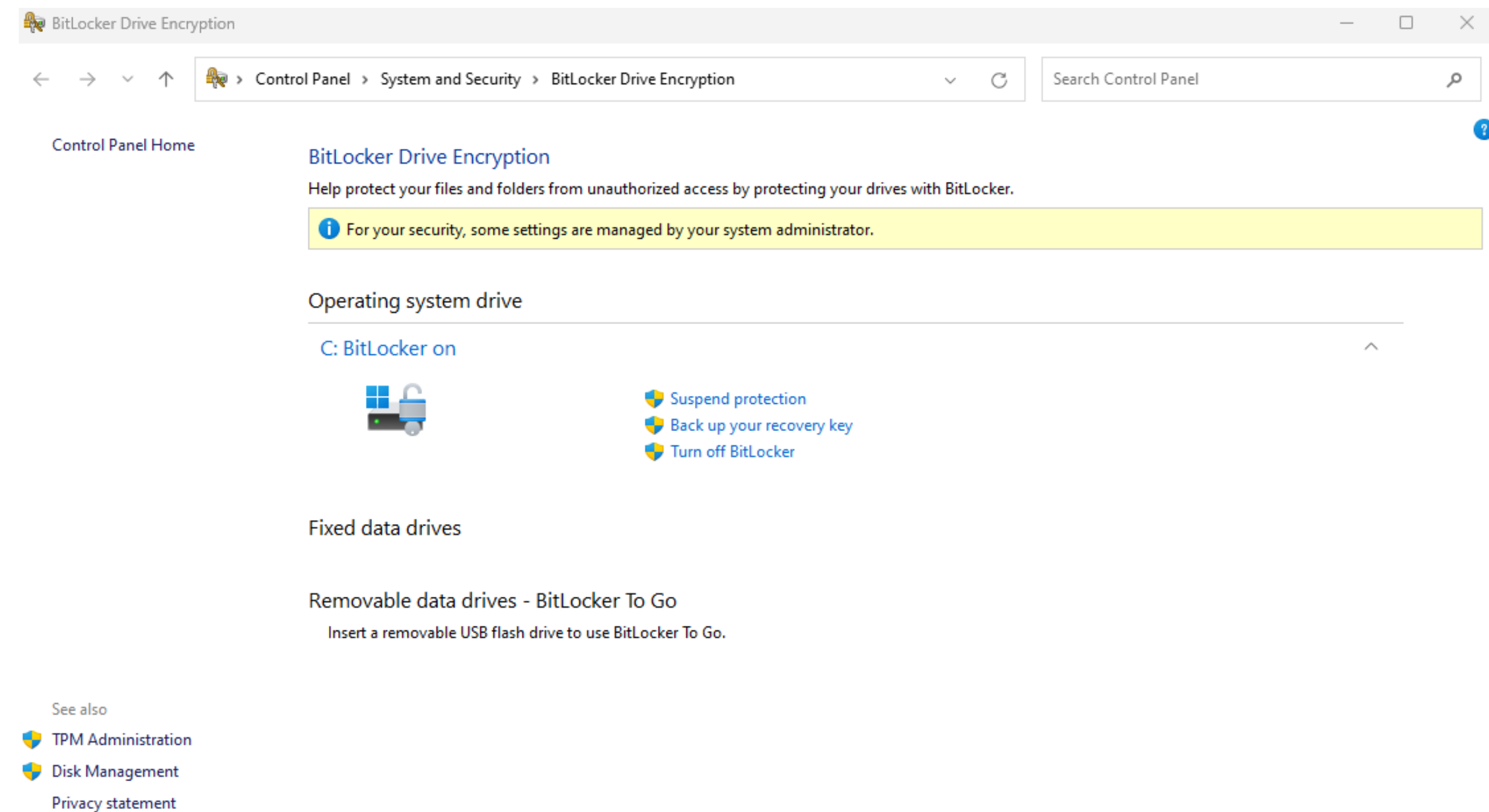
APPLE FILEVAULT

- System preferences -> Security and privacy->FileVault
- Keep your recovery key somewhere safe
- Helpdesk can keep a copy

