

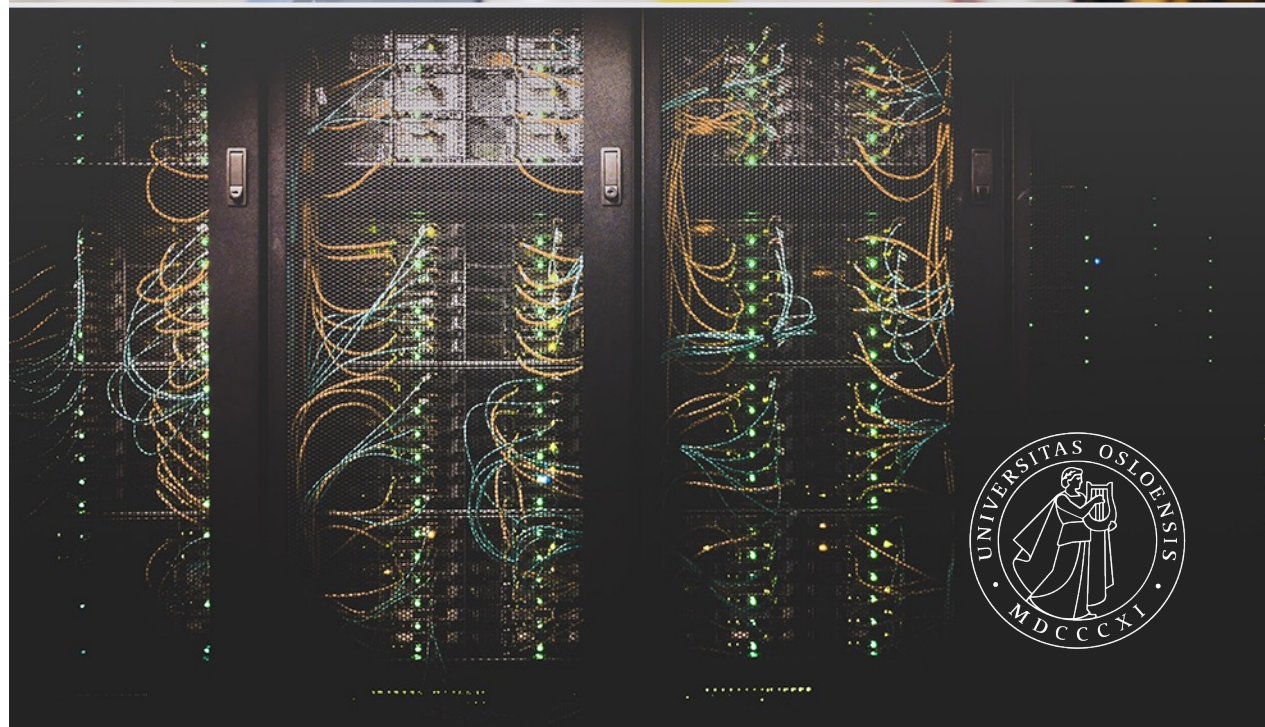
UNIVERSITETET I OSLO

UNIVERSITETETS SENTER FOR INFORMASJONSTEKNOLOGI



Gard Thomassen, PhD
Underdirektør
ITF/USIT

22/8-22



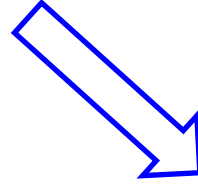
UiO leverer unik infrastruktur til viktig europeisk forskningssamarbeid

EU-prosjektet EXCITE er et teknologitungt fellesskap for elektron- og røntgenmikroskopi som trenger bedre utnyttelse og deling av egen teknologisk infrastruktur. Og takket være UiO, kan forskerne behandle selv de tyngste bilder og datasett fra laptopen hjemme. Noe som er spesielt anvendelig nå under koronapandemien.



