

# INFRASTRUCTURE

- Grid – Going to SLF 5, doubled capacity in GPFarm
- Bluearc - performance good, expanding and consolidating Jan 20
- Enstore – have admin access, changed 2011raw data owner to minosraw
- Nucomp – Soudan network upgraded, jobsub reunification underway
- GPCF – have minos-slf4 minos-slf5
- Servers – stable, ongoing ganglia and aklog issues
- Control Room – remote shifts
- NDTF – Near Detector Task Force ( Minerva / Minos )

# EXECUTIVE SUMMARY

- Young Minos issues:
  - Getting minos54 back from NOvA
  - scaling to 5000 Grid jobs – will ramp up after Condor 7.4 upgrade
- Raw Data file ownership
  - 2011 changed from buckley to minosraw, will do the rest soon
- Bluearc issues
  - Moving to new disks, 170 TB capacity ( was 130 ) Jan 20
  - Initial copies are done, touch ups run in under 2 hours
  - This removes Satabeast from Bluearc – move to Enstore or DCache
  - Will keep /minos/data2 symlink to /minos/data, but stop using it
  - Hoping to triple disk/\$ ratio via Bluearc Data Migration
  - Most of 10 TB of mcimport/STAGE is archived, thanks Adam !
- Scheduled downtime 2011 Jan 20 all day for kernels, PNFS, Fermigrid, etc
- Soudan network upgrade is complete
- Planning for Condor 7.4 upgrade and jobsub script Reunification with IF

# GRID

- We continue to reach peaks of 2000 running jobs, but quiet recently
  - still want 5000, will ask scale up when we have Condor 7.4
- Still using wrapper for condor\_rm, condor\_hold
  - To prevent SAZ authentication overload
  - Condor 7.4 upgrade will fix this internally, soonish
- CPN - 3.9 million locks served to Minos
- Final Fermigrid workers are moving to SLF 5.4 Jan 20
  - There will be no more SLF 4 Fermigrid workers

# Bluearc

- /minos/data expansion 2011 Jan 20
  - Copying files from /minos/app, minos/data, minos/data2 to new disk
  - Net gain of at least 30 TB
  - Retiring the original Satabease ( data, app ) from Bluearc
  - New mounts will be /minos/data and app
    - temporary data2 and scratch compatibility symlinks
- Performance remains good

# Enstore

- Changed owner of raw data from buckley to minosraw in 2011
- Will change all existing file ownerships this month
- New LTO4GS robot in GCC for non-CMS customers.
  - Existing tapes being moved there.
  - Will keep raw data Vault copies separate

# NUCOMP

- GPCF hardware is installed and running.
- Soudan networking upgrade hardware was installed
- 600 cores of new Fermigrid processing is deployed, 1/3 for Minos
- Dennis Box is working on a shared jobsub to replace minos\_jobsub
- REX will take over Condor support from Ryan Patterson soon ( at 7.4 )
- Next meeting around Jan 19 ? Not yet scheduled.

# GPCF

- Initial configuration for GPCF
  - 14 batch hosts x 16 slots
  - /scratch/minos is 10 TB NFS served
  - Interactive systems are Oracle VM virtual machines
- gpsn01 – shared Grid submission node is available
- minos-slf5 = minosgpvm01 runs SLF 5.4 , give it a try !
- minos-slf4 = minosgpvm02 runs SLF 4.7 32 bit kernel
- nova01/2 virtual interactive systems having I/O performance issues
  - Bluearc data was originally under 10 MB/sec, still under 30
  - being investigated

# Minos Servers

- minos26 will be powered off soon
  - use minos-slf4 for access to a32bit SLF4
- minos54 back from Nova Jan 20 ? - INC000000065778
- Ganglia – still not available on ifora1/2, not supported by FEF
- Need aklog for SLF 5 , this is coming soon
  - aklog has been ported, Nagy is integrating this with kinit
  - waiting for an RPM to test
- SLF5 plans
  - will move to retire SLF 4 when we have stable kcron/aklog
  - Control Room already runs SLF 5
- Will request management ability to kill non-root processes on Cluster

# Control Room

- First official remote shifts from BNL on 2011 Jan 3-6
  - Great effort by Brett and Mary especially.
  - Ricardo Gomes will be at Fermilab later in January to work on this.
  - Documentation will be coming
  - We should generate project principals for each remote control room.
- Minerva needs to run remote shifts this spring.
- I'd like to see a web-based Big Green Button
- I'd like to switch the ACNET consoles to SSH tunnels ( AD supports this )

# Near Detector Task Force

- Planning handover of the Near Detector to Minerva by 2012
- I drafted a document for offline and Control Room issues.
- Minerva will need to take over
  - Calibration
  - Batch processing
  - Data Quality
  - Data Handling
  - Simulation
  - Code maintenance
  - and more – we are just getting started
- Task force met with the Directorate 2010 Dec 2
- See DocDB Minerva 5600, Minos 7787
- Minerva is counting on doing remote shifts when they are in charge.