

## Status and Directions

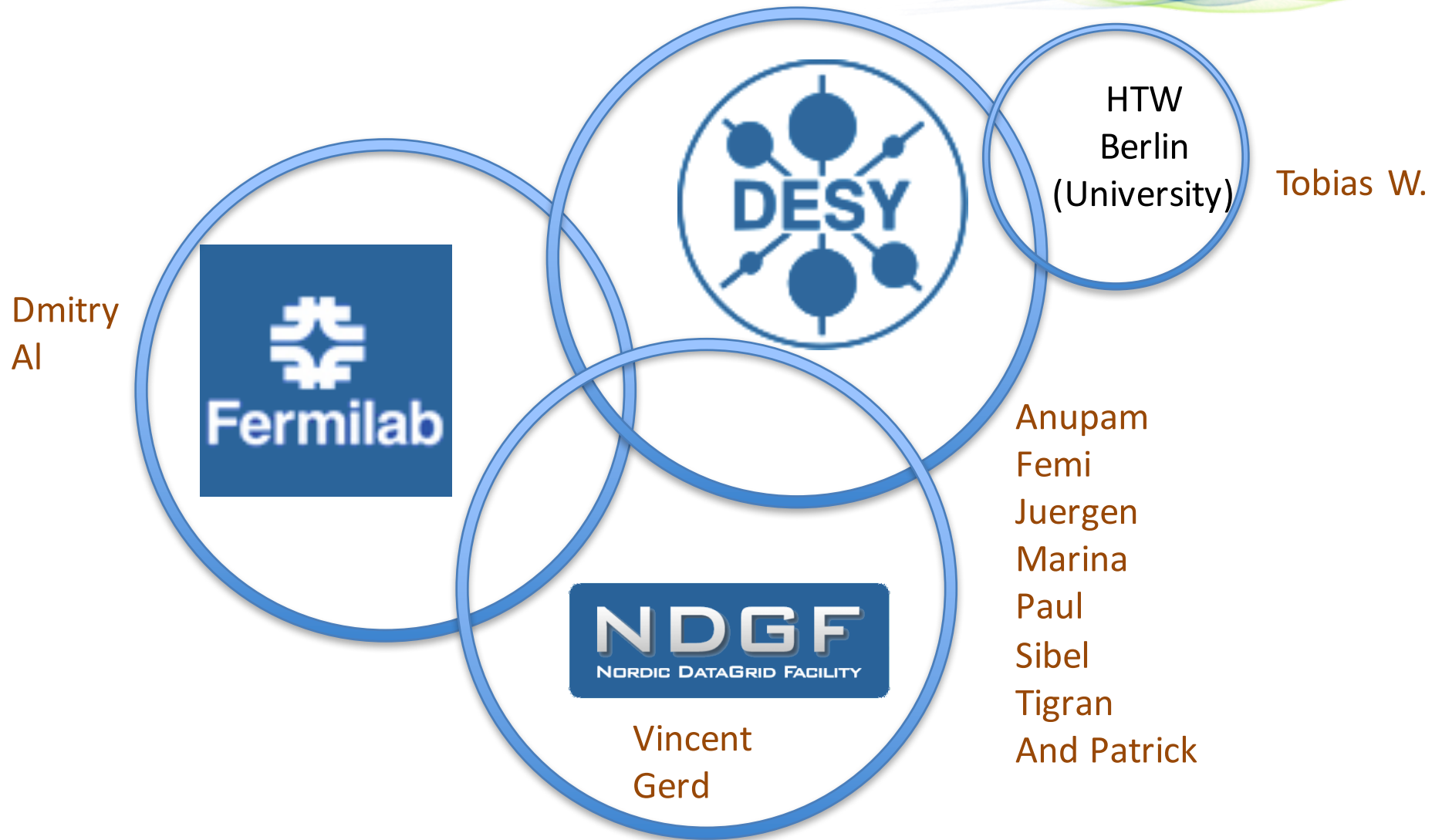


Patrick Fuhrmann

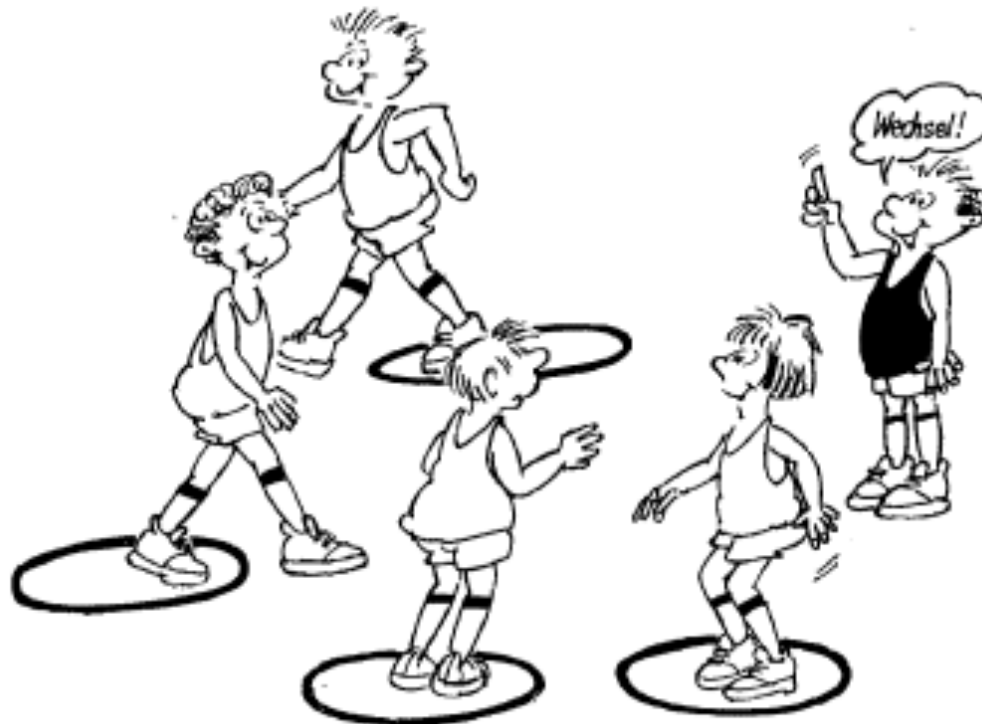
On behave of the project team