Fra v.: Magnus Hovland (USIT/UiO), Luca Menegon (GEO, UiO), Liebert Parrairas Nogueira (OD/UiO), Gard Thomassen (USIT/UiO) og Håvard Jostein Haugen (OD/UiO). Foto: Ingar Storfjell, OD/UiO

Educloud Research Vision



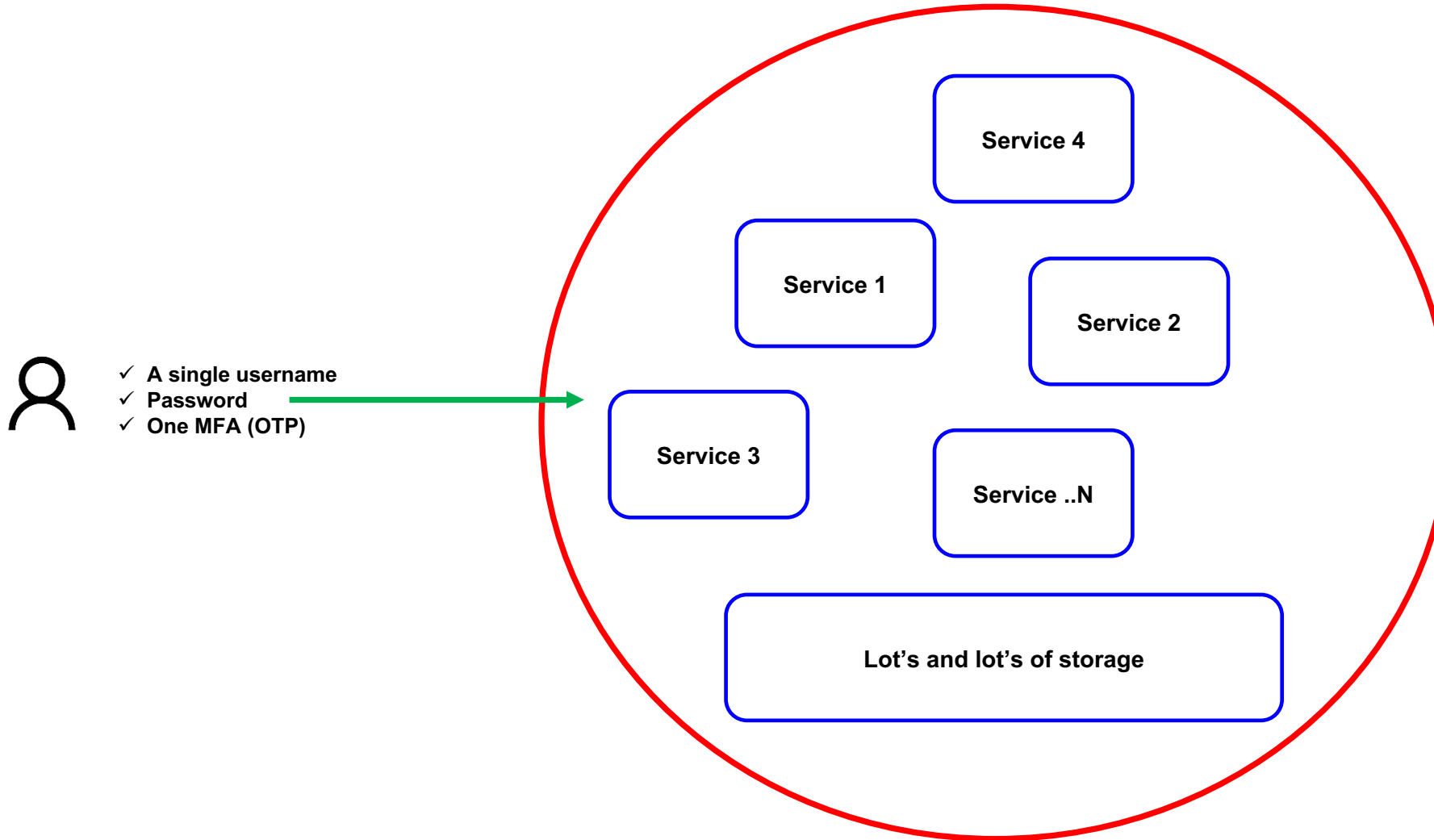
Guidelines and requirements

“Collaborate securely with researchers, on one single platform, across borders.”

