GRS Datastorage

Every system has a breaking point
Be careful…

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What do we need to store?

- Simulation results (DALES etc.)
- Radar data
- Satellite data
- Cabauw measurements
- Versioned documents (source code, texts)
- Research data used in publications
- ….

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Available storage

- Local harddrives
- Central Windows environment
- Cluster storage in datacenter
- Local servers in VRLAB network
- Cloud storage
- Version controlled storage

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Local hard drives

- Unreliable, fail without notification
- Slow
- Only available on local machine
- OK for transporting data to other locations

Don't use as single solution for any work that is worth doing!

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Central Environment

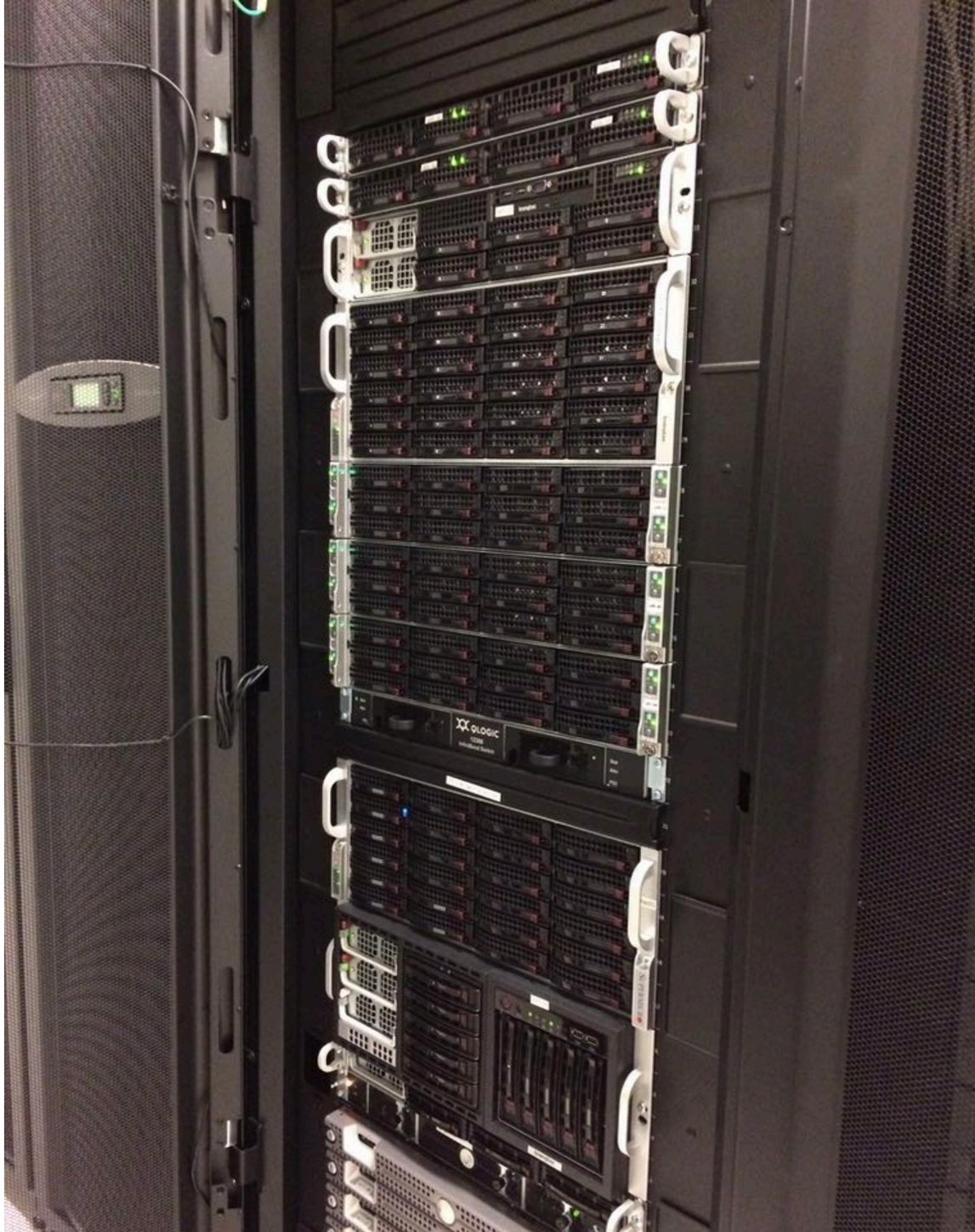
- Build with 'office-like' tasks in mind
- Slow / high latency (No HPC support).
- Usually 10 MB/s connection to workstation
- Reliable (redundancy + backups)
- Sufficient storage for relatively small data sets

Use for office work and lightweight tasks that can be performed on a single workstation

Cluster storage

- 250 TB backed-up storage
- High performance. Peaks up to 4GB/s, sustained 1 GB/s
- Only available on compute nodes in the HPC03 cluster

