Integrating low level storage technologies

Unlimited hierarchical Storage Space
*NFS 4.1, WebDAV, GriFTP, X509, user/passwd, OIDC, Kerberos*

Benefits: Best of two worlds
- Low maintenance CEPH functionality
- High level dCache functionality: access protocols and authentication mechanisms

See Tigrans Talk Today 14:00 at GG C3
QoS Management interfaces
The Hybrid System

dCache.org

dCache, managed Cloud Storage | CHEP 2016, CHEP 16 | Patrick Fuhrmann | 11 Oct 2016 | 3
The scientific Data Cloud

High Speed Data Ingest

Fast Analysis
NFS 4.1/pNFS

Visualization & Sharing
by WebDAV, OwnCloud

Wide Area Transfers (Globus Online, FTS)
by GridFTP
Conclusion

Well on the way for new strategic direction on storage:

• Bringing costs down for operations
  – Using ‘low maintenance’ storage backends (e.g. CEPH)
  – Introducing High Availability mechanisms to support ‘dark data centers’
• Allowing Quality of Service in storage to be defined by sysadmins and users.
• Introducing Cloud mechanisms (e.g. sharing) not only for home directory type data but as well for experiment data.
• Implementing the “Scientific Storage Cloud”