OSG Storage for VDT report

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Milestones

- Re-designed vdt-dcache installation
  - We are not planning any major work on dCache except:
    - Adding chimera to the package
    - Running automated test suite to certify new minor releases
- Established working relationship with Xrootd developers
  - Monthly meeting with developers and ATLAS representatives
  - Better response time from developers to acknowledge bugs
  - Participation in design discussion
- Released storage discovery tools to ITB
  - Help VO to discover and test accessibility of SE, get amount of available storage space, find mapping of storage path to local path, etc

Testing, Packaging and Releases

- vdt-dcache
  - 2 releases since October
  - improved/simplified installation script, community toolkit, dCache server 1.9.5-8 - in production
  - new gratia probes, dcache 1.9.5-12 (caught up with dcache.org) - in ITB testing
- BeStMan - multiple releases
- Xrootd/XrootdFs - new releases in OSG 1.2.5
- Storage discovery tools - released for ITB testing
- Working on creating production Hadoop repository in Wisconsin (rpm/yum)

New developments

- Gratia dCache storage probe re-write
  - Uses Information Provider (eliminates need to access data in srm database)
  - Configurable to suppress pool information
  - Report on storage topology as well as space utilization
  - Ready for ITB testing
- Xrootd transfer and storage probes
  - Reports accounting information broadcasted by Xrootd
  - In unit testing
- Hadoop transfer and storage probes
- Ownership of storage RSV probes
- Improvement in testing framework

Public storage

- Collaborated on writing the document describing OSG policies on public storage
- Discussed with ET the feasibility of offering storage appliance to the OSG sites
- Working with VOs to provide access to OSG storage:
  - SCEC
  - Fly's Eye
  - D0

ATLAS and CMS T3

- Provided support and documentation
- T3 ATLAS
  - installation workshop
  - help with tailored storage docs
  - T3 sites workshop
- T3 CMS
  - uses our teststand for T3 SE testing (files transfer via PhedEx)
  - testing direct access from worker node to Hadoop/Xrootd data servers
  - trying to understand performance issues related to KVM

Documentation

- Maintaining Release Documentation for
  - BeStMan, BeStMan-gateway
  - Xrootd
  - dCache
  - Storage and transfer gratia probes
- Participating in DocTeam work
  - Reviewing/Updating general storage documentation
  - Working on modifying storage Release Documentation according doc templates

Support

- 36 GOC tickets for 4 months
  - dCache/vdt-dcache - 21 tickets
  - BeStMan – 9 tickets
  - Xrootd - 6 tickets
- Several VDT tickets related to storage installation and configuration
- A lot of questions have been answered in the mailing list
- Started to monitor t3 mailing list and provide support when needed

Various activities

- Participation in WLCG-EGEE-OSG workshop
- Discovery tools presentation at Site Coordinator Meeting and Columbia Grid workshop
- Participation in STG
- Started working with NEES in order to facilitate storage/tape access at Fermilab
- Ongoing FTS investigation as a possible DMS for OSG activity

Upcoming events

- Blueprint meeting
- Documentation workshop
- OSG All-Hands meeting
- IRODS workshop at ISGC (Tapei, Tawain)

Issues

- Will be understaffed during February (Neha is going on vacation)
- Need to improve understanding of xrootd internals. It is really hard to consistently reproduce problems and convince developers to look into them.
- Need to solve organizational issues with providing public storage – negotiations with sites for every major request require a lot of time.
- Hardware is very limited at Fermi and UCSD, no means to do any significant performance or scalability tests. Unsure of our ability to test performance improvement of BeStMan 2 and dCache with load-balance.
- Need collaboration of GIP group to verify integrity of storage related data, otherwise discovery tools information will be unusable or non-existent.