



xRootd in dCache

Patrick Fuhrmann

Martin Radicke

for the dCache people





Responsibility, dCache

Patrick Fuhrmann Rob Kennedy

Responsibility, SRM

Timur Perelmutov

Core Team (Desy and Fermi)

Jon Bakken

Mathias de Riese

Micheal Ernst

Alex Kulyavtsev

Birgit Lewendel

Dmitri Litvintsev

Tigran Mrktchyan

Martin Radicke

Neha Sharma

Vladimir Podstavkov

External

Development

Nicolo Fioretti, BARI

Abhishek Singh Rana, SDSC

Support and Help

Maarten Lithmaath, CERN

Owen Syngé, RAL

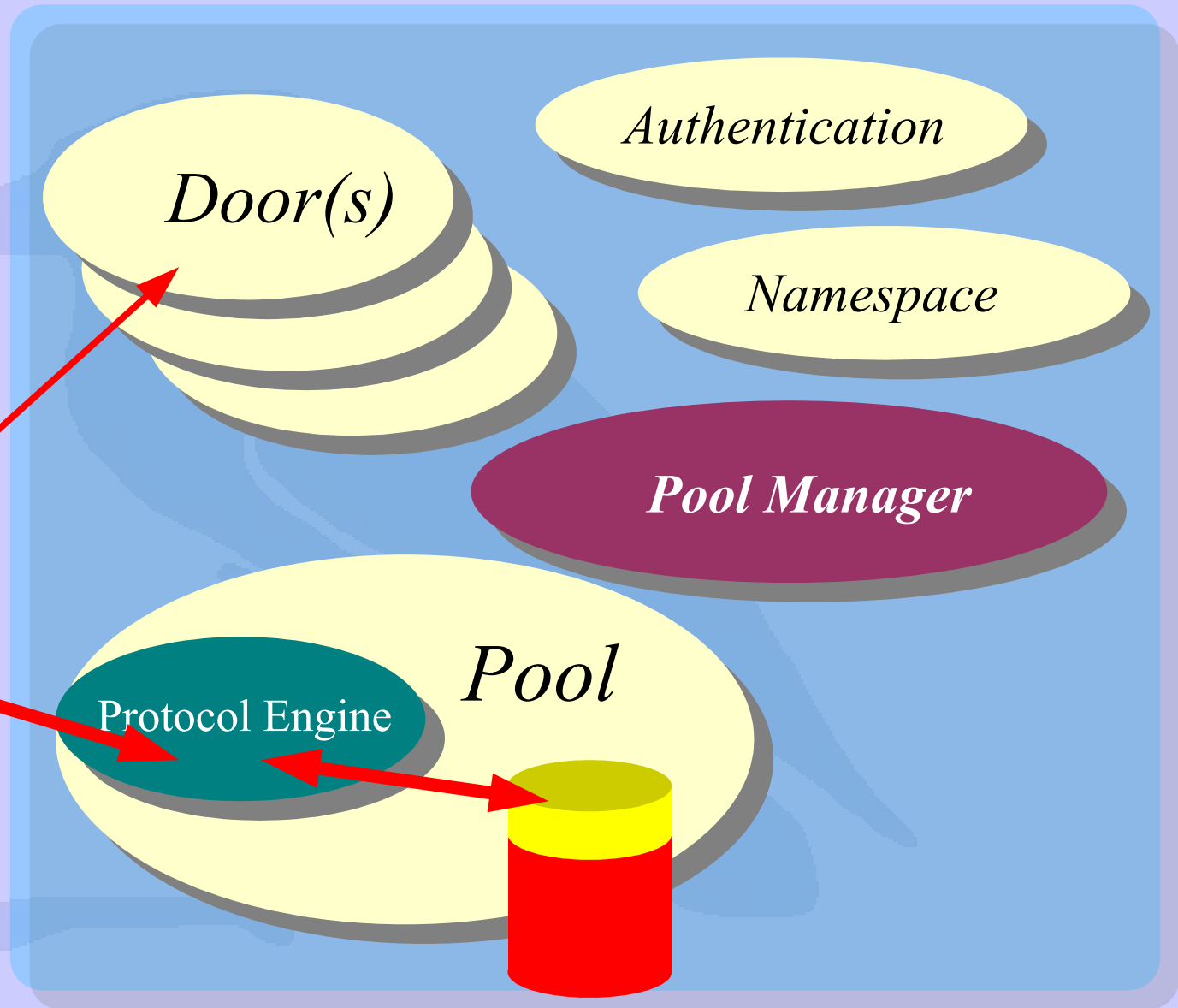


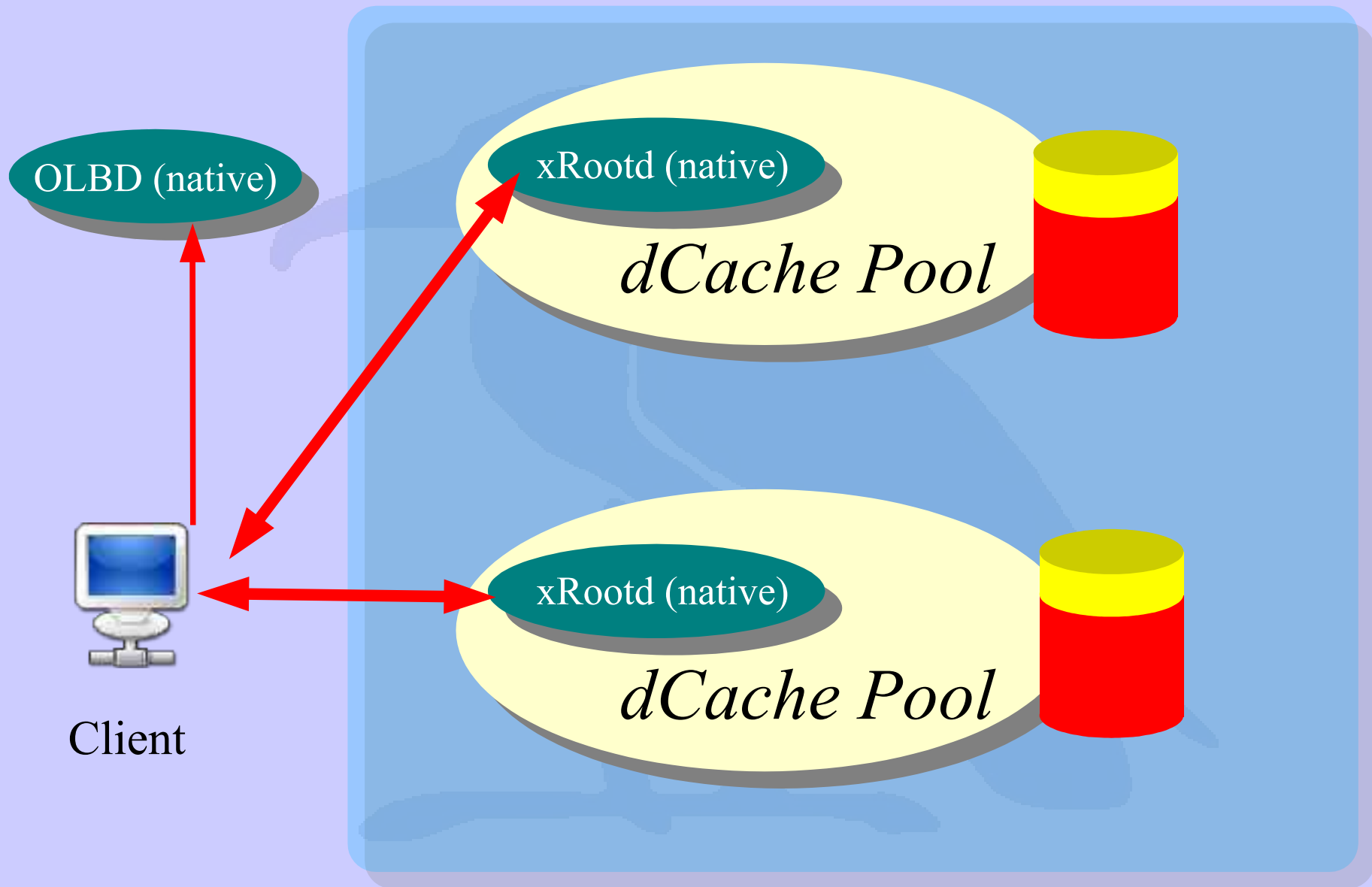


Either
control/data protocol
(e.g. dCap, ftp)
or
redirecting protocol
(e.g. xRootd, http, ***)



