



Status and Directions



INDIGO - DataCloud



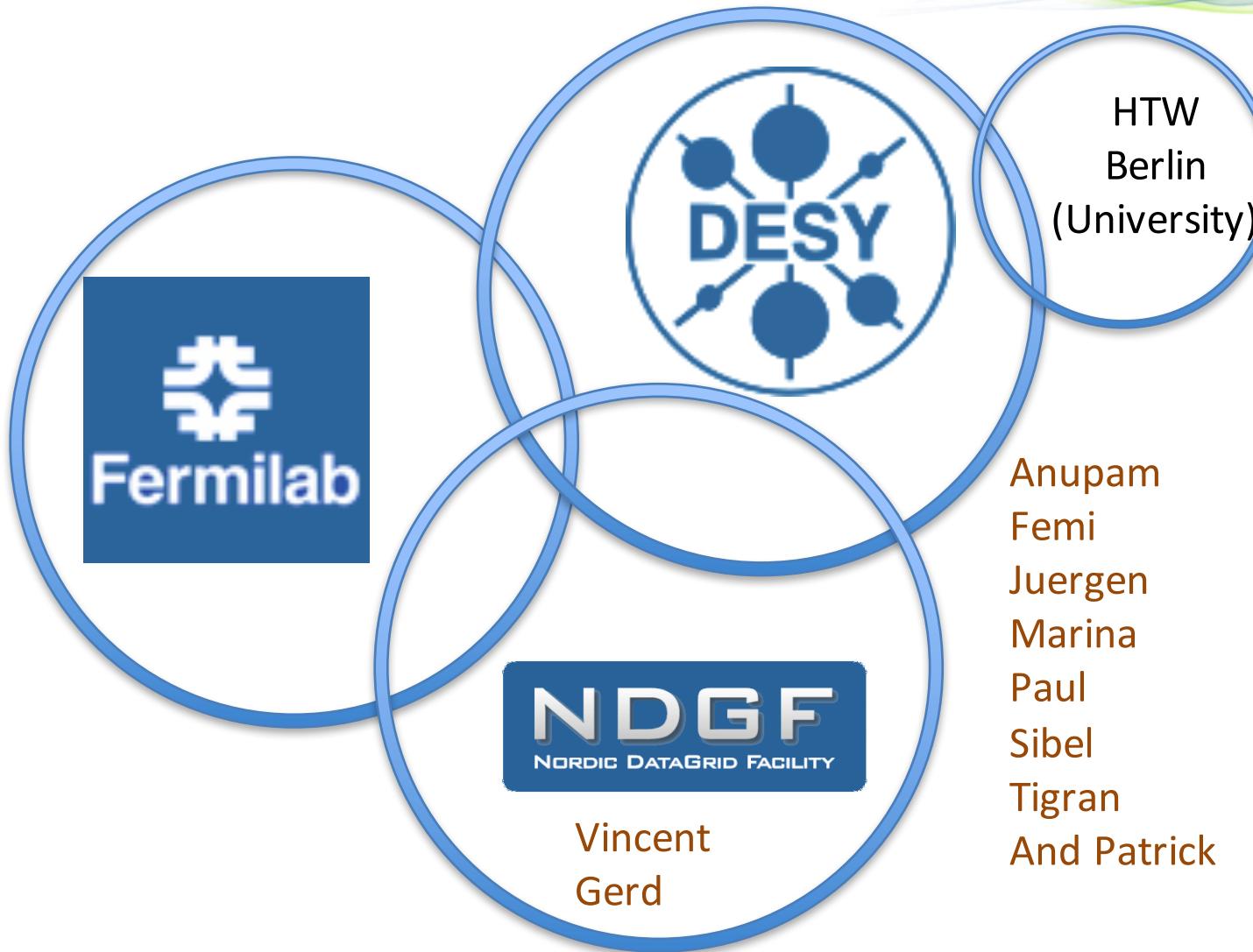
Patrick Fuhrmann

On behalf of the project team

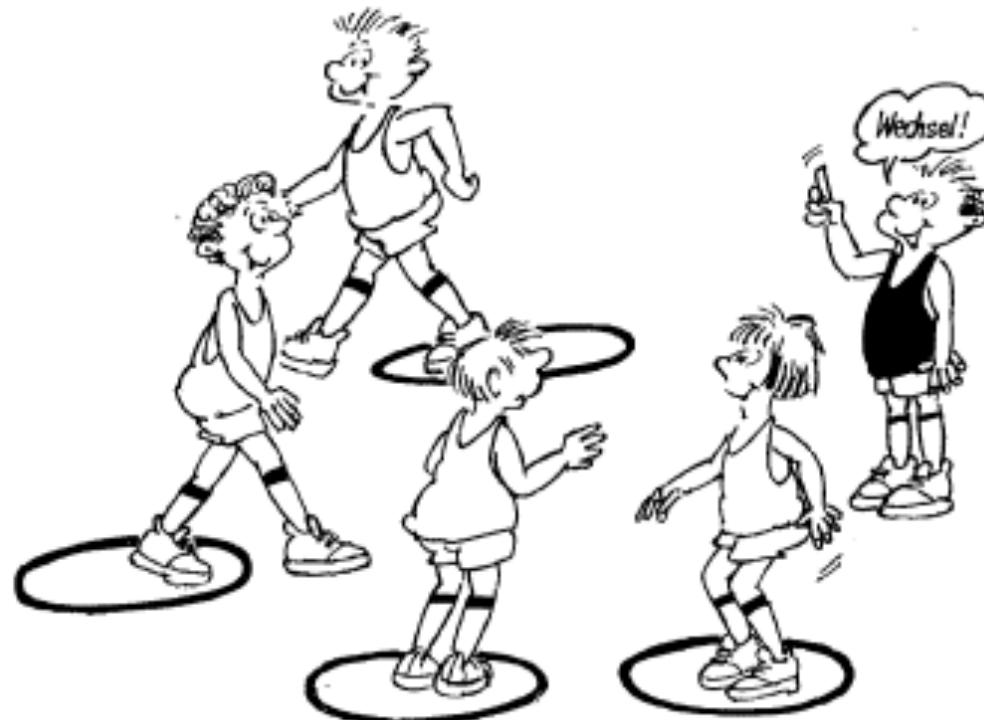


Reminder : The collaboration

Dmitry
AI



