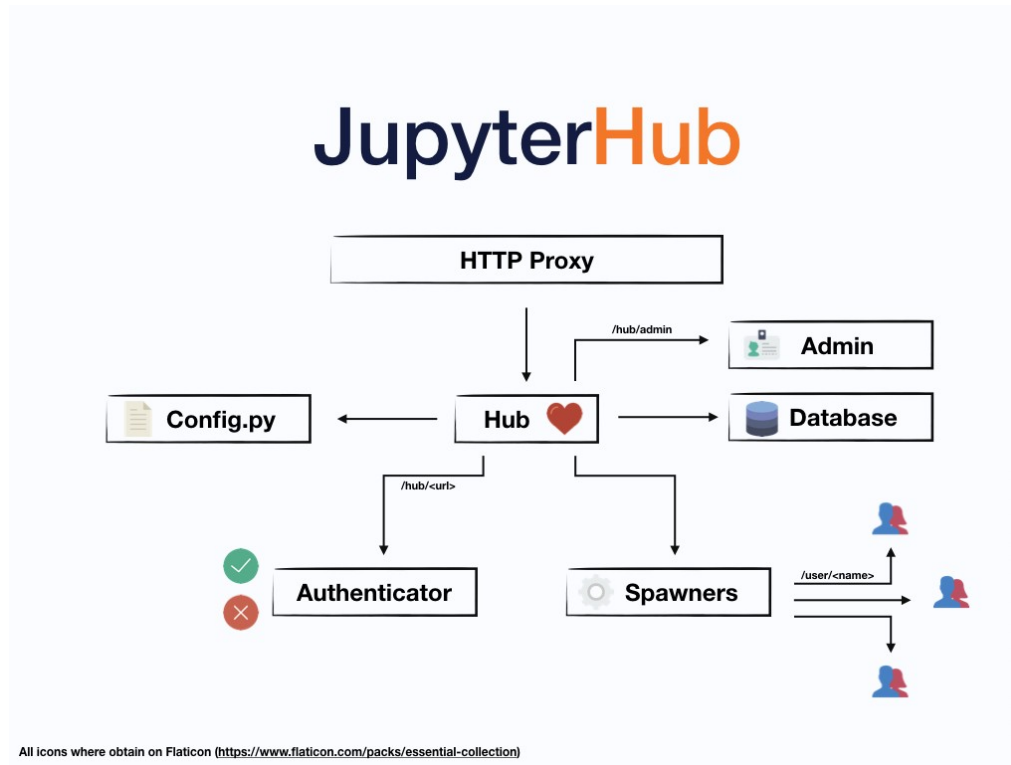


Jupyter Notebooks on the NAF

Jupyterhub

Schematic Architecture



Jupyterhub on a DESY VM
(accessible from the web)



Notebook Server on NAF

Jupyter on the NAF

Architecture

Hub

- Webinterface
- Does the Proxying to Notebooks
- Login of Users
- Database of logged in user
- Runs on a VM in the DESY DMZ
- <https://naf-jhub.desy.de/>

Notebook Server

- Runs the Python Kernel
- Calculations on NAF worker Node
- Access to Data, Mounts etc.
- Same well-known environment of NAF machines
- 1 extra Hyperthread on Machine for jupyter Jobs
- 2bg Ram *soft* limit
- 20h runtime “start your notebook once a day”
- Feedback from Users: enough power?

JupyterHub

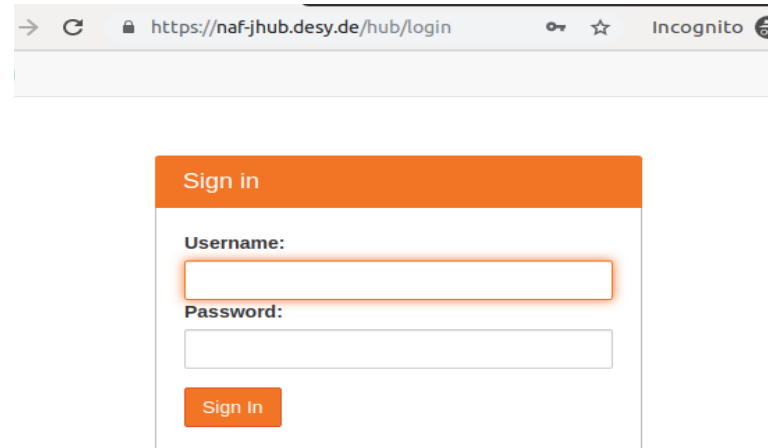
Login, Job Options

Login

- Users use DESY credentials

Job Options

- Users chose which Group they are part of
 - For condor job options
 - Home dir in DUST
- After condor job starts Users see \$HOME

