



Enabling Grids for
E-science in Europe

www.eu-egee.org

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The EGEE Project

gLite Middleware for Grid Computing

Madeleine Theile



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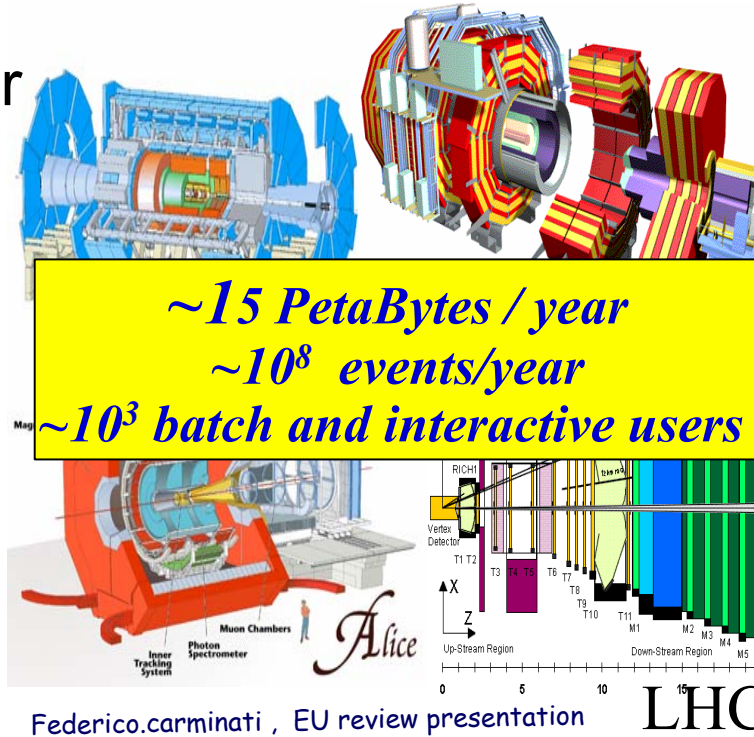
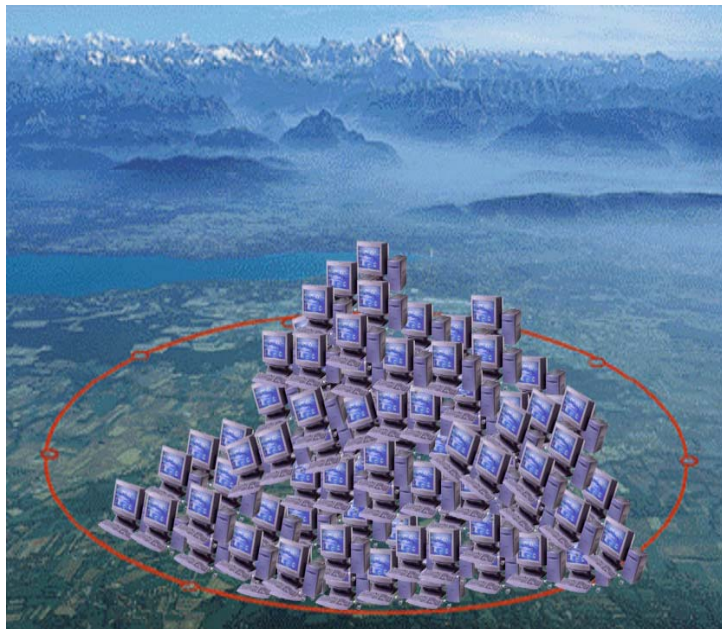


Why do we need the Grid?