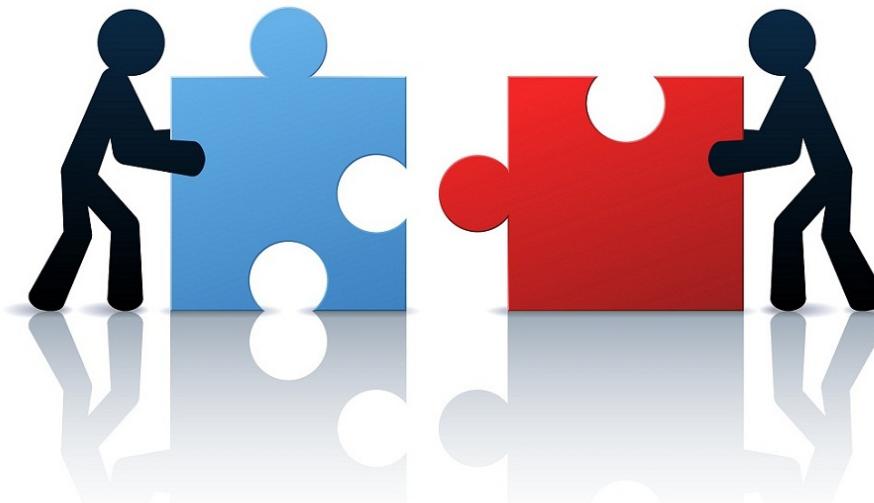
News on the team



- Sibel replacing Christian
- Vincent replacing Gerd at NDGF
- Gerd remains on a small% basis for awhile.
- Anupam (AAI) got a real job.
- Hiring N.A. end of this week.