You and a Laptop
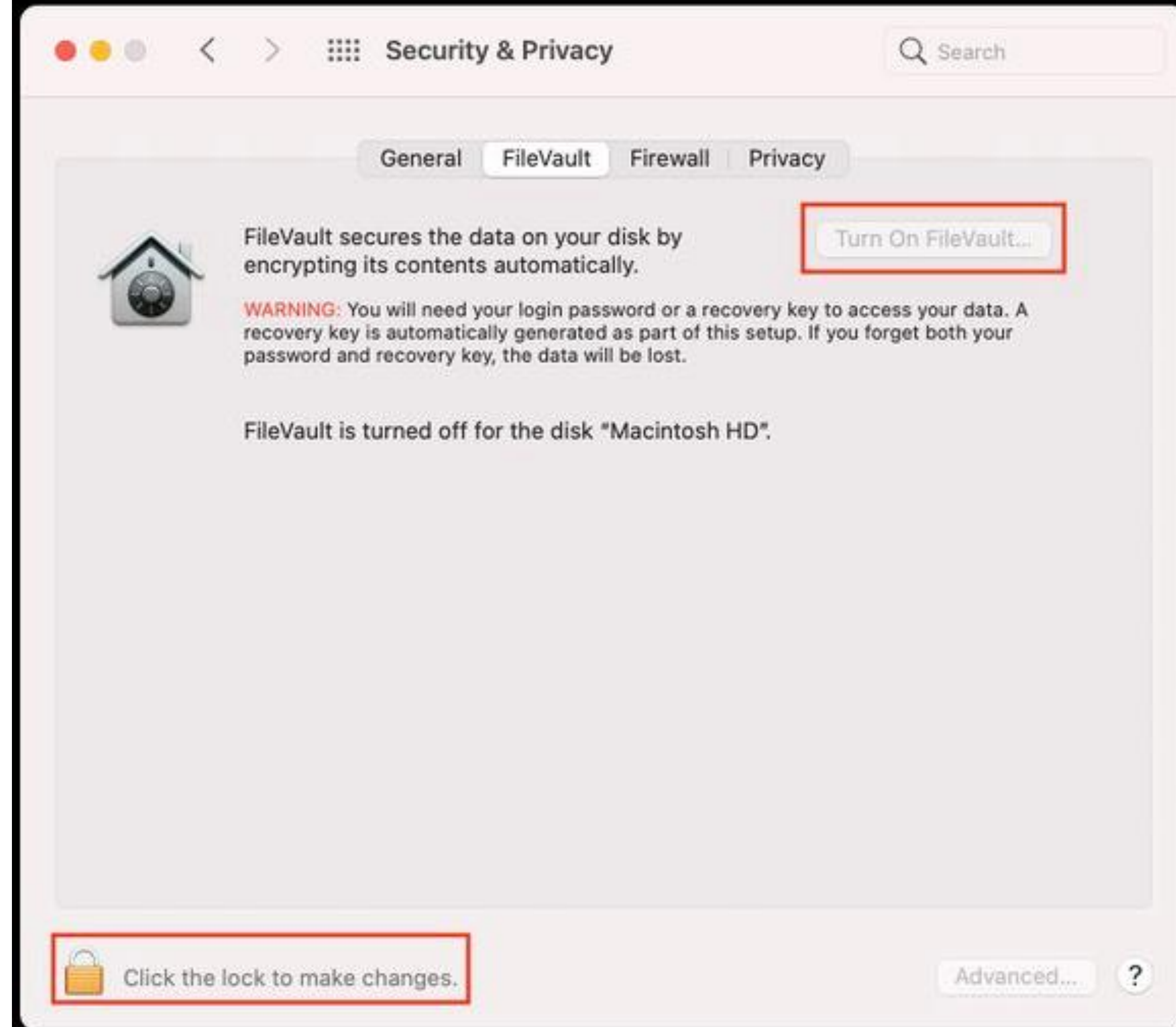
LINUX

- During installation choose use LVM and encrypt installation
- Afterwards with cryptsetup-reencrypt
- https://man7.org/linux/man-pages/man8/cryptsetup-reencrypt.8.html
- Be careful make a backup before you start!

EDUVPN

- VPN (Virtual Private Network
- A safe tunnel to the Nikhef Network (institute access)
- Only traffic to Nikhef will use this

