

# “Hands On”

## Questions by Categories

- dCache Administration
- dCache Installation
- Network / Firewall Configuration
- Development / Plans
- Communication
- Documentation

# dCache Administration (1/4)

- Monitoring
  - Cell Services: what is/are criteria for declaring them “offline”
  - GFTP transfer monitoring incorrect?
  - Meaning of colors on “Pool Space Usage” page
  - Can FNAL tools be added to standard package
- Log files
  - Interpretation / explanation of messages
    - GFTP: max # of data channels reached
    - No route to cell (e.g. Replica Manager)
    - GFTP: configured but missing log file “/tmp/dcache-ftp-tlog”

# dCache Administration (2/4)

- PNFS
  - Migration of pnfs db (...because of new S/W or H/W)
  - Splitting of existing db if it's becoming too large
  - Shows wrong size w/ files >2GB (LargeFileSimulation enabled)

# dCache Administration (3/4)

## Miscellaneous

- Scripting w/ admin interface using ssh keys for authentication
- dCache Write block size
  - Default of 10KB too small
- Load Balancing
- SRM: CPU utilization & latencies due to Postgres DB
  - Causing FTS transfers to hang (no TURL returned)
- Pool offline
  - Temporarily vs. permanent (monitoring page does not clearly indicate that a pool is permanently down)
- Pool Manager Cost function
- Meaning / usage of Pinboard
- Prestage - # of request limit per user
- Accounting – to prevent improper usage
- Space not released after failed GFTP transfer (solved)
- SRM PinManager crash/hangs (solved w/ code released on 08/26)
- Automatic pool restart after reboot
- In Syslog “nfs inode mismatch”
- Hanging GridFTP connections

# dCache Administration (4/4)

## HSM

- Proper pool selection in case of (e.g. HSM) problems
- On expiration of “st set timeout” only main store process is terminated, sub-processes stay alive
- Sometimes files are not automatically flushed (BNL/HPSS)
- How to remove files from MSS (BNL/HPSS)

## Performance

- GridFTP
  - Single stream w/ dCache server 1,6 MB/s (CERN-SARA)
  - 10 streams 16,0 MB/s (CERN-SARA)

# dCache Installation

- Verification / Validation of new installation
- Configuration for different H/W setups

# Network / Firewall Configuration

- Depending on setup
  - Pool exposed to Internet
  - Pool behind Firewall, data path via Adapter
- Configuration w/ multiple network interfaces to split interior from exterior traffic

# Development / Plans

- Pnfs DB
  - Can't be > 2GB (single db not enough to support LHC VO)
  - Support for multiple pnfs managers?
- VOMS support
  - How will this affect current method of mapping dCache pools to VOs?
- SRM
  - SrmPut directly to pools storing the data (rather than selecting least loaded GFTP door w/ intermediate network traffic)
  - Status of SRM 2.1 implementation
  - Which WSDL (2.1.1 or 2.1.1-modified)?
  - Open Source? (if yes, where?)



# Communication

- Have set up
  - [www.dcache.org](http://www.dcache.org)
  - Mailing lists
    - [support@dcache.org](mailto:support@dcache.org)
    - [user-forum@dcache.org](mailto:user-forum@dcache.org)
  - Request Tracker for selected communities (LCG, GridPP)
- BNL: can you set up a TWIKI for developers & admins to share information on problems and solutions?

# Client Utilities

## srmcp

- Currently unable to use w/o config file ( “-conf” in CLI)
- Option “-num\_streams” has no effect w/ 3<sup>rd</sup> party transfers
- How to prestage over the Grid?
- Active and queued requests hang when assigned to a pool that has crashed – possibility to dynamically re-assign them?
- Reliability of return code?

## dccp

- What is the actual route of data transfer (via dcap door?)

# Documentation

- Config files
  - Admin Commands (at least a subset)
  - “How-to” on namespace layout
- The “dCache Book” at  
<http://www.dcache.org/manuals/Book/index.shtml>