Collaborations and projects





EU H2020 Projects

- INDIGO DataCloud
 - will finish end of Sep 17
 - Achievements
 - 3 people have been working for you payed by EU.
 - Implementation of AAI and QoS in dCache.
- EOSC Pilot
 - Jan 17' until End of 18'
 - Goal : Getting scientific communities into the cloud

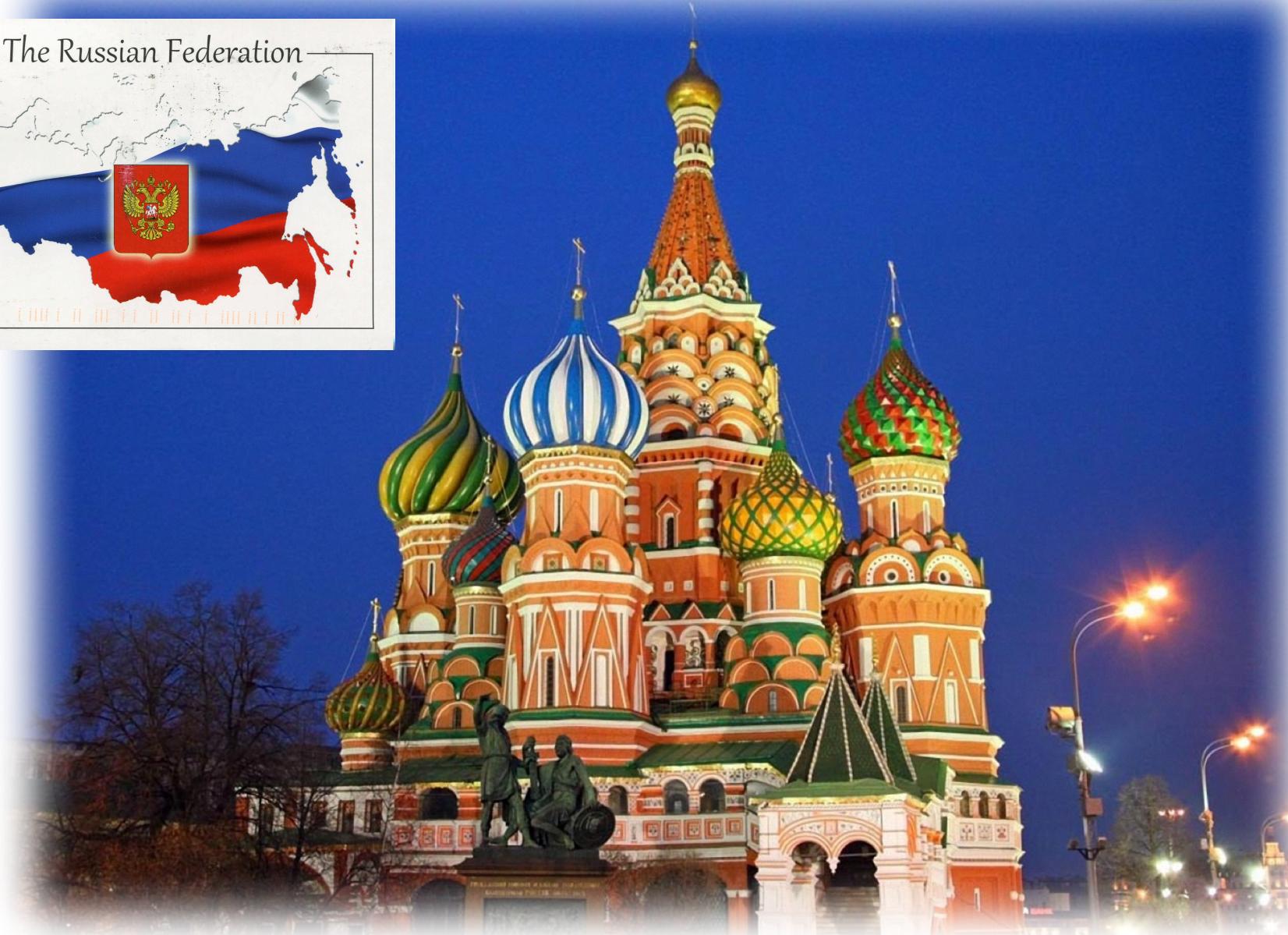
- New Proposal in INFRA 21
 - eXtreme Data Cloud (XDC) with CNAF and CERN
 - The eXtreme DataCloud (XDC) project will develop scalable technologies for federating storage resources and managing data in highly distributed computing environments.
 - Possible outcome is an architecture to have heterogeneous storage elements been federated.