- UiO owned and operated (in USIT datacenters)
- Data-centric model (all services can, if permitted, access all data)
- Secure access (minimum two-factors 😊)
- Self Service (portal enabling PIs and users)
- Scalable (we hope, the future is not yet known)
- **We can provide advanced user support!**

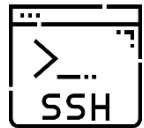


Secure access to multiple services

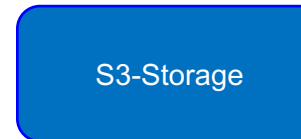
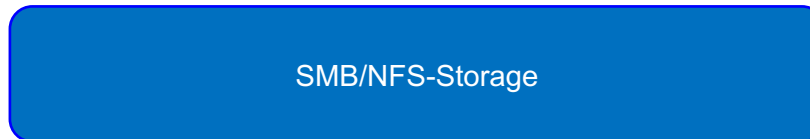
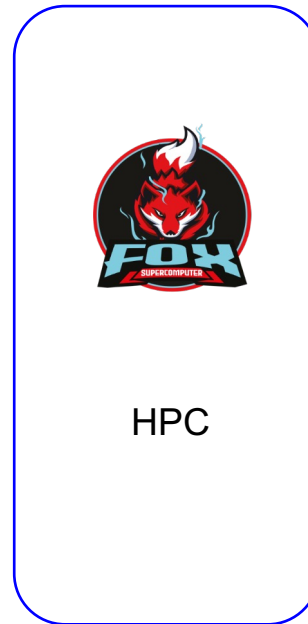
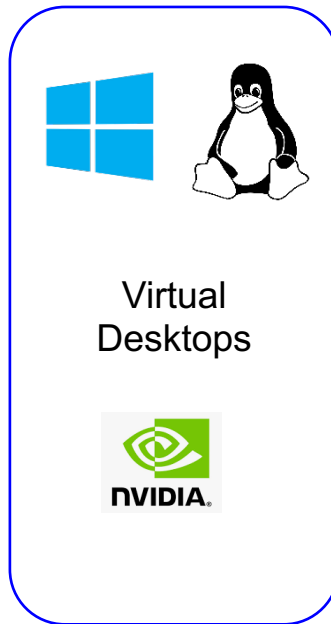


Educloud Research - Services

User@all-projects



On-Prem data-centric



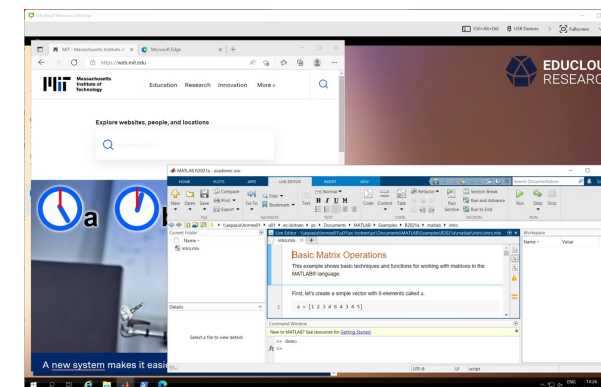
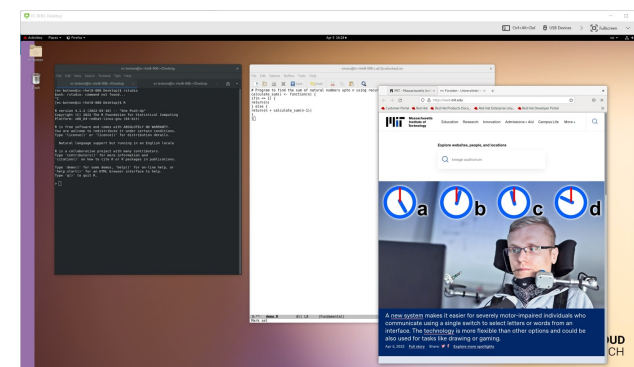
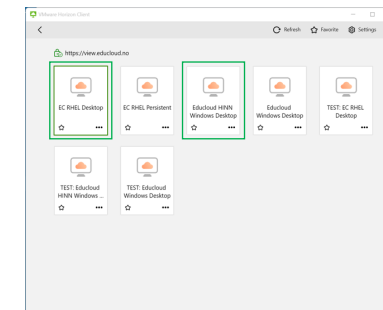
«External» resources



