

HPSS at SDSC

HPSS User Forum - June, 2002

Tom Sherwin
High-End Computing Resources Division
sherwint@sdsc.edu



NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER



HPSS configuration

- HPSS 4.3
- AIX 4.3.3
- 2 TB cache, SSA and Sun T3 disk
- 20 3590 tape drives
- 8 9840
- 20 IBM nodes, (Gig-E and FC equipped)
- 5 STK silos (2 new from last year)

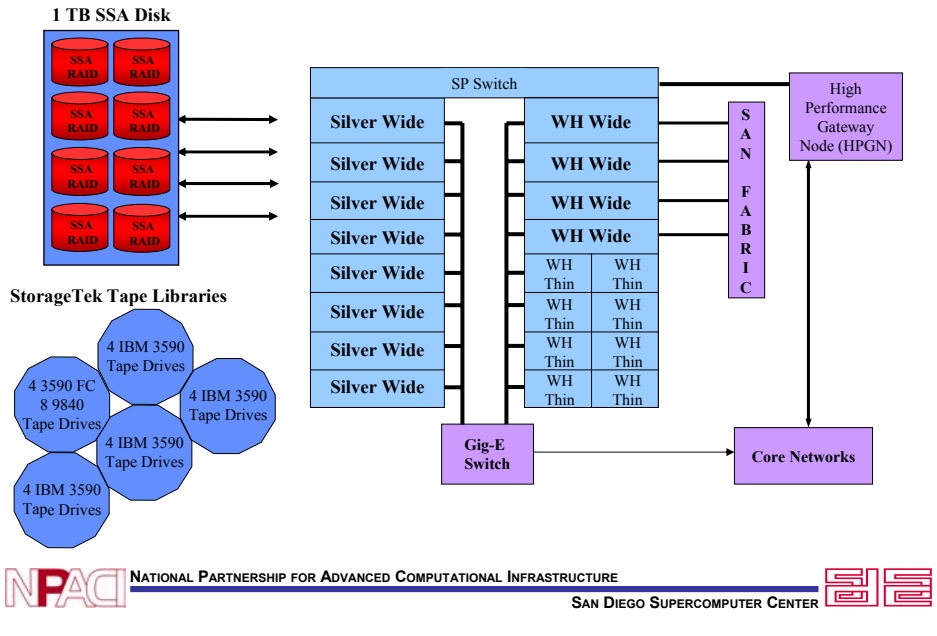


NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER



Mass Storage (HPSS) Configuration



Statistics

Data Stored: 380 TB
 Number of files: 16.1 million
 Growth: 12 TB/month
 Tapes: 18,200

http://www.sdsc.edu/storage/statistics/hpss_stats.cgi?1

Issues

- Tape/drive problems
- PVL/PVR data inconsistencies when drives have trouble
- Migration stalls due to tape drive problems



NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER



Changes coming soon

- 2 additional STK silos (January, '02)
- Receive 24 9940B drives (June/July '02)
- Test 4.5 upgrade in (July/August '02)
- Plan HPSS 4.5 upgrade in (August '02)
 - Add additional 7TB cache
 - Re-allocate storage resources
 - Configure for Striping
- Add more nodes (undetermined)
- Higher data rates and 6PB capacity (uncompressed)



NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER



STK 9940B Tests

- Have two early-release drives
- 200GB/cartridge
- 30MB/sec data rates
- Dual-ported 2Gb Fibre attached
- Raw testing shows as-advertised performance

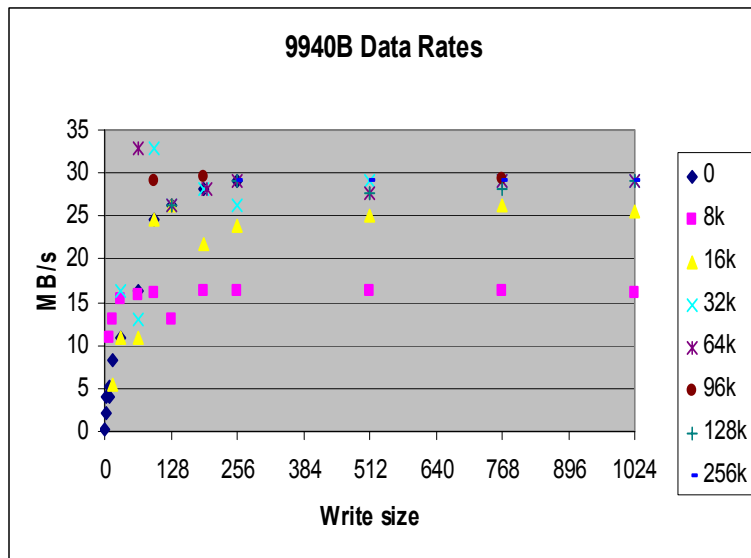


NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER



9940B Data Rates



NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER



Future work/interests

- HSI support (officially)
- SAN (third party copy)
- GPFS
- GRID FTP/GSI client support
- HPSS 5.1 (finally a real database!)



NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE

SAN DIEGO SUPERCOMPUTER CENTER