Project with the Russian Federation

dCache.org



The Russian Federation



- Joint Research Project (Germany - Russia)
 - Title: “Federated data prediction framework”
 - Russia (NRC “Kurchatov Institute”, JINR in Dubna, PNPI (Gatchina))
 - Germany (DESY (dCache.org), LMU (Belle II), HTW Berlin)
 - 3 Years with about 3 FTE per country.
- WLCG Building a large scale federation
 - Project with NRC “KI” and JINR (Dubna)
 - Alexei Klimentov, Andrey Zarochentsev and Andrey Kirianov
 - Report by Andrey
 - Reparation : FUSE for dCache via the xroot protocol
 - Implemented by Ivan Kadocnikov (visited DESY for 4 weeks)

- Our Student : Tobias Wochinger:
 - Bachelor finished.
 - File Synchronisation between WebDAV Endpoints using FTS3
 - Master thesis planned.
 - On smart caching using Deep Learning
- dCache.org will be teaching in Berlin
 - End of July at HTW Berlin.

Strategic directions



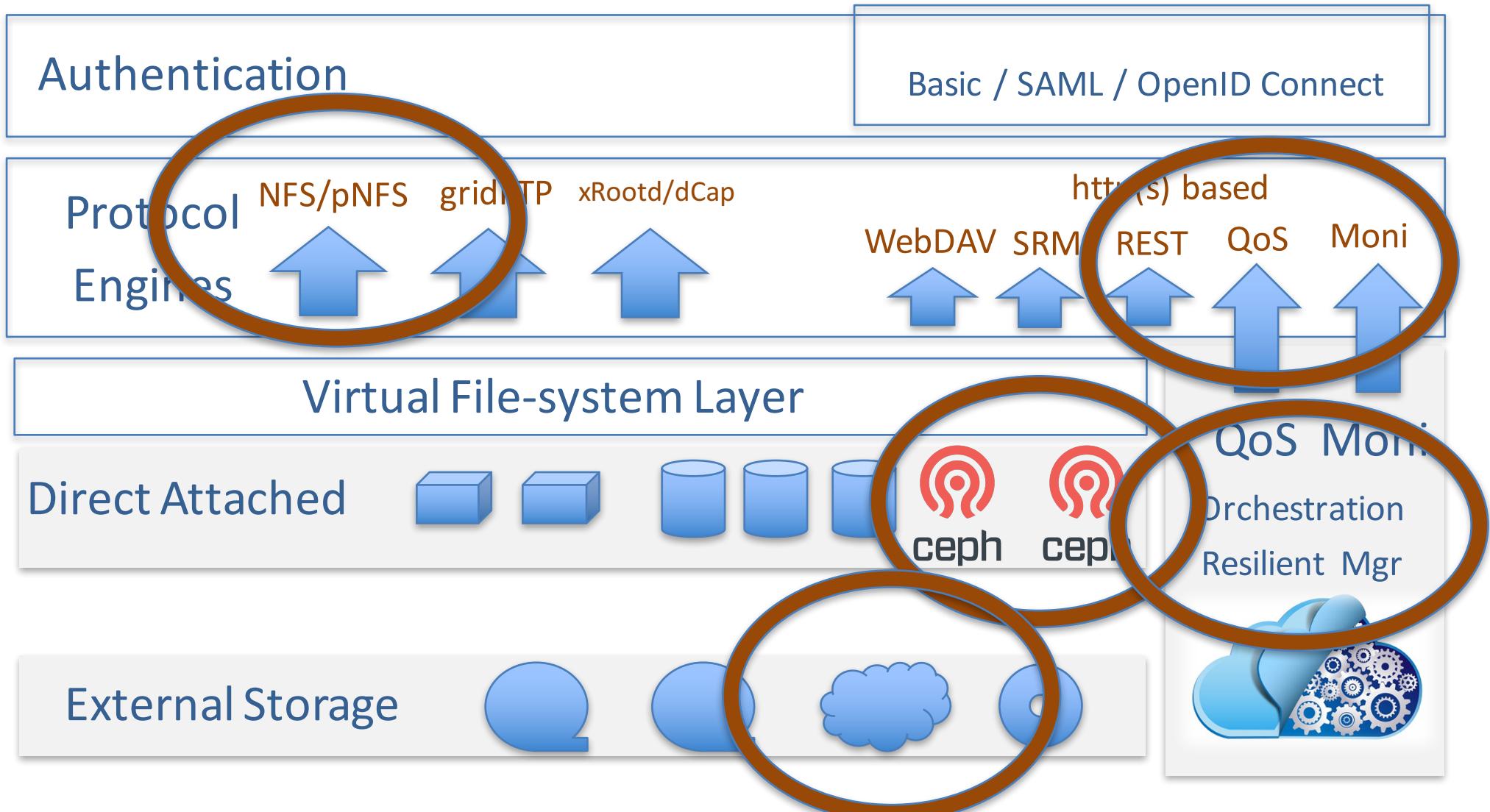
- Utilizing professional (OpenSource) technologies
 - Providing ‘cloud like’ storage (e.g. ownCloud)
 - ‘sync and share’
 - Web Authentication (e.g. OpenID Connect)
 - Support for portals (delegation, e.g. Macaroons)
 - Underlying storage (e.g. CEPH)
 - Access through SAMBA
- Providing mechanisms for ‘User Selectable’ storage quality. (QoS)
 - dCache historically has the ability to support various media.
 - Now we are consolidating the orchestration.

- Investing in Federations
 - WLCG, e.g. NRC “KI” project
 - Supporting Onedata ® for ‘long tail of science’
- Smart Caching (local and in federations)
 - EU proposal in INFRA21 with CNAF and CERN
 - Joint Research between Germany and Russia on using Deep Learning