# Reminder : The collaboration

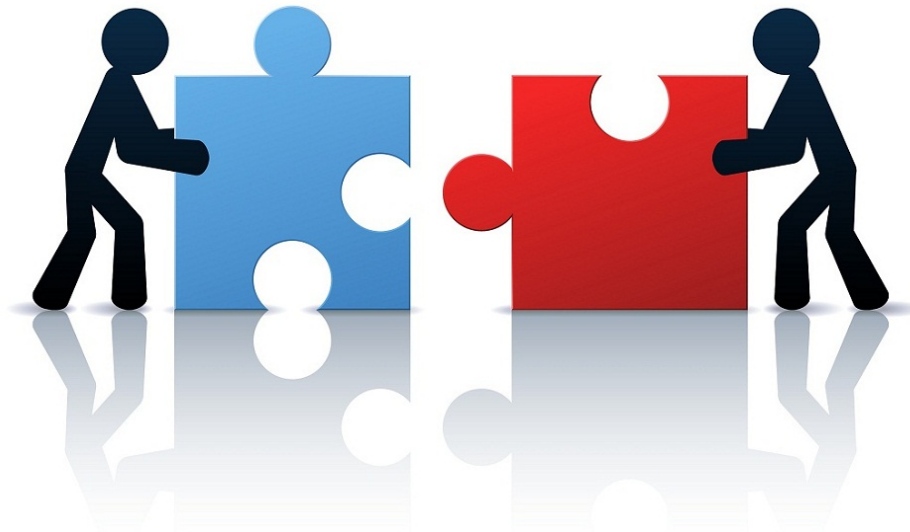


## News on the team



- 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.