- A safe tunnel to the Internet (Secure Internet)
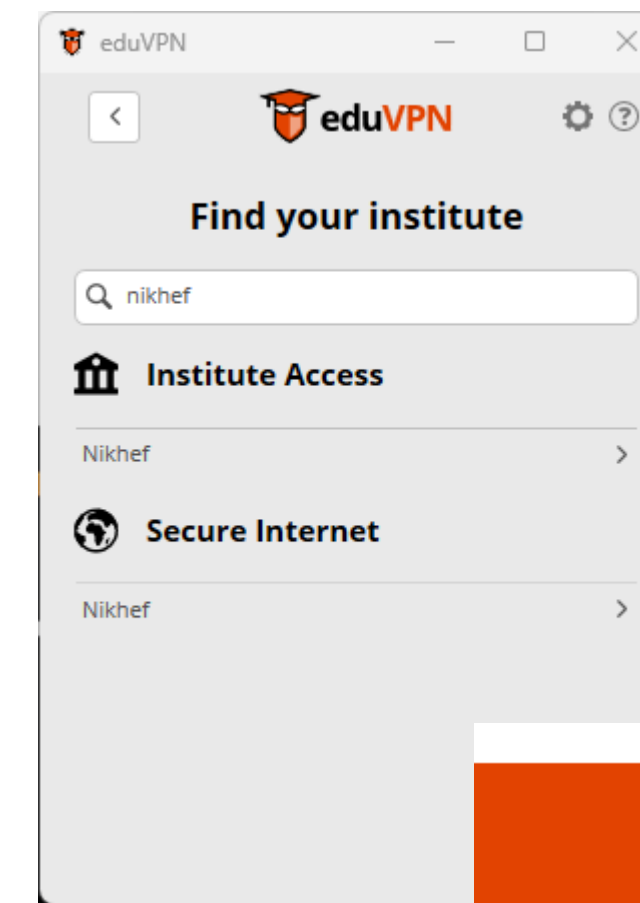- All traffic will use this.
- No access to Nikhef.

EDUVPN

- Download and install Client
- https://www.eduvpn.org/client-apps/
- Windows, macOS, Android, iOS and Linux
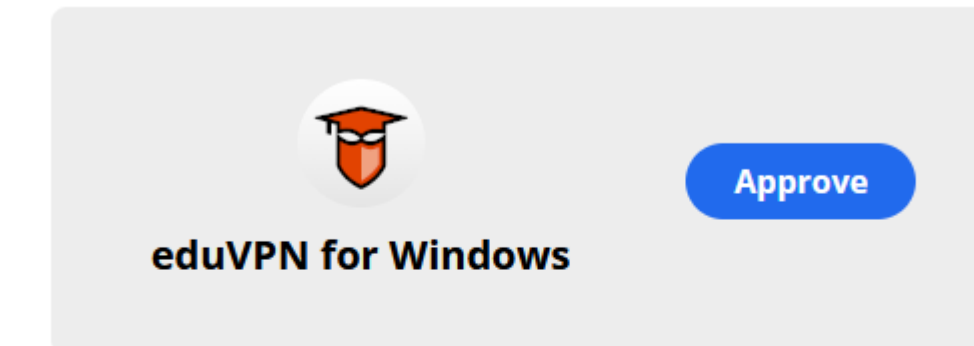- Linux can be a bit more work.