Client







Advantages

Fast file access (mainly extremely fast 'open operation')

Profiting from Andys et al. code development

Issues

No longer : compile once run everywhere (easy deployment)

Problems integrating wrt

Space management

Pool selection mechanisms (PoolManager rules)

File hopping

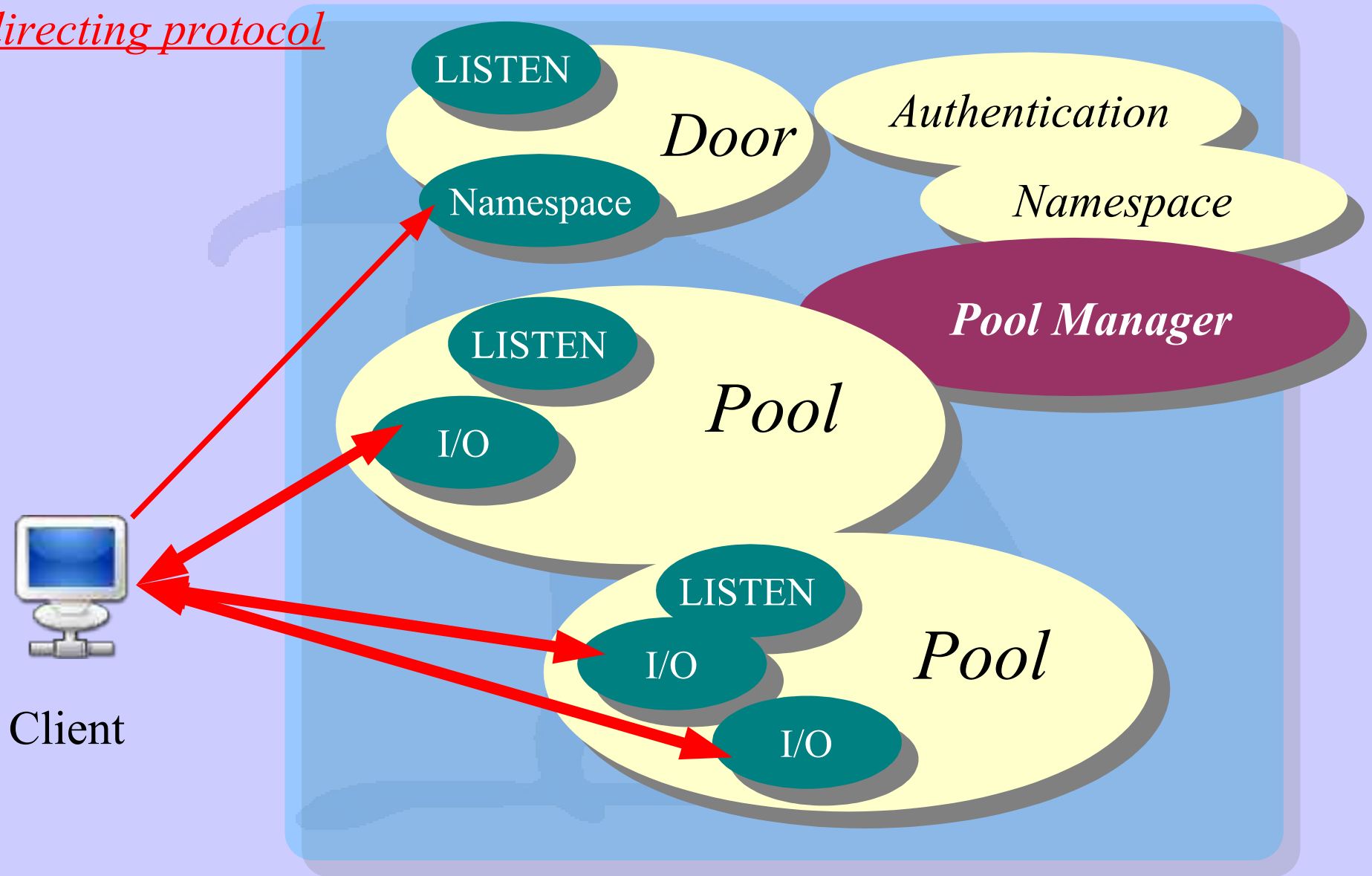
Multiple I/O queue

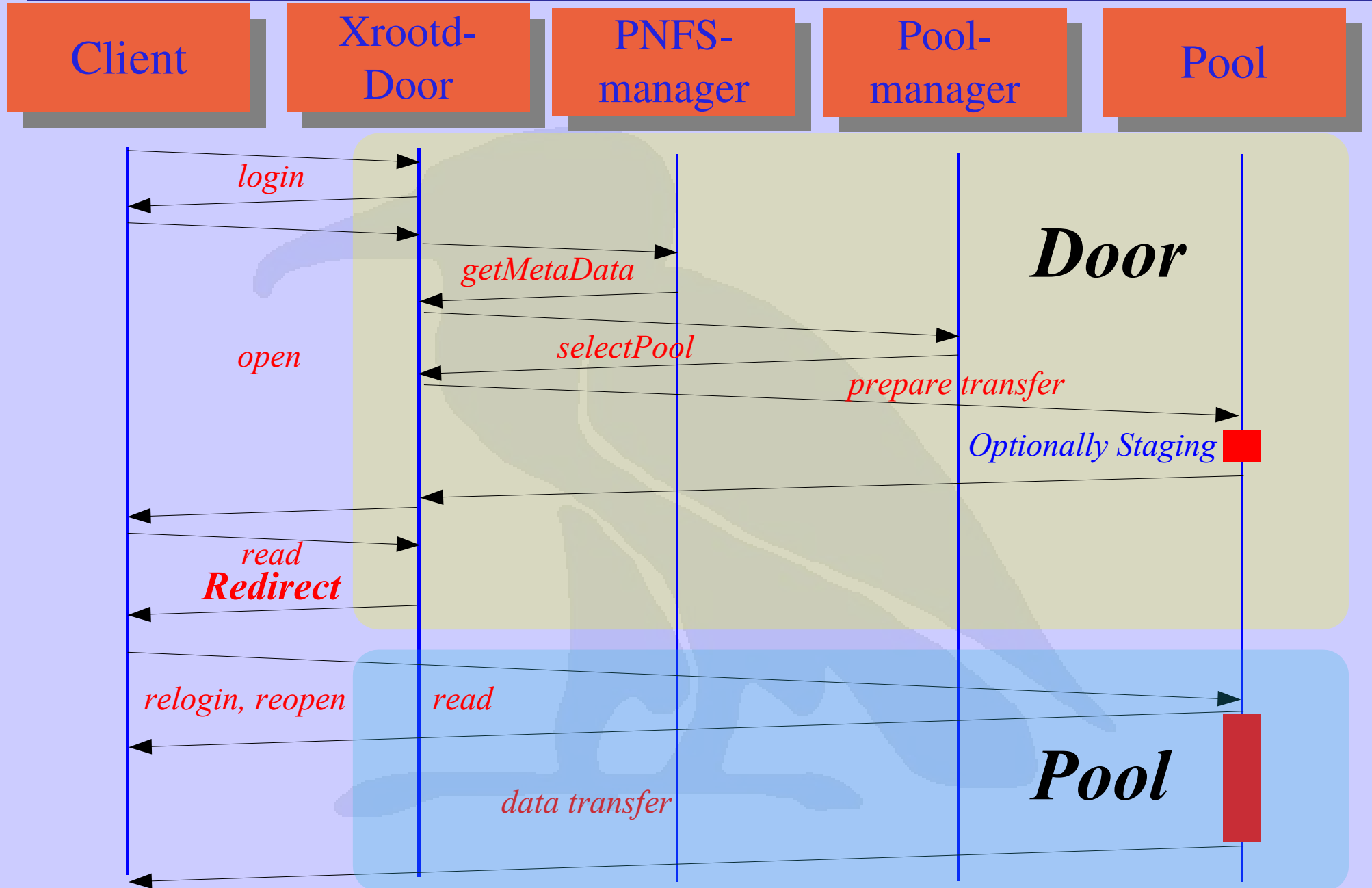
etc

Multiple implementations improve protocol



redirecting protocol







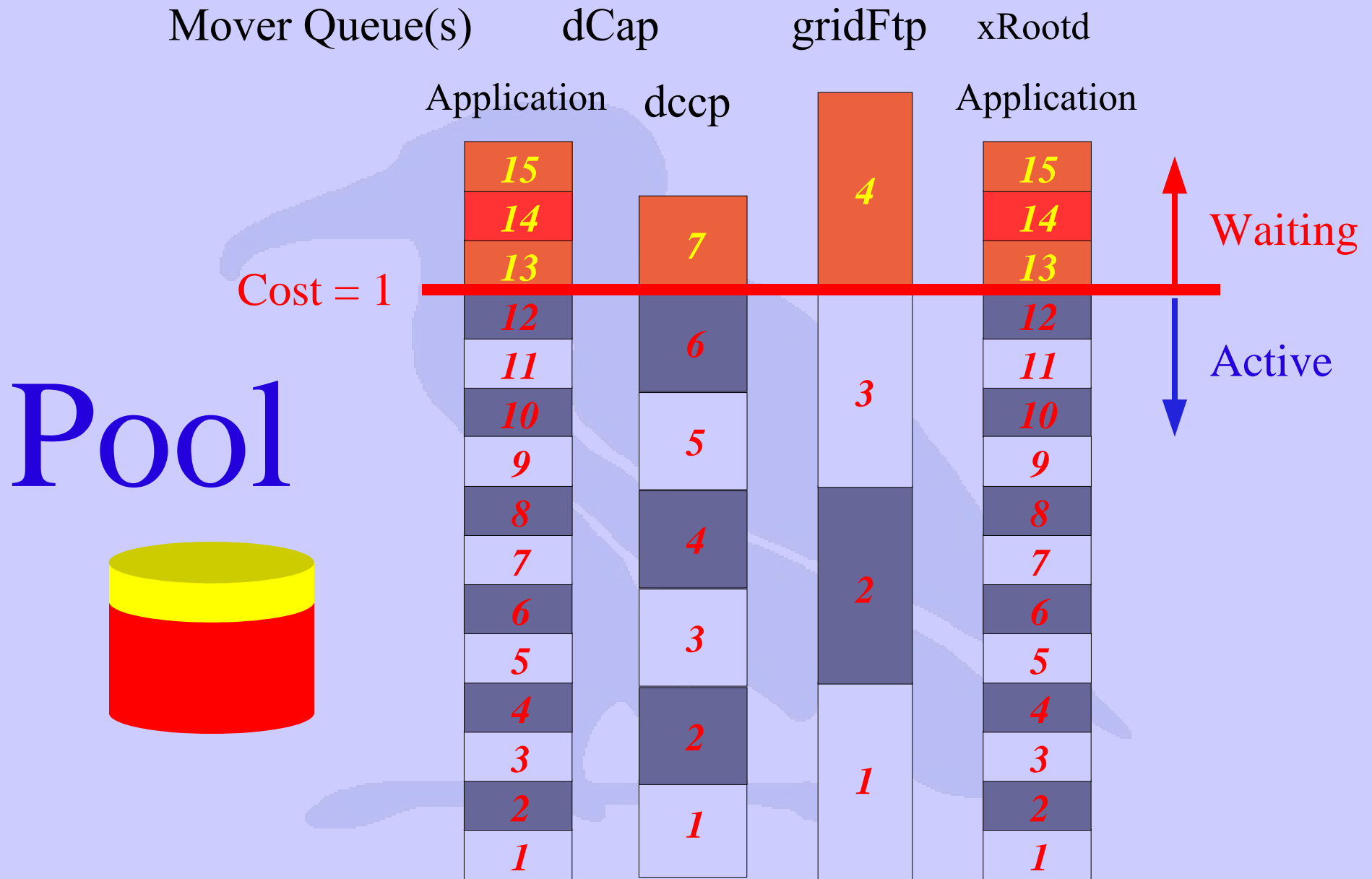
Already done

- main xroot messages are implemented (login, open, stat, read, write, sync, close, redirect)
- xrootd-door : one single xrootd server listening on an agreed port (e.g. 1094)
- xrootd-mover : new xrootd-server instance created on every file request (no channeling)
- indirect message contains PNFSID to xcheck connection within newly 'forked' mover thread