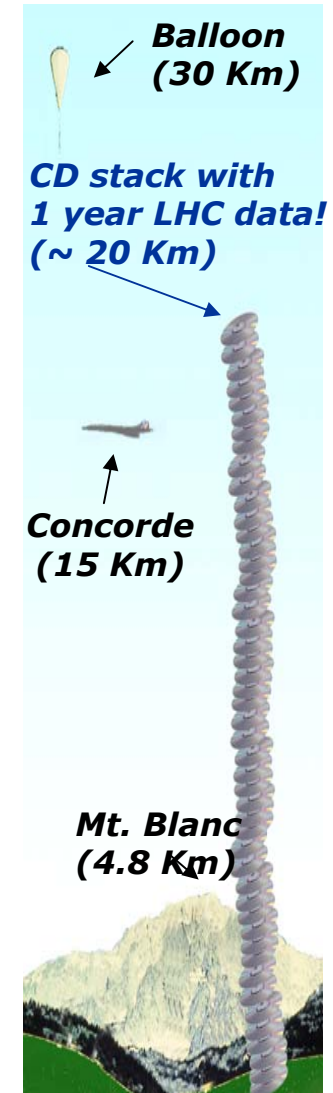
Computing power

Distribution to
regional centres

Storage



Integrate distributed
heterogeneous
computing resources

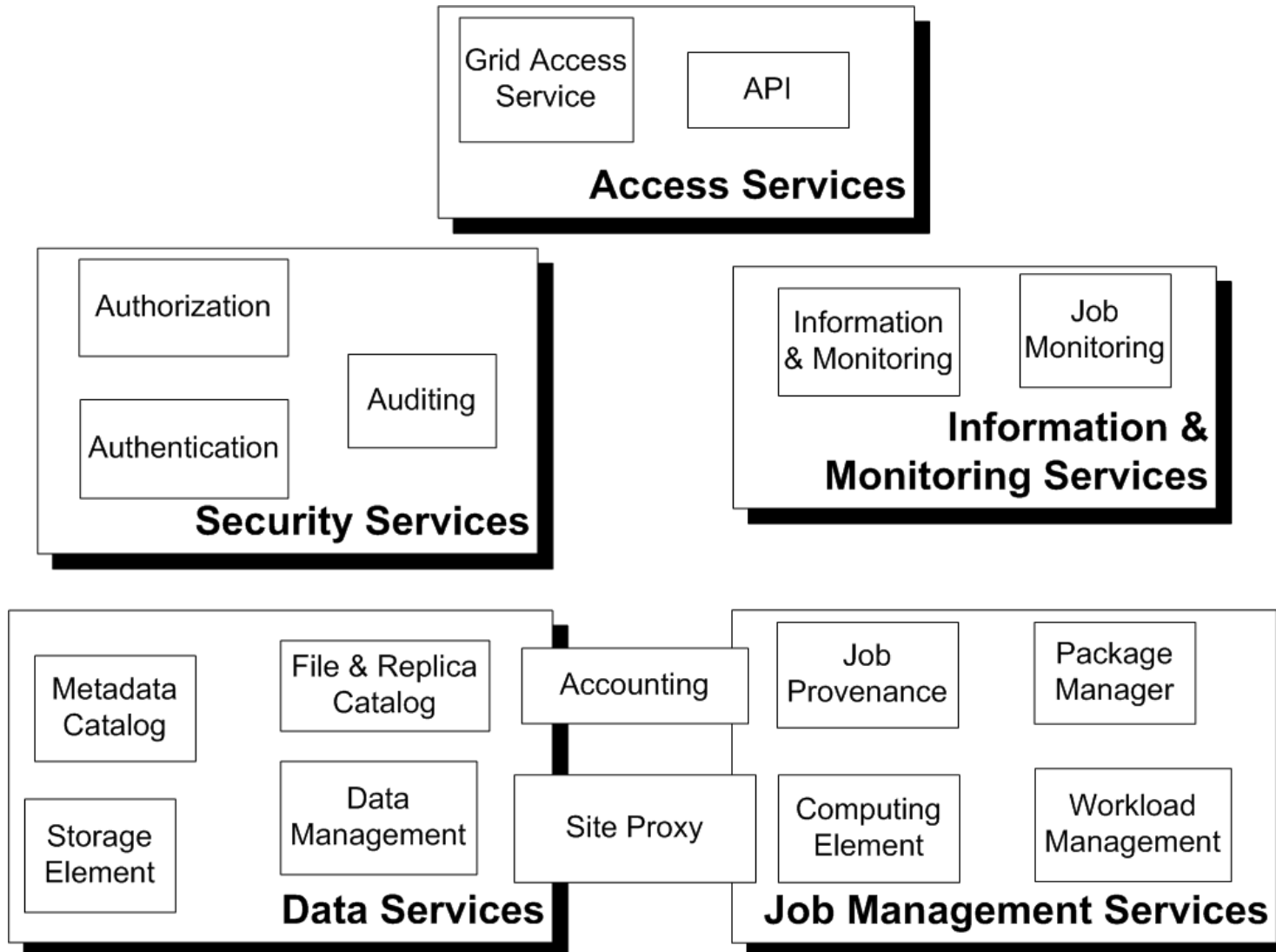


Architecture Guiding Principles

- **Lightweight (existing) services**
 - Easily and quickly deployable
- **Interoperability**
 - Allow for multiple implementations
- **Resilience and Fault Tolerance**
- **Co-existence with deployed infrastructure**
 - Run as an application (e.g. on LCG-2; Grid3)
- **Service oriented approach**