EDUVPN

- Find your institute: "Nikhef"
- Choose access type.
- Browser will be opened
- Log into Nikhef with SSO and approve.
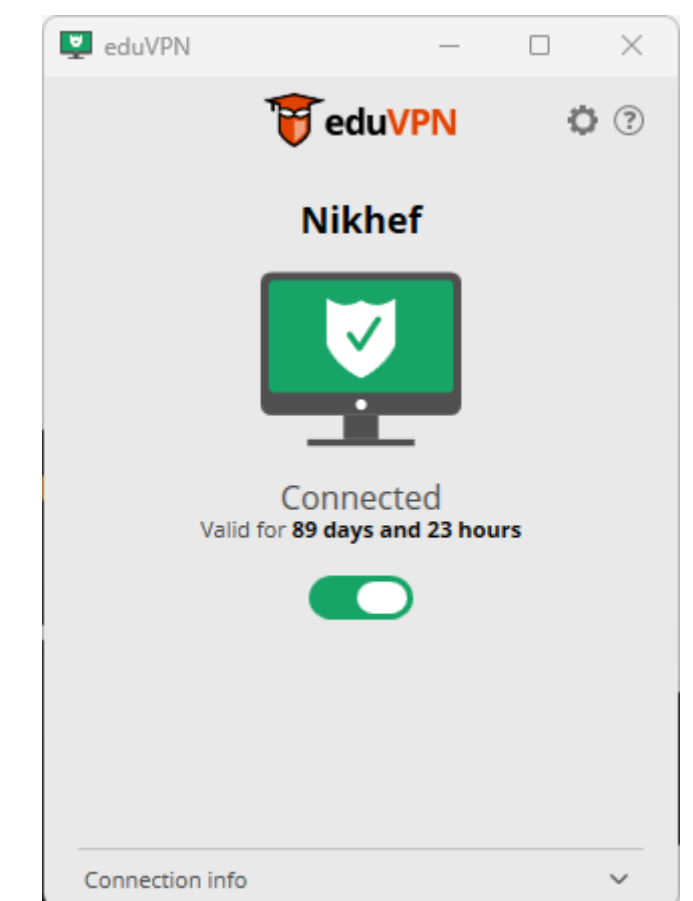- Approval