

SLAC Site Report

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General

- SLAC has re-defined itself
 - Was a HEP lab
 - Now: Photon Science
 - 1st year of users at LCLS was spectacular
 - 3 out of 6 instruments are now open for users
 - New joint SLAC/Stanford faculties hired
 - All theorists with lot of computing needs:
 - » Material Science (SIMES),
 - » Catalysis (SunCat)
 - » Molecular Dynamics (PULSE)

Reorganization

- New Storage group under Lance Nakata
- New Head of IT Applications & Systems:
Yuhua Liu
 - Updating business IT: HW + SW
- Charge-back for Scientific Computing
 - first model last fiscal year was unpopular
 - one cluster shut down due to costs
 - new model with large buy-in for FY11

Processes

- No ITIL yet but
 - Many processes have been defined
 - Service portfolio+catalog coming
 - First SLAs are in place
- IT governance policy is in place now
 - Resource allocation conflict resolution
 - Project prioritization

Buildings

- Diesel generator 671 kVA (=500 kW) is being installed
- Additional power to central datacenter building
- Training room removed: water cooled racks
 - Same planned for space of Powderhorn silos
- SRCF is on again

Cyber Security

- New DoE enforced CPP monitoring
 - Triggered immediate “Don't look at porn” email
- Exposed PII in Sharepoint due to wrong ACLs in Windows file systems
 - Symantec's Data Leakage Prevention (DLP) on all Windows machines
 - Caused problems with Xwin32
- Splunk for syslog analysis is coming

Tape Migration

- 1,950 TB have been moved to SL8500s
- 50 TB still to go
- Target date for finishing: December 2010

Unix Backup

- AFS backup is now done with TiBS (Teradactyl)
 - to disk only for now
 - still missing ACSLS interface
- Other Unix backups are still done with TSM
- Windows backups still with NetBackup
- Consolidation will come

ATLAS Storage

All # are usable TB/PB

- 1.5 PB of Xrootd storage
- Two tiers of xrootd storage
 - Front/Fast tier are old Thumpers/Thors:
 - 600 TB in high rack density, 12 drives/1U
 - high ratio of TB/spindle (.5 TB and 1 TB drives).
7200 rpm; Solaris/ZFS
 - Back/Slow tier are new Dell R710/MD1000
 - 900 TB in low rack density, 5 drives/1U (not counting head node space)
 - RHEL5-64/xfs; xfs user tools came from CentOS

GPUs

- Astrophysicists (KIPAC):
 - 4x SuperMicro CSE-118G
 - DDR IB connected to a compute cluster + Lustre storage
- Institute for Ultra-Fast Science (PULSE):
 - 14x Colfax CXT8008
- several other groups are looking at GPUs



Compute Nodes

- Latest acquisitions:
 - 240 HP ProLiant SL2x170 for new SunCat group
 - QDR IB connected cluster of 20 Dell C6100 for LCLS2
 - Dual quad-core Intel E5620 CPUs
 - 2GB memory per core
 - First time: fixed amount of money for bidding



Oracle/Sun - Solaris

- Started to look at alternatives for “Thor's”
 - Need to buy more storage soon
 - Looking at the “Usual Suspects” for vendors: Supermicro, Hitachi, DDN, etc.
- Looking at RHEL for storage servers
 - Have been using Solaris