- 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 Kadochnikov (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



## Strategic directions

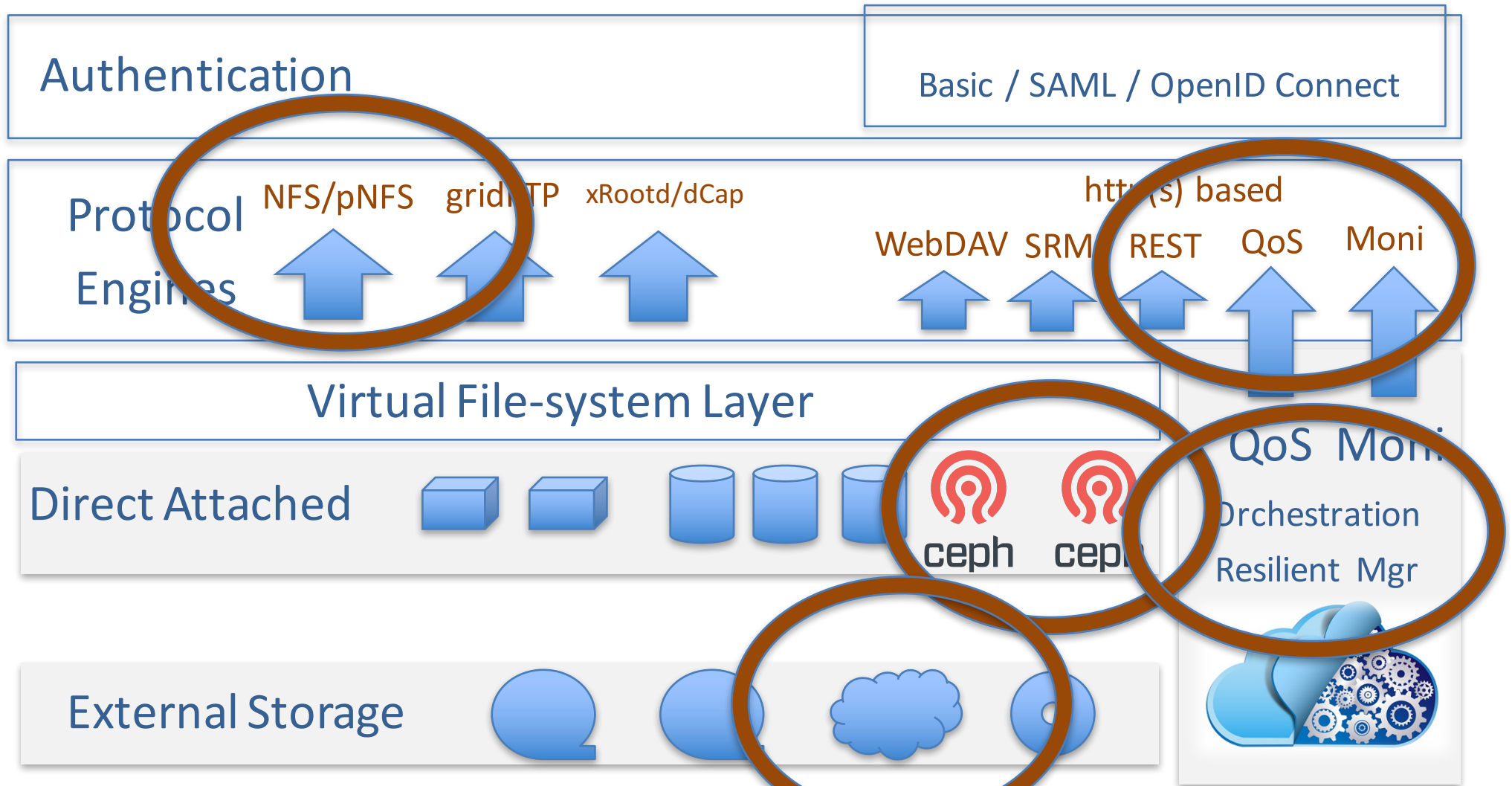
- Utilizing professional (OpenSource) technologies
  - Providing ‘cloud like’ storage (e.g. ownCloud)
    - ‘sync and share’
    - Web Authentication (e.g. OpenID Connect)
  - Support for portals (delegation, e.g. Macaroons)
  - Underlying storage (e.g. CEPH)
  - Access through SAMBA
- Providing mechanisms 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<sup>®</sup> 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

