



Data Management for extreme scale computing

# WLCG Status All Hands Meeting



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# Use Case Goals

## ✂ WLCG Use Case Goals in XDC:

- Improving storage management mechanisms
- Improve the scalability of the LHC Computing models for Run 3 (2021)
- Optimize resource usage, Reduce costs (50% of the infrastructure on storage)
- Enabling the usage of heterogeneous (Cloud, HPC etc.)

# Use Case Architecture

✕ Concentrate on several data managements aspects:

- Intelligent data distribution
- Smart caching mechanisms
- Storage Federation
- QoS and data lifecycle
- AuthZ/AuthN

✕ Connection with Data-lake concepts and activities

# Use Case Update

✘ Several aspects are currently under investigation and development:

- Caching for storage managers that supports HTTP:
  - Read Only for the moment with credential forward



✘ EOS standalone remote cache (XCache):

- Credential forwarding
- ACL synchronization (maybe)
- Write support (probably)



✘ XCache for regional Caching/Federation

# Use Case Update

- ✗ Attach a different storage system to EOS
  - Tested with S3 and WebDAV
  - Place data for access at the remote site
  - Trigger placement based on access pattern (cache)
- ✗ dCache similar work for Caching and storage adoption

- ✗ FTS for transfer management and QoS manager



- ✗ Dynafed use case is for it to be the top-level federator for XDC, federating all the storage systems and caches available

# Workplan

- ✗ Finalize the work done so far
  - ✗ Prepare the relevant documentation
  - ✗ Organize the first release
  - ✗ Setup Demo in the next weeks/months
- ✗ Choose the features to further develop (e.g. Write support, which AuthN/AuthZ to support)
- ✗ Scalability testing and related issues