 - **WebServicesResourceFramework** still being standardized

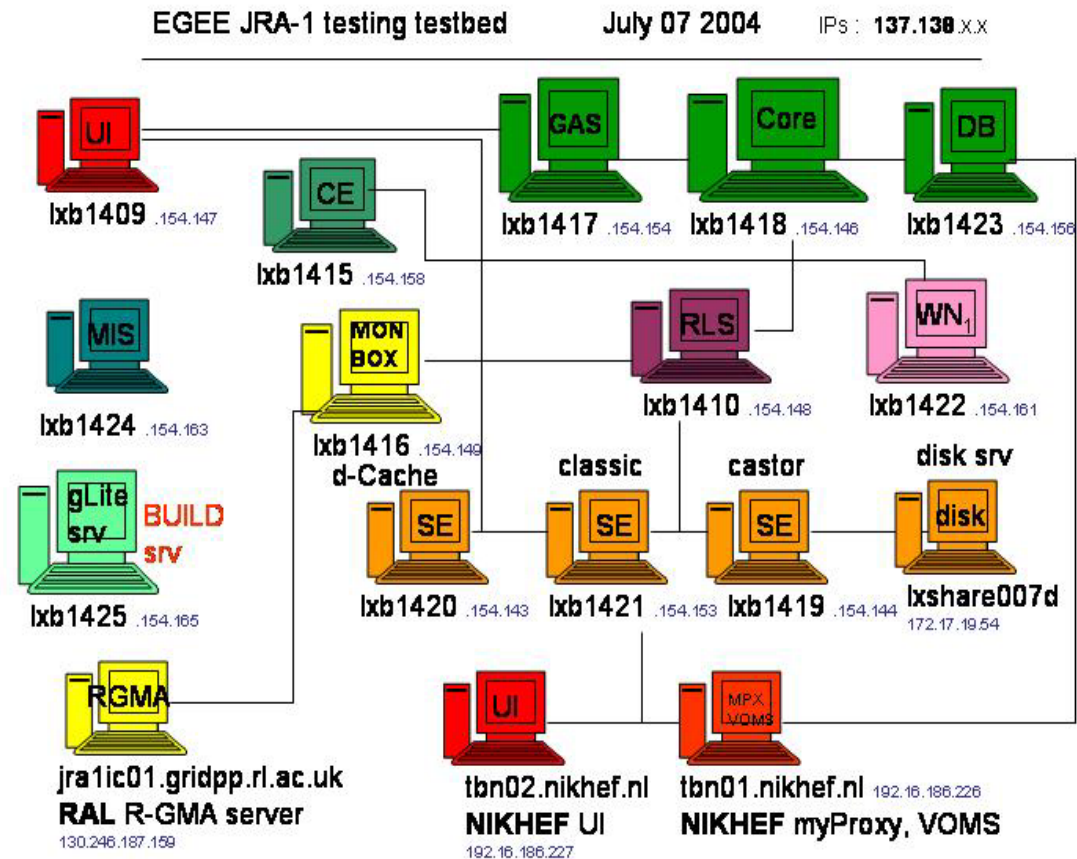


gLite Services



Testing Testbed Setup

- Testing is distributed over 3 different sites: CERN, NIKHEF, RAL
- Important to test a distributed system in a distributed environment
- Currently 20 machines scaling up to 50 across the 3 sites
- Currently migrating to Scientific Linux platform. All sites run different binary compatible versions of Scientific Linux
 - Test the middleware on > 1 platform