Virtual Desktop Infrastructure (VDI)

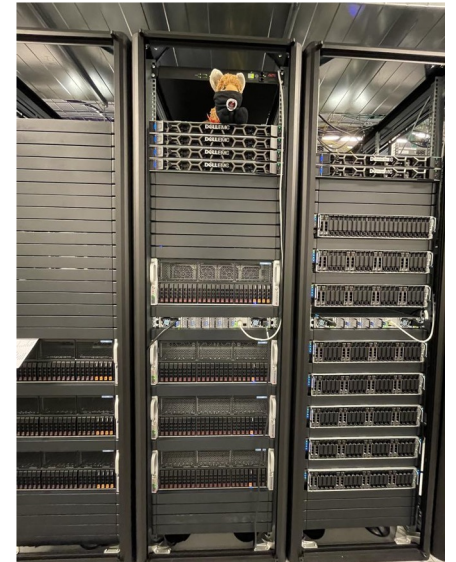
(A managed desktop that is on the Internet)

- ✓ Similar to the setup at UiO (Instant Clones and Persistent)
- ✓ Windows 2019 (will be Windows Server 2022)
- ✓ RedHat8 (working on Ubuntu)
- ✓ VMware Horizon to distribute the desktop
- ✓ Highly customizable
- ✓ For RedHat8 full integration with FOX application stack



FOX (HPC)

- ✓ Easy access
- ✓ Free for UiO (compute)
- ✓ Interactive nodes and job-based nodes (Slurm)
- ✓ 3 AI nodes (4x nvidia A100 per node)
- ✓ Infiniband
- ✓ Buy your own node like NCMM and IFI if needed

