“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
  – Mailing lists
    • support@dcache.org
    • 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/ 3rd 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