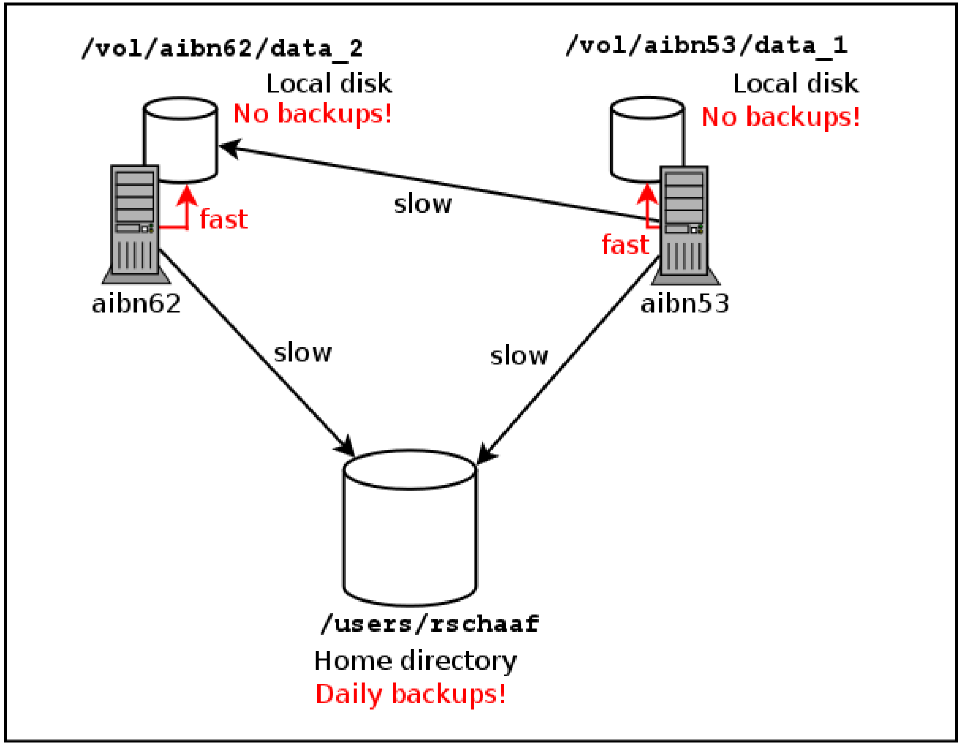
Anaconda:

but first, Where to install it? 🤔

- Bloated home (/users/username/) directory –> ☹️
- User directory quota limit of 25 GB !!
- */anaconda3* dir takes up space very quickly and grows !!
- users have local directories on the disks of their assigned PC
- e.g., /vol/aibn49/data1/adev
  In this directory, adev has full read and write permission.



Ref: https://intranet.astro.uni-bonn.de/de/computer-group-zrg/services/local-storage

ANACONDA.

- Anaconda Individual Edition :
  - free, easy-to-install package manager, environment manager, Python distribution
  - Anaconda is platform-agnostic: Windows, macOS, or ***Linux***.

- **Installation**
  - Suggested loc : */vol/computername/diskname/username/anaconda3/*
    1. *download the software with wget*
    2. *assign execution rights chmod +x*
    3. *execute and follow the instructions ./...sh*
    4. *change default install path*
    5. *load .bashrc to update PATH environment variable   source ~/.bashrc*
       conda config --set auto_activate_base False
    6. *update conda and verify everything.*
    7. *Create an enviroment*
  - *Show demo : capture-conda-install.log*
  - *Ref: https://docs.anaconda.com/anaconda/install/linux/*

Conda Basics

- Always *should* use Environments !!
- Creating envs: *conda create --name test-env1*
  conda create --name test-env2 python=2.7
  conda create --clone base --name test-env3

- *conda info --envs*
- *conda activate <envName>*
- *python --version ; which python*
- *conda list – list all packages with versions in activated Env*
- *conda search package_name*
- *conda install package_name=1.0 (fuzzy constraint)*
- *conda install package_name=0.7.7=py34_0 (exact)*
- *conda update package_name*
- *conda remove package_name*
- *To remove an environment:*
- *conda remove --name test-env1 --all*

- *Use Conda Cheat-Sheet :*
  https://docs.conda.io/projects/conda/en/4.6.0/_downloads/52a95608c49671267e40c689e0bc00ca/conda-cheatsheet.pdf

- *Show demo : capture-env-create.log*

Saving Environments / Re-Creating Environments

- Export a yml spec file, containing the detailed dependencies of your environment, and save this in a file called, *environment.yml*
- first activate and enter the environment to export

```
[test-env1 ] $ conda env export > environment.yml
```

- Used to re-create the environment later on another system:

```
conda env create -f environment.yml
```

- *Show demo : capture-env-export.log*
- *capture-env-restore.log*

- ref: https://medium.com/data-science-in-practice/saving-the-environment-with-anaconda-ad68e603d8c5

- https://conda.io/projects/conda/en/latest/user-guide/tasks/manage-environments.html

Deleting Anaconda 😨

- *Install the Anaconda-Clean package from Conda Prompt:*

  ```
  conda install anaconda-clean
  ```

- *Remove all Anaconda-related files and directories with a confirmation prompt before deleting each one:*

  ```
  anaconda-clean
  ```

- *Caution , double check and --> rm -rfi ~/anaconda3*

- *Removing Anaconda path from .bash_profile // .bashrc*

Finally !
ssh tunnelling

- Needed to run *jupyter-notebook* on any of the AIfA servers
- *Double port forwarding using ssh*

```
$ conda activate your_env
cd your_project_dir
username@arc10:$ jupyter-notebook --no-browser --port=YYYY
username@aibnPC:$ ssh -NfL localhost:XXXX:localhost:YYYY
```

- In your favourite browser in aibnPC : *localhost:XXXX/*