last for 90 days.
- Connect.
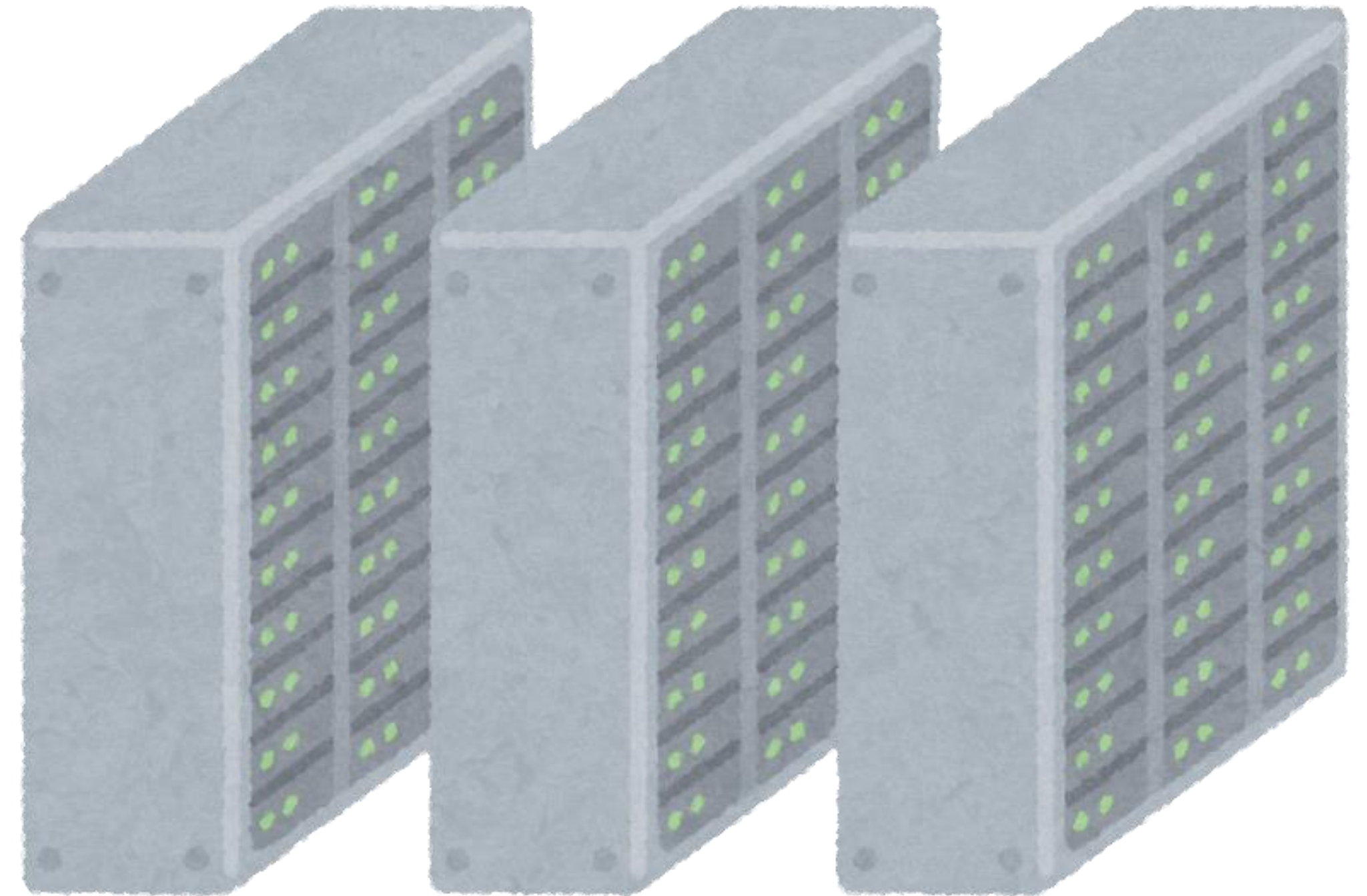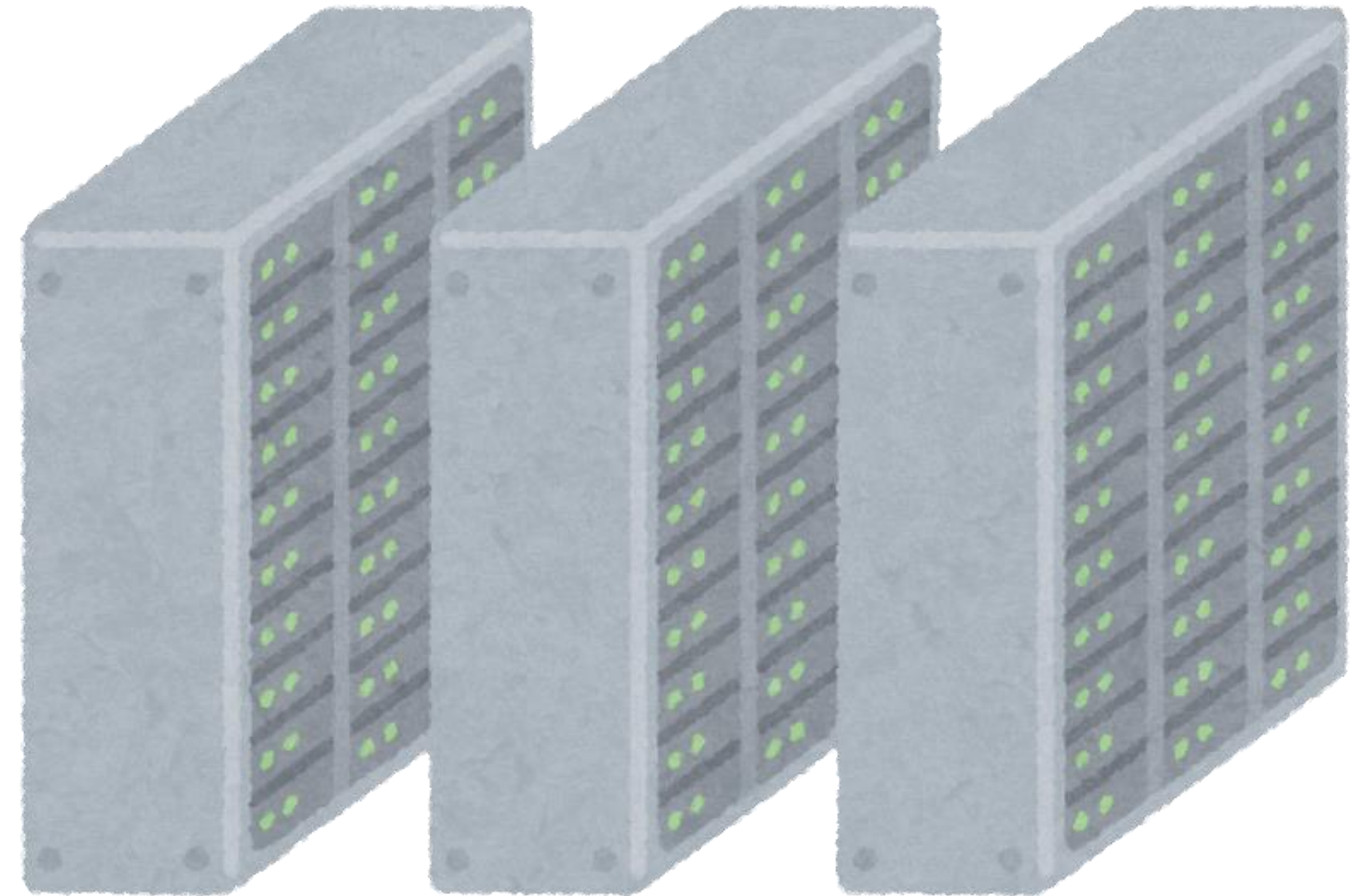
WHAT ARE THE FILESYSTEMS