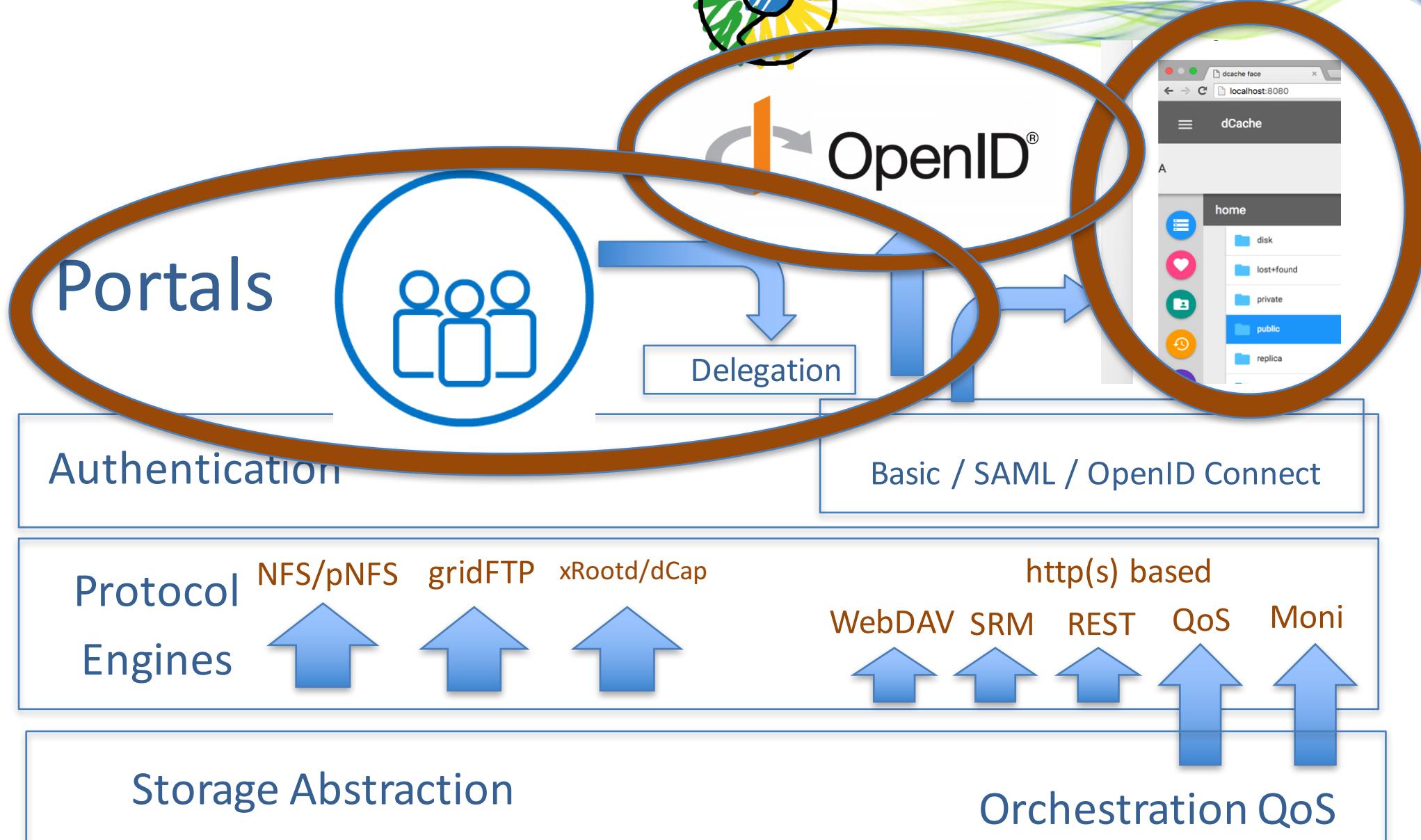
Topics for the workshop



You'll learn about ...



You'll learn about ...



And not to forget.. Presentations about

- dCache HA and rolling upgrades
 - Juergen
 - Mattias
- NRC “KI” federation project
 - Andrey
- FUSE and SAMBA for dCache
 - Tigran
- The new Book
 - Sibel

Two observations



The ‘facebook’ effect

- Binding people to products by inventing ‘standards’
- Started with iRods
- Xrootd at least published the protocol, although implementing was a big hassle
- Onedata (federation based entirely on proprietary protocols)
 - Here we have to run their software. Protocol is not open.
- !!!! Now Globus is following. (See Tigran’s remarks)

The ‘we need the money’ effect

- We need to jump from EU to EU project.
- While EMI was still very beneficial in terms of money AND content
- INDIGO-DataCloud already had to be stretched quite a bit to be of advantage in terms of content.
- The new project ‘EOCS pilot’ and other proposals are of questionable benefit.
- However we need to participate because we need the money.

However,

no-one ever said that life would be
easy

So



Enjoy





The END

further reading
www.dCache.org