Computing Infrastructure

1) Analysis computer at Fermilab (CAF + fcdfsgi2)
2) Two JIF dual-CPU computers at Fermilab
3) Desktops at Fermilab and Liverpool
4) One 8-CPU JIF computer Lpool + 2 RAL
5) Other computing in Liverpool (MAP + Compass + MAP offspring)

1) One JIF cluster in Lpool
2) Three dual-CPU computers at FNAL/UK

Analysis computer at Fermilab (fcdfsgi2)

- Hardware
- 32 processors of 300 MHz
- Shared between 500 physicists!
- 5G user space.

- Comments
- Only route to staging-in data
- Zero maintenance to us
- Very slow, and getting worse.
- Massive competition for CPU and data.
- SGI

CAF at Fermilab

- Hardware
- 200 processors of 1500 MHz
- Shared between 500 physicists!
- 20T user space.

- Comments
- Main CDF analysis vehicle
- Support & Upgrade path for future
- Limited user space (50G)
- Prone to paralysis; reliant on data-handling
- Recently…. over capacity

UK JIF computers at Fermilab

- Hardware
- Two dual processor 933 MHz + 120 GB disks
- Shortly: Three dual processor 2.4GHz + 300 GB disks
- Comments
- Gateway into CAF
- Not enough space for full data storage
- Speed ?

Desktops at Fermilab/Liverpool

- Hardware
- Typically 750MHz / physicist
- Typically 20GB disk.

- Comments
- No competition for resource

- No space for large data storage
- Slow

JIF computers in UK

- Hardware
- 8 way CPU 700 MHz + 1 TB disk + use of similar at RAL (2x8-way + 4 TB)
- To come: Cluster of 10 duals + 6TB.

- Comments
- Fast ? I/O excellent. CPU not.
- Loads of disk space
- Data access rates ~ok but self managed and accessed across international boundaries
- Problems with competition of resources
- Swapping behaviour….

Other computers in Lpool

- Hardware
- 300 300MHz processors -> 1000 1GHz (Dec01)
- Shared between 4 experiments >=25% for Lpool?

- Comments
- Blisteringly fast.

- Only suitable for simulation
- Limited RAM (~solved for CDFSIM)
- Database issue (~solved)
- Getting the data off…..

SAM

- CDF slowly learning from D0 experience
- Other UK groups playing leading role in porting SAM to CDF

- Ultimately we need this to access data
  - self management of resources
- Expertise exists with our colleagues
- We will set up a SAM station at Lpool and start to test and use.