Now: A demonstration

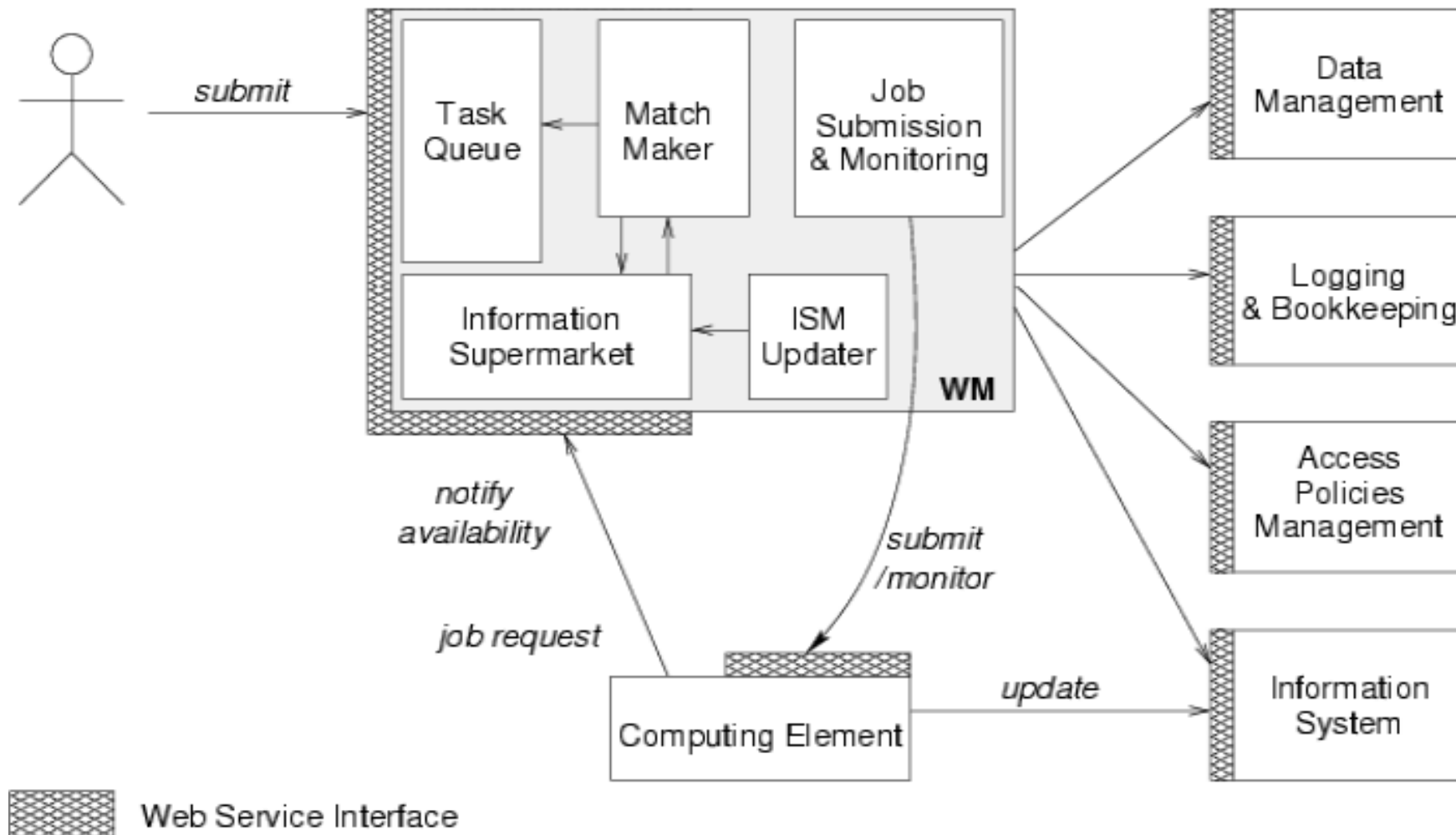
- Success ratio:
 - Depending on the setup (scheduling system)/configuration:
 - 65%-100% (PBS) -> the one currently working
 - 100% (CONDOR) -> the one to be used in the future
- Performance ratio: $\text{job-execution-time} / \text{job-running-time}$
 - 0.93 for a 15 minute job
 - 0.69 for a 2 minute job
 - 0.13 for a 10 seconds job

Thank you!