- /Project, /Home and /Data
- Available by default on Nikhef desktops and servers.
- CIFS (smb, windows)
- Available on Nikhef network or via EDUvpn
- NFS (Only Nikhef managed machies.)
- Others
- DCACHE, CVMFS etc…

You and a Laptop

WHAT ARE THE FILESYSTEMS

- ## /Project
  - Share per Group/experiment
  - Important data shared with others
  - Has backup and Snapshots
  - Expensive storage for important data
  - High availability not high performance (still fast though)
  - Same storage as /Home

WHAT ARE THE FILESYSTEMS

- **/Home**
  - Per user
  - Your personal data.
  - Settings for your Windows or Linux systems at Nikhef
  - Readable by default!
  - Has backup and Snapshots
  - Expensive storage for important data
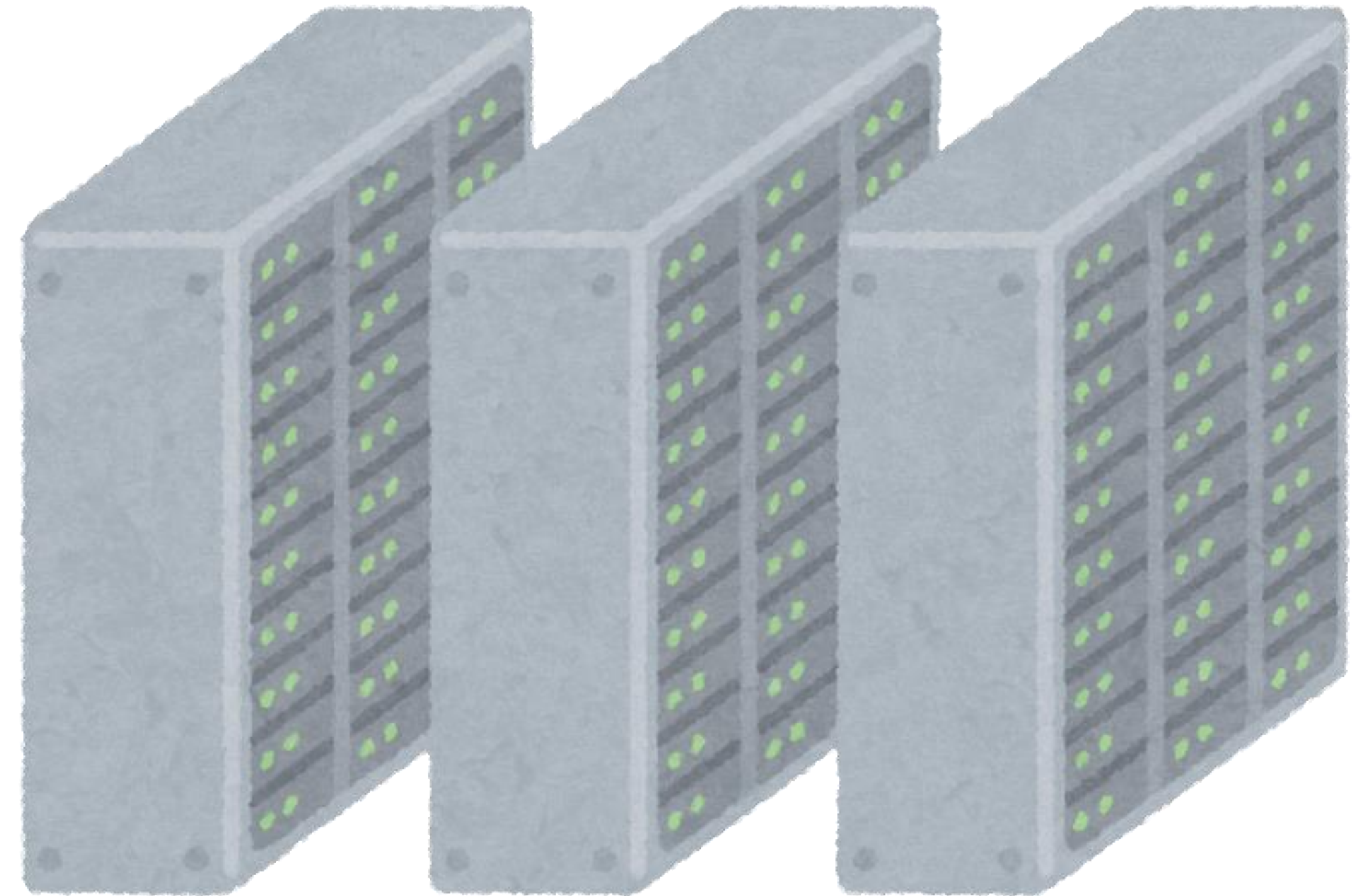 - High availability not high performance (still fast though)
 - Same storage as /Project
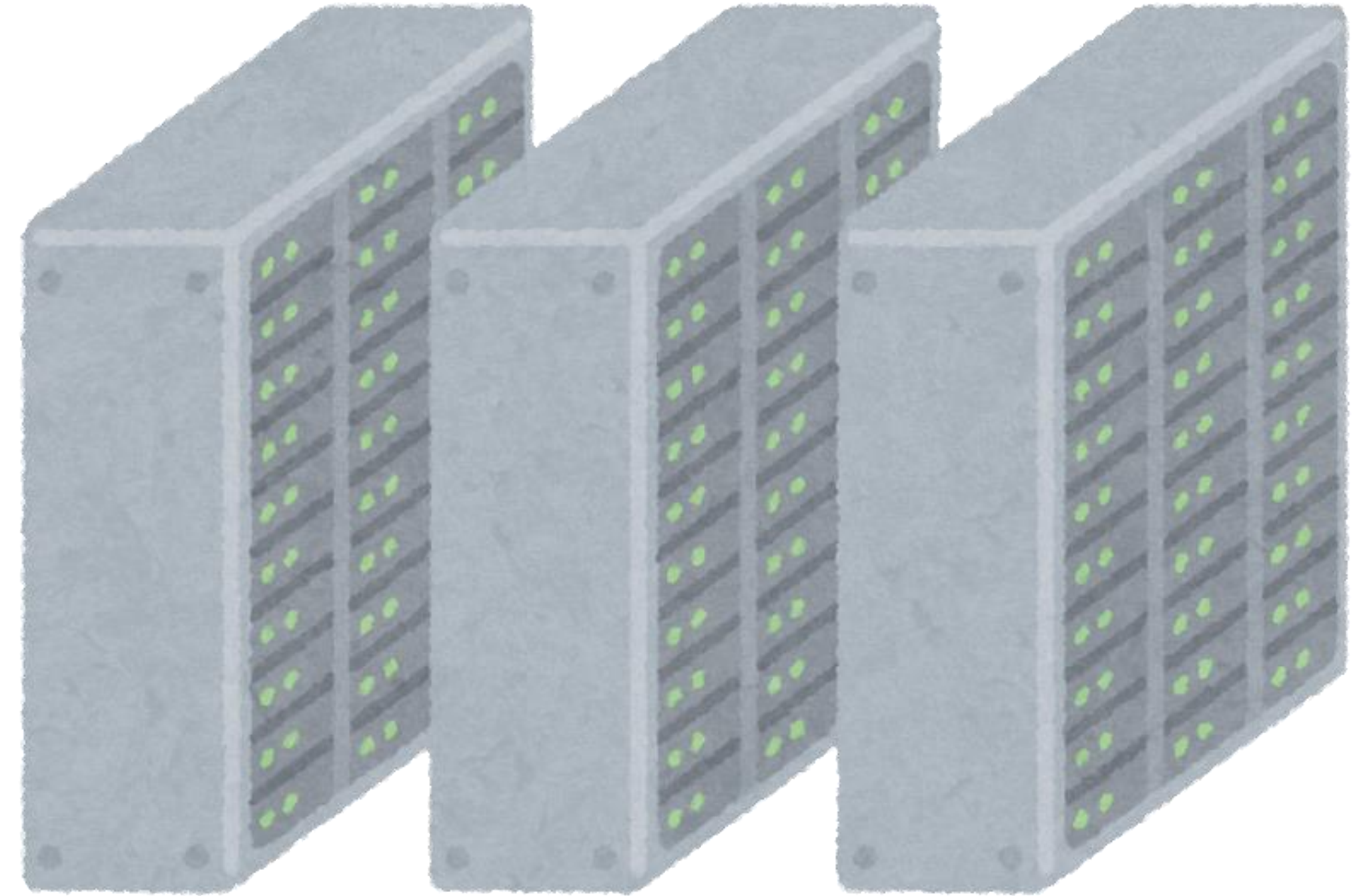
WHAT ARE THE FILESYSTEMS

