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• Shared by ATLAS and D-Zero
• Hardware (4.8GFlops, 7.5GB, 1TB)
  – OUHEP0, 2x Athlon 1GHz, 2 GB, 100GB + 800GB RAID
  – OUHEP1, 2x P3, 1GHz, 1GB, 150GB
  – OUHEP2, 2x P3, 500 MHz, 1GB, 13GB
  – OUHEP3, 2x P3, 500 MHz, 1GB, 13GB
  – OUHEP4, 2x P3, 1GHz, 1GB, 40GB
  – OUHEP5, 2x P3, 1GHz, 1GB, 30GB
  – OUHEP9, 1x, P4, 2.2GHz, 512MB, 15GB
  – OUHEP[6,7,8], 1x P2, 233MHz, 64MB, 0GB

SAR @UTA Workshop 2003, Joel Snow, Langston University
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• Network
  – University: Gigabit to Internet2
  – Cluster: 100 Mbs Ethernet and Gigabit interconnect on private switch (NFS)
  – Gigabit to OSCER
  – OSCER: 250 CPU (P4/1.5GHz) Linux Cluster
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• Software
  – RH Linux 7.2 (2.4.18 Kernel)
  – D0 software infrastructure
    • Full D0 software releases
    • Code development
  – Remote Data Access - SAM Station
  – MCFarm
  – Globus 2
  – Condor & Condor-g
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• MCFarm
  – 7 nodes/13 CPUs (12 worker CPUs)
  – Using p13.08.00 release
  – Remote job submission from UTA
  – Condor as batch system
  – NFS Automounter for disk availability
    • Better Security - no root daemon
    • Easier administration - system does the work efficiently
    • Simpler system, less code to run
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– Scratch directory structure eases administration, reduces root dependence
  • export FARM_NODEDIR=/scratch/users/mcfarm/scr
  • export FARM_CACHE=/scratch/users/mcfarm/cache
  • export FARM_GATHER=/scratch/users/mcfarm/gather
  • export FARM_ARCHIVE=/scratch/users/mcfarm/archive

– These are soft links to local scratch storage, which are automounted when needed: e.g.
  • scr001 -> /home3/ouhep1/scr001
  • archive001_A -> scr001/archive
  • cache001_A -> scr001/cache_A
  • gather001 -> scr001/gath_queue
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– Portability/Migration Issues
  • For use on non-dedicated clusters especially those without
    root access like the 250 CPU OSCER cluster mcfarm
    must be as innocuous as possible.
  • Remaining root dependence must go:
    – export FARM_WORK=/fscratch (redundant with automounter)
  • Eliminate mcfarm daemons by utilizing the full
    capabilities of the batch system (Condor, PBS)
    – No user daemons allowed on head or worker nodes of OSCER
  • A less restrictive mcfarm implementation for non-
    dedicated clusters will significantly increase available
    resources.