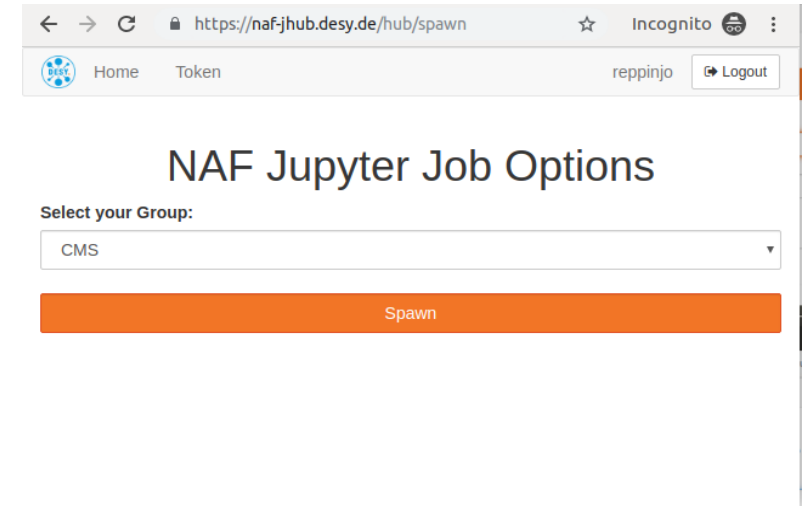


Sign in

Username:

Password:

Sign In

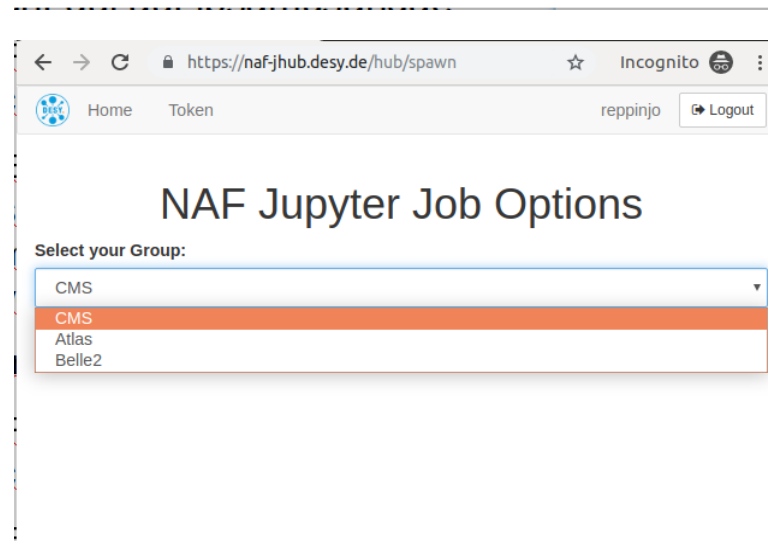


NAF Jupyter Job Options

Select your Group:

CMS

Spawn



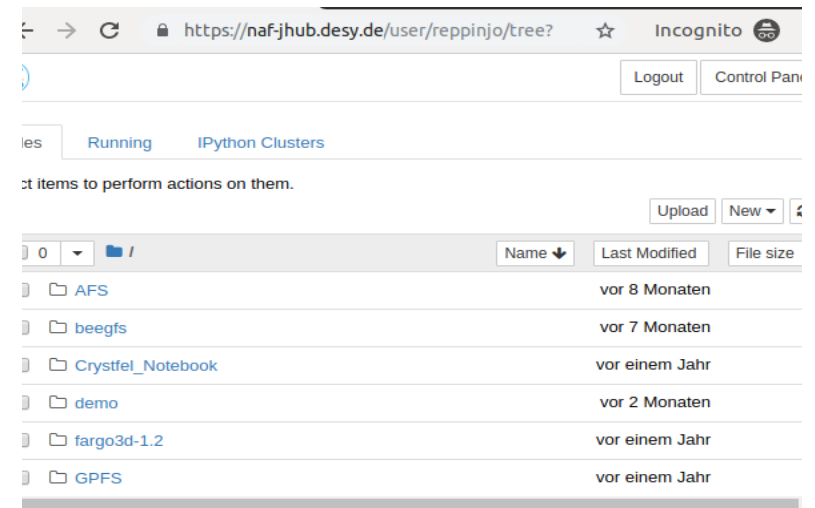
NAF Jupyter Job Options

Select your Group:

CMS

Atlas

Belle2



Logout Control Panel

Running IPython Clusters

0 /

Name	Last Modified	File size
AFS	vor 8 Monaten	
beegfs	vor 7 Monaten	
Crystfel_Notebook	vor einem Jahr	
demo	vor 2 Monaten	
fargo3d-1.2	vor einem Jahr	
GPFS	vor einem Jahr	

Jupyter @ NAF

Timeline, AFS

Timeline

- Testing in June '19
- If performance / job response time of BIRD sufficient: release to Users

Homedir in DUST

- AFS currently not supported for Jupyter Home
- From Notebook / Terminal AFS Token can be obtained
 - Kinit / aklog
 - No automatic token renewal, manual process