work to be done

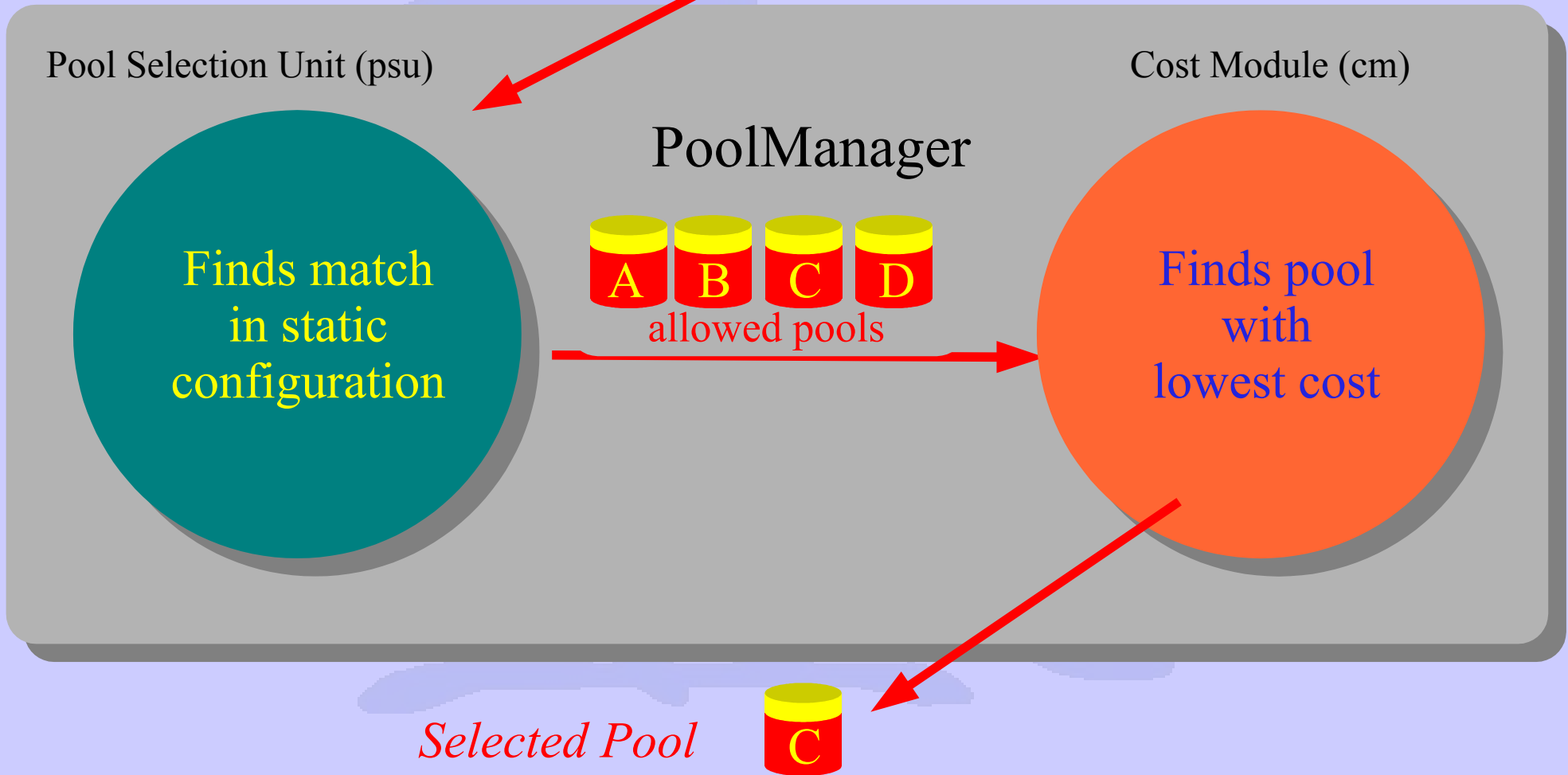
- authentication
- asynchronous file transfer (is it important)
- which messages are really needed from specification
- test site available mid of April