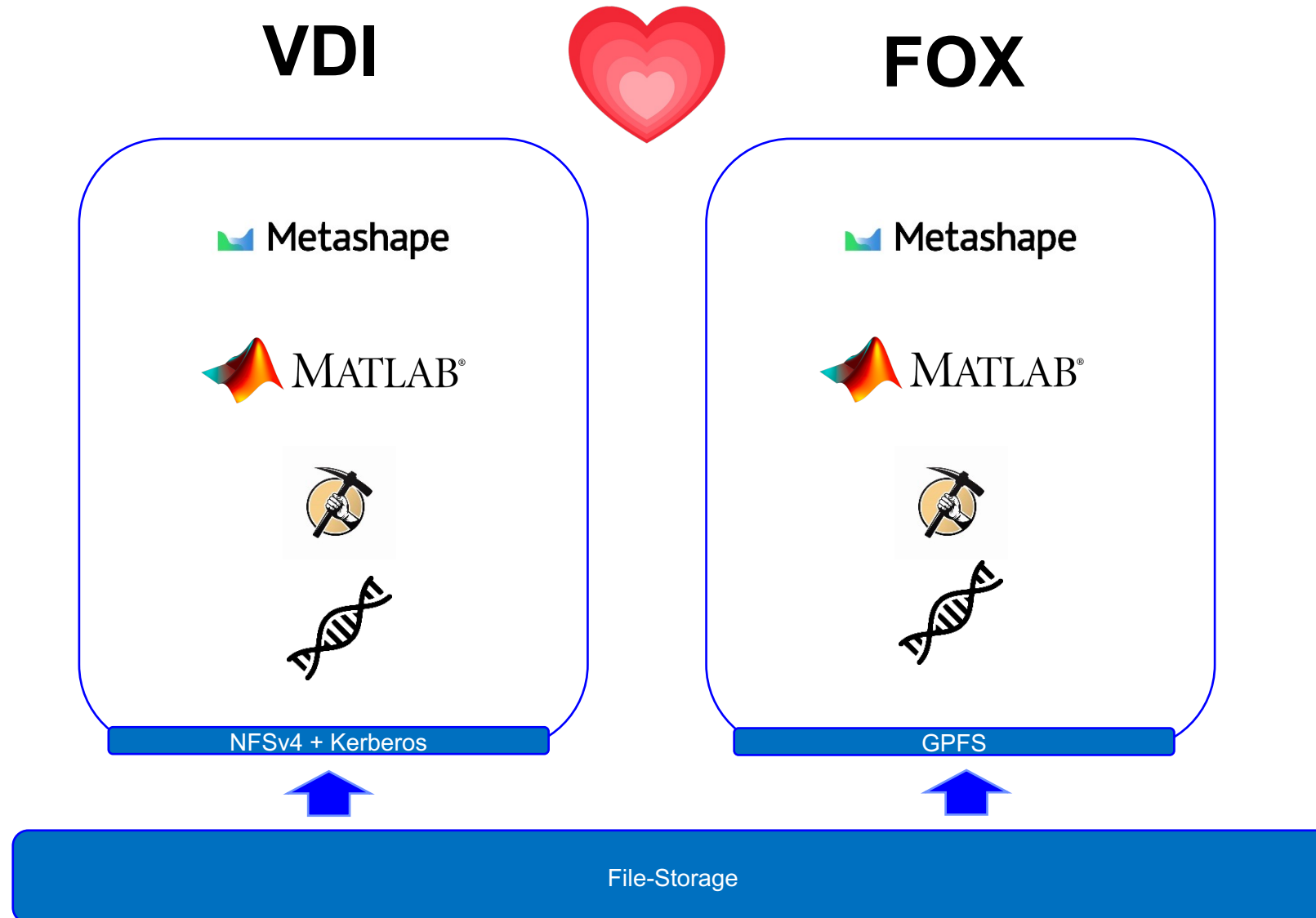


```
ec-botnen@login-3/projects/ve Welcome to
                                F O X
                                the HPC cluster in EduCloud.
Please see the documentation for how to use Fox:
https://www.uio.no/english/services/it/research/platforms/edu-research/help/docs/fox/index.md
In addition to the compute nodes, Fox has a couple of machines for interactive use:
https://www.uio.no/english/services/it/research/platforms/edu-research/help/docs/fox/interactive-machines.md
Current resource situation on the interactive machines, updated 2022-04-05 14:25:01:

memory (GiB)      load
name  total free  1-min 5-min 15-min total used %used
int-1 1807 980  0.00 0.00 0.00 5959 732 13%
int-2 1807 990  0.00 0.02 0.00 5959 636 11%
int-3 1807 990  0.00 0.01 0.00 5959 41 1%
int-4 1807 990  0.00 0.01 0.00 5959 41 1%

We encourage you to choose the least busy machine.
[ec-botnen@login-3 ~]$ cd /projects/ec02/
[ec-botnen@login-3 ec02]$ ll
total 0
drwxr-xr-x 2 ec-silen ec01-member-group 4096 Jan 18 14:17 admin
drwxr-xr-x 2 ec-botnen ec01-member-group 4096 Apr 5 14:25 botnen
drwxr-xr-x 4 ec-filip@uio ec01-member-group 4096 Mar 18 13:12 file-report
drwxr-xr-x 7 ec-haroldg ec-haroldg-group 4096 May 4 2021 haroldg
drwxr-xr-x 2 ec-jonhni ec01-member-group 4096 Mar 9 14:54 jonhni
[ec-botnen@login-3 ec02]$
[ec-botnen@login-3 ec02]$
[ec-botnen@login-3 ec02]$
```

VDI and HPC Integration



Getting started

Self service portal : <https://research.educloud.no/>

Main page : <https://www.uio.no/english/services/it/research/platforms/edu-research/>

- ✓ Send your browser to <https://research.educloud.no/>
- ✓ Apply for a project, get an “ec”-project number
- ✓ Spread the word and get project members