Suitable for traditional HPC batch processing with large data sets



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Local VRLab servers

- Due to locality extremely low latency
- High throughput. 1Gb/s to Linux and Mac workstations on same vlan
- 40 Gb/s from storage to connected compute power (both CPU cores and GPU's)
- Approx. 150 TB backed-up storage
- Connected visualisation facility in physical lab

Suitable for interactive and batch workflows like LES runs, Deep Learning, Visualisations, Software development…

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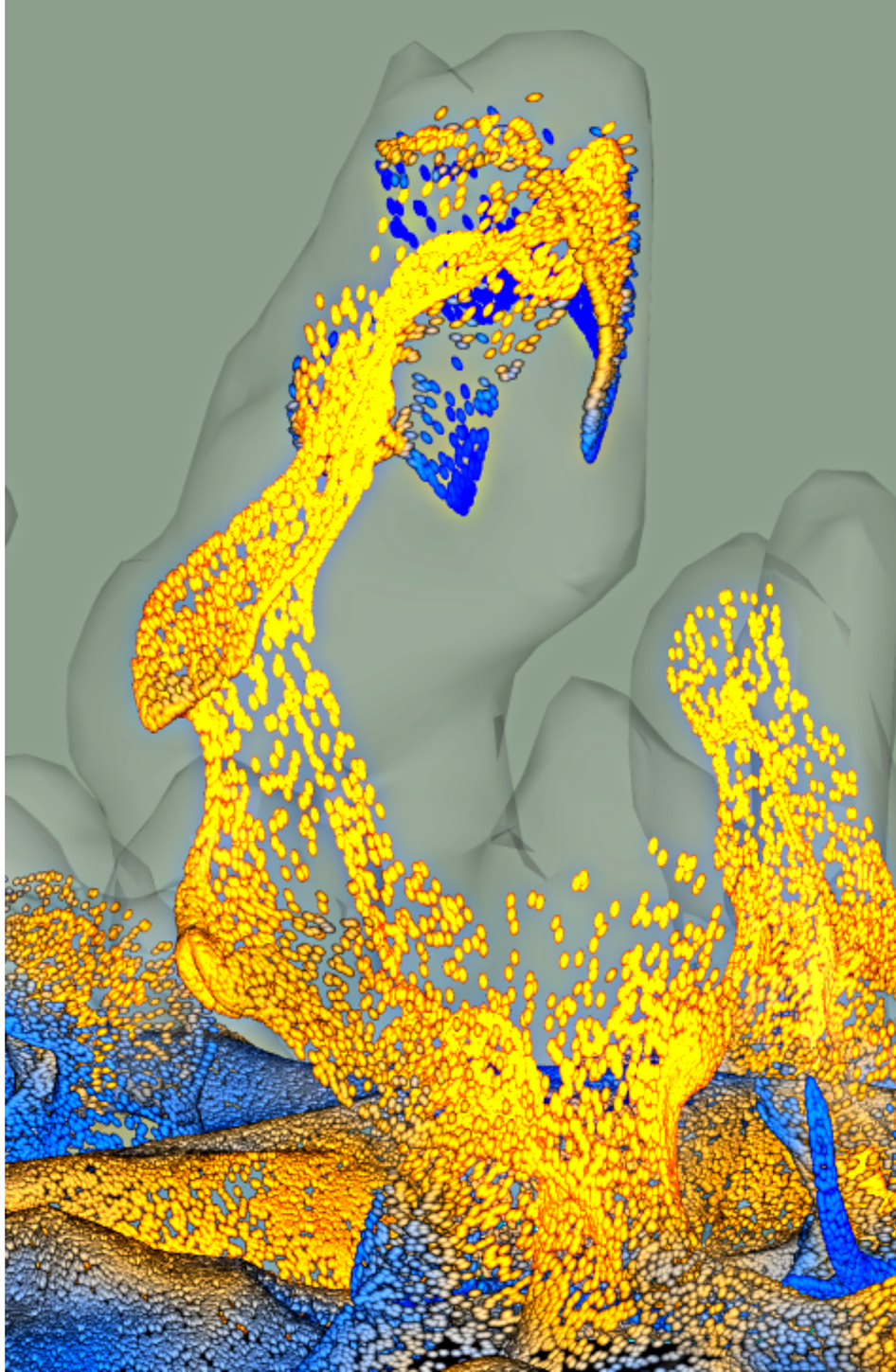

Cloud Storage

- Local server: No concerns of sharing data with third parties
- Open to all at GRS
- https://wolkje.vrlab.tudelft.nl

For syncing data between devices and sharing data with anyone in the world
IT IS NOT A BACKUP!

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Versioned files

- Source code, thesis, papers, ….
- Local server at https://git.vrlab.tudelft.nl
  Central server at https://……tudelft.nl
- Also possible in home folder without server
- Free book: Pro Git at
  https://git-scm.com/book/en/v2

Use for storing source code and other versioned texts.

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Research data

- 4TU Data center
- DOI assigned (similar to ISBN for books)
- Long term storage of research data
- http://researchdata.4tu.nl/home/

Use for data that is associated with scientific publications

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4TU. CENTRE FOR RESEARCH DATA