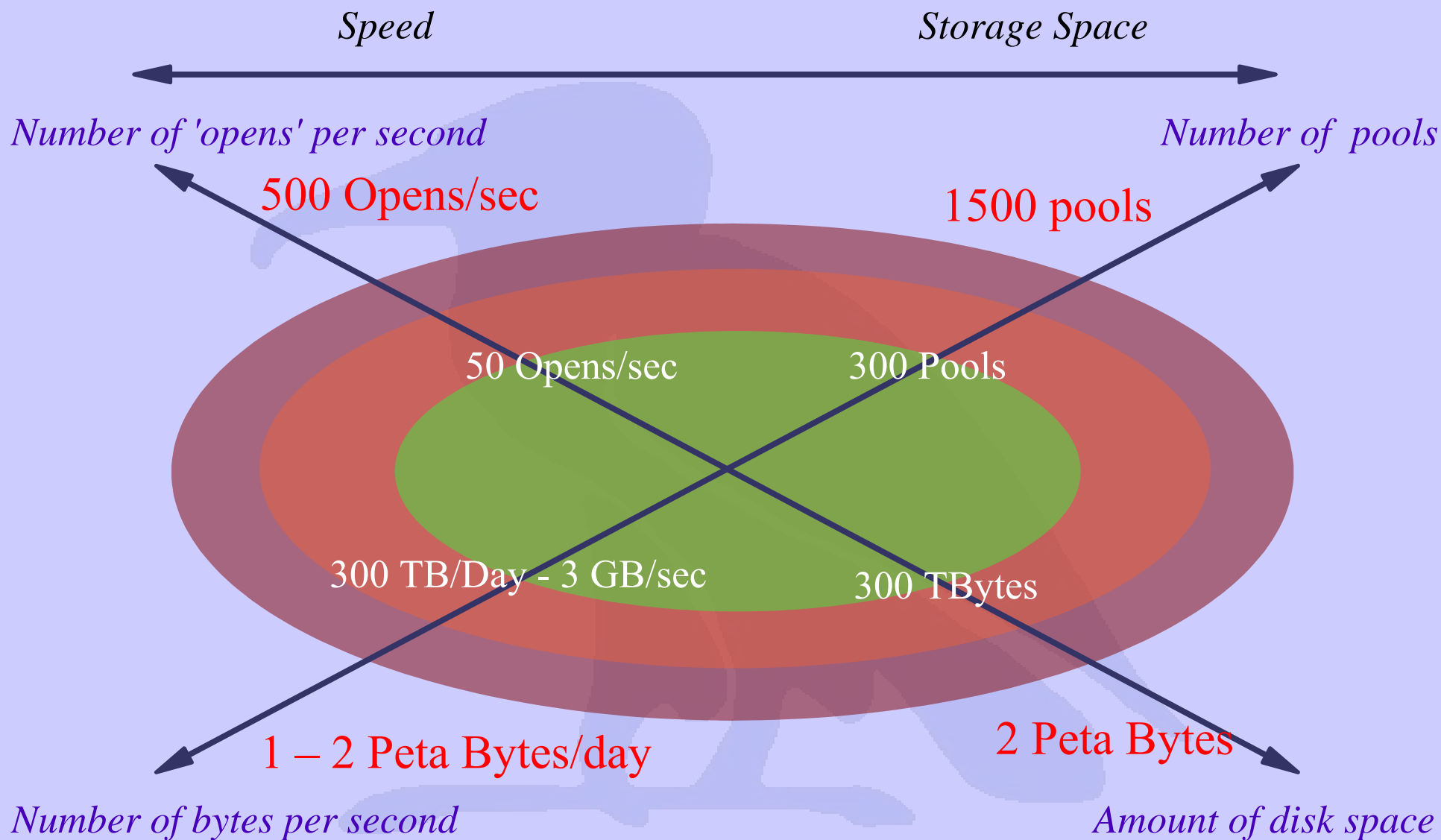






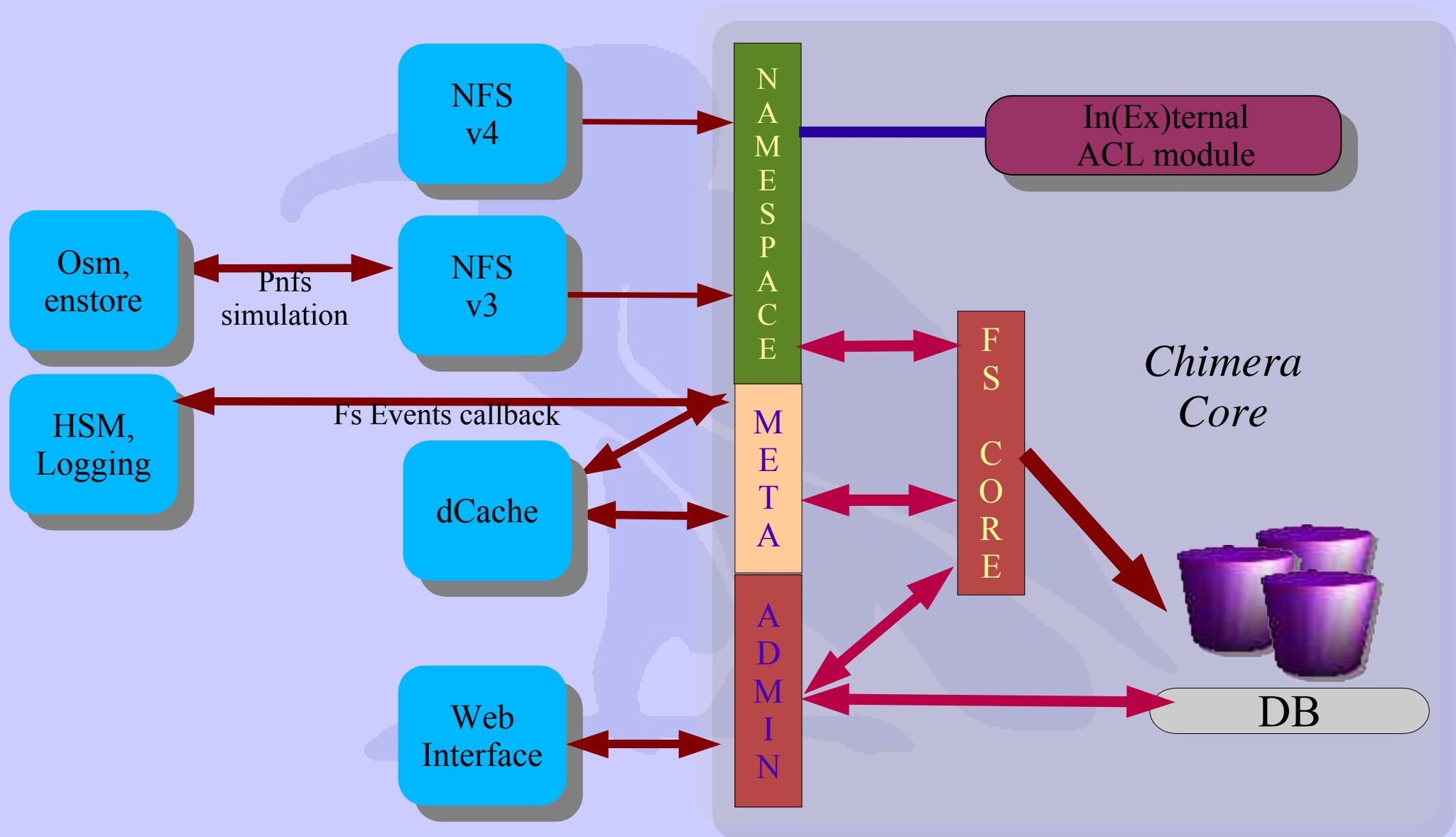
Incoming Request







by courtesy of Tigran Mkrtchyan





dCache, the Book

www.dCache.ORG

need specific help for you installation or help
in designing your dCache instance.

support@dCache.ORG

dCache user forum

user-forum@dCache.ORG

