Scalable Global Data Access with HTTP/WebDAV

Alejandro Álvarez Ayllón
on behalf of the LCGM development team
Overview

- **HTTP/DAV in front of DPM**
  - Use case: Installing in an existing DPM
    - Browsing using Nautilus
    - Random I/O
    - Third party copies

- **HTTP/DAV in front of LFC**
  - Use case: Accessing CERN's read-only LFC
    - Redirection
    - Fall-back with Metalink
HTTP/DAV in front of DPM

• We have already shown how installing lcgdm-dav-server is quite easy
  – And also, how to boost performance using the new plugins

• And we have seen how to navigate using a web browser
  – Which is already good enough!
HTTP/DAV in front of DPM
HTTP/DAV in front of DPM

- But we can mount it using Nautilus
HTTP/DAV in front of DPM

• Random I/O
  - A file can be read partially using Range headers
  - Using cURL, we can test it manually
    curl -L http://host/path/file -r start-end

• Third party copies
  - Copy from one HTTPS to another
  - Source must understand logic
  - Destination doesn't
    • But you must be authorized, obviously!
• We said we could browse a DPM using regular web browsers, and DAV clients (i.e. Nautilus)
• But we can do that too with the LFC!
  – Even better, if our client supports redirection, we can browse an LFC and access files from there
• Fallback with Metalink
  - What happens if one of the replicas is broken?
  - Metalink gives us the full list, and a client (i.e. aria2) can try each one until it reaches a good one
  - Even better, if the file is big, it can use at the same time several replicas to increase throughput