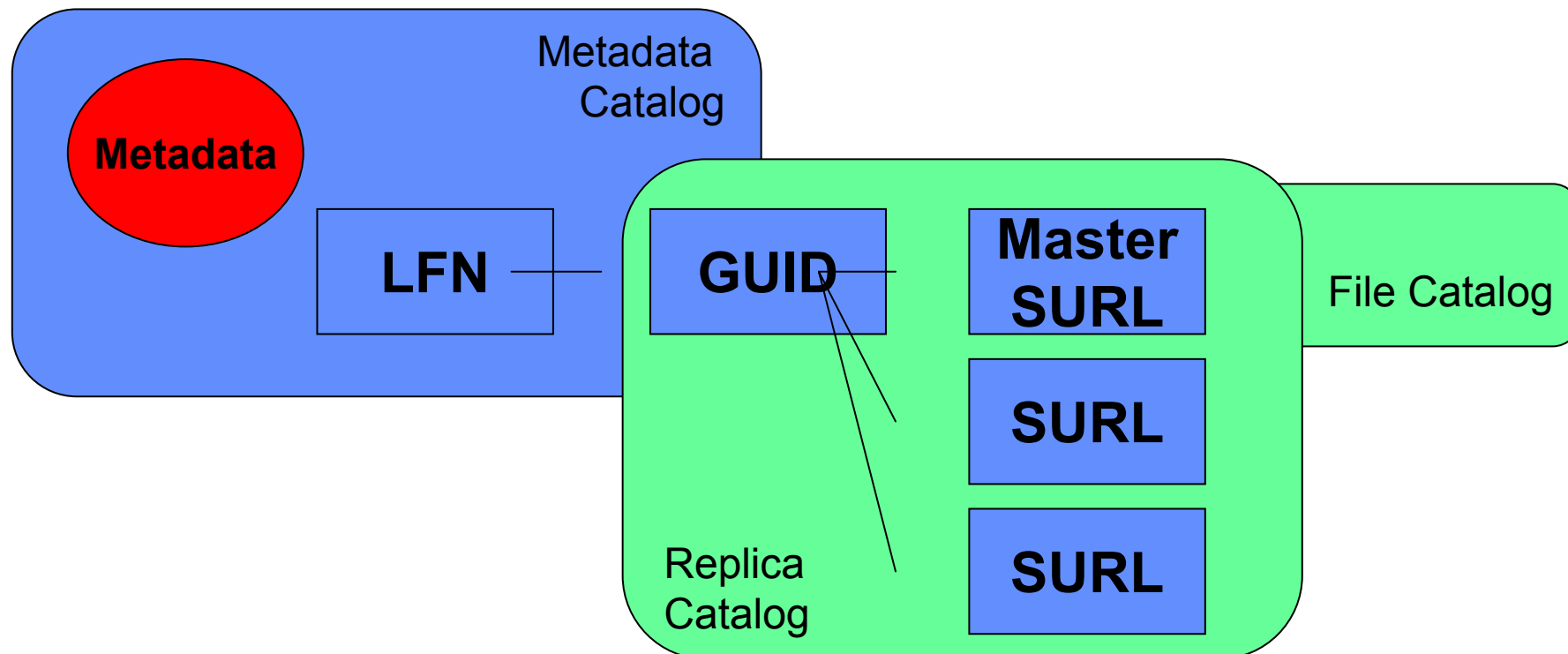
Questions?