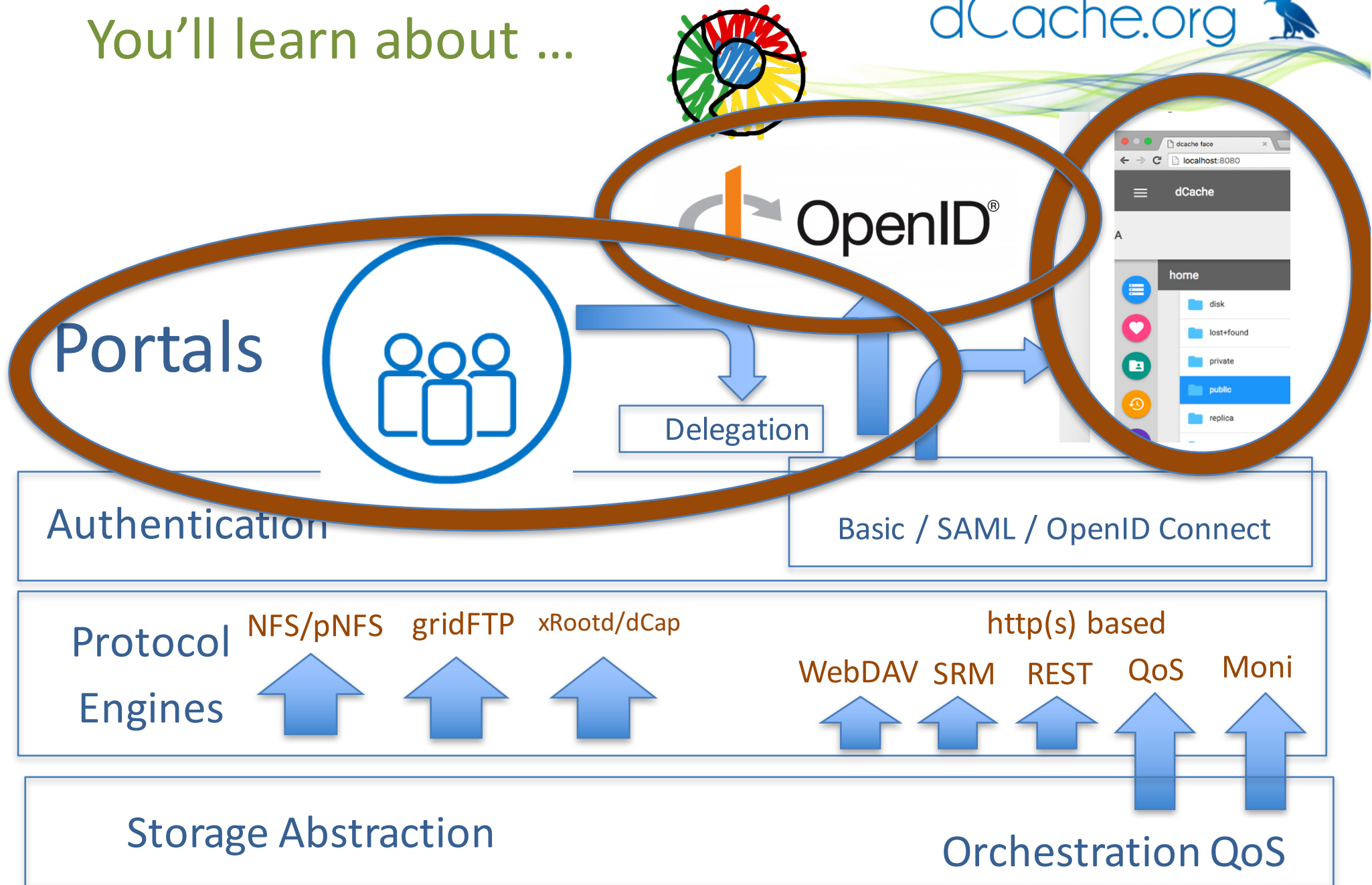


# You'll learn about ...





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](http://www.dCache.org)