- # /Data
  - Share per Group/experiment
  - Large amounts of data
  - **NO** backup or Snapshots!
  - **Do Not** store anything important!
  - High Volume not high performance (still fast though)

WHAT ARE THE FILESYSTEMS

- ## Do's and Don'ts
- On /project make sure people can read/remove if you leave.
- Be carefull with stoomboot and /project, /home and /data
- DO NOT store things that are important on /data!
- A symbolic link in you home to /data is dangerous!
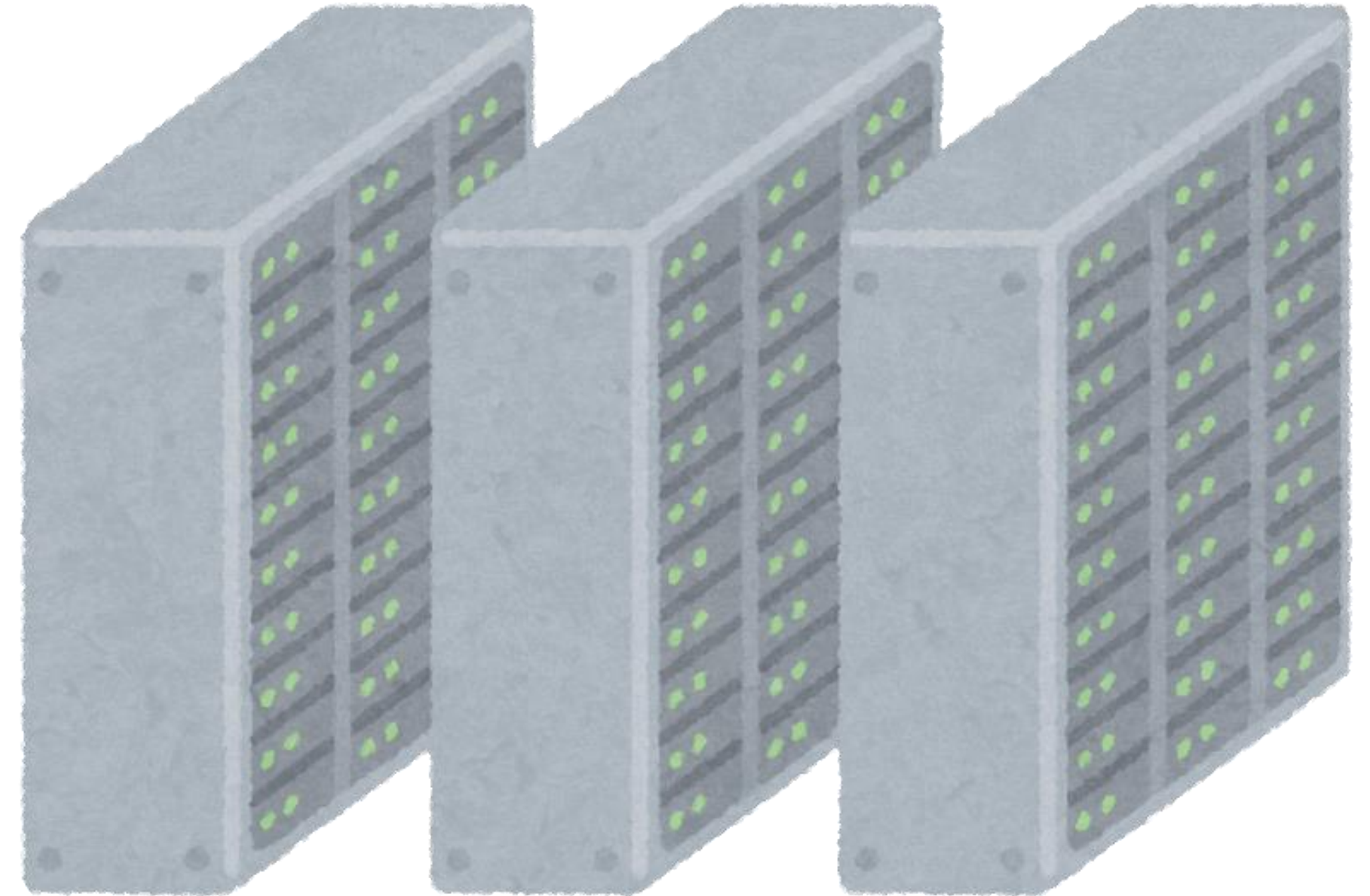
HOW TO MOUNT

- ## Windows
- \\ad.nikhef.nl\project
- \\ad.nikhef.nl\data
- \\ad.nikhef.nl\user\user\"username"
- User = username@nikhef.nl
- Use map network drive, add network location or just type in addressbar.

- ## MacOS
- Go -> connect to server
- smb://ad.nikhef.nl/project
- smb://ad.nikhef.nl/data
- smb://ad.nikhef.nl/user/user/"userna me"
- User = username@nikhef.nl

HOW TO MOUNT

- Linux
- https://wiki.nikhef.nl/ct/Mounting_shares
- sudo mount -t cifs -o username=<username> //ad.nikhef.nl/project /mnt/nikhef_share

BACK AND RESTORE

- /project and /home
- Snapshot daily for one week and weekly for one month.
- Windows: right mouse button previous versions
- Linux: .snapshot folder
- Backup (stored in Groningen)
- 6 months
- Ask the helpdesk (takes time)

BACKUP AND RESTORE

- Store important files in /project or /home
- Surfdrive has versions, but if you remove in one location it is removed everywhere.
- Laptop backup service. New version soon…
- Backup with time machine. Remember to store separate.

QUESTIONS?

You and a Laptop