WMS



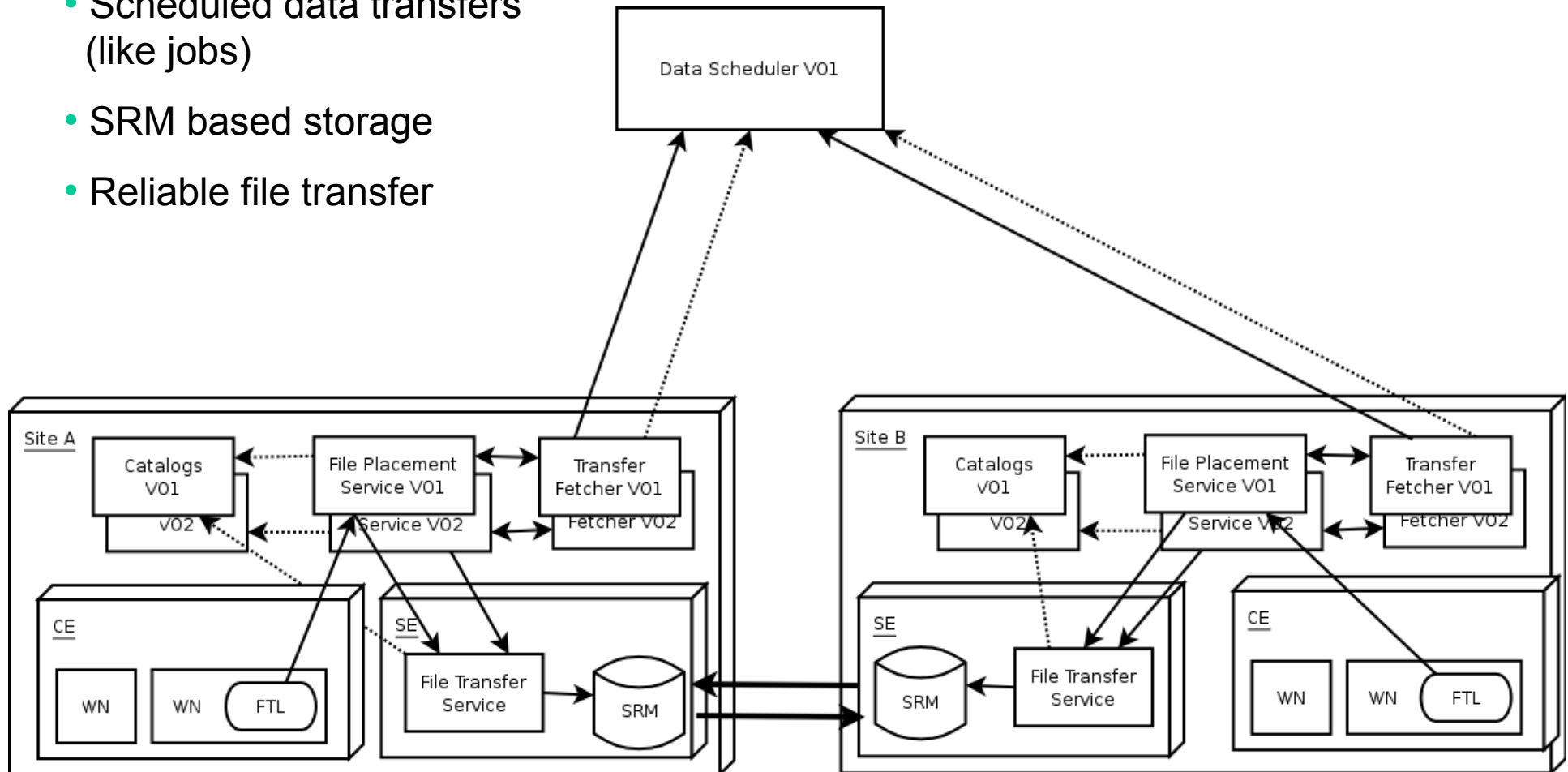
Catalogs

- File Catalog
 - Filesystem-like view on logical file names
- Replica Catalog
 - Keep track of replicas of the same file



Data Management

- Scheduled data transfers (like jobs)
- SRM based storage
- Reliable file transfer



Poster

