

## HPSS @ NERSC

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## **TWO PRODUCTION HPSS SYSTEMS**

**NERSC DCE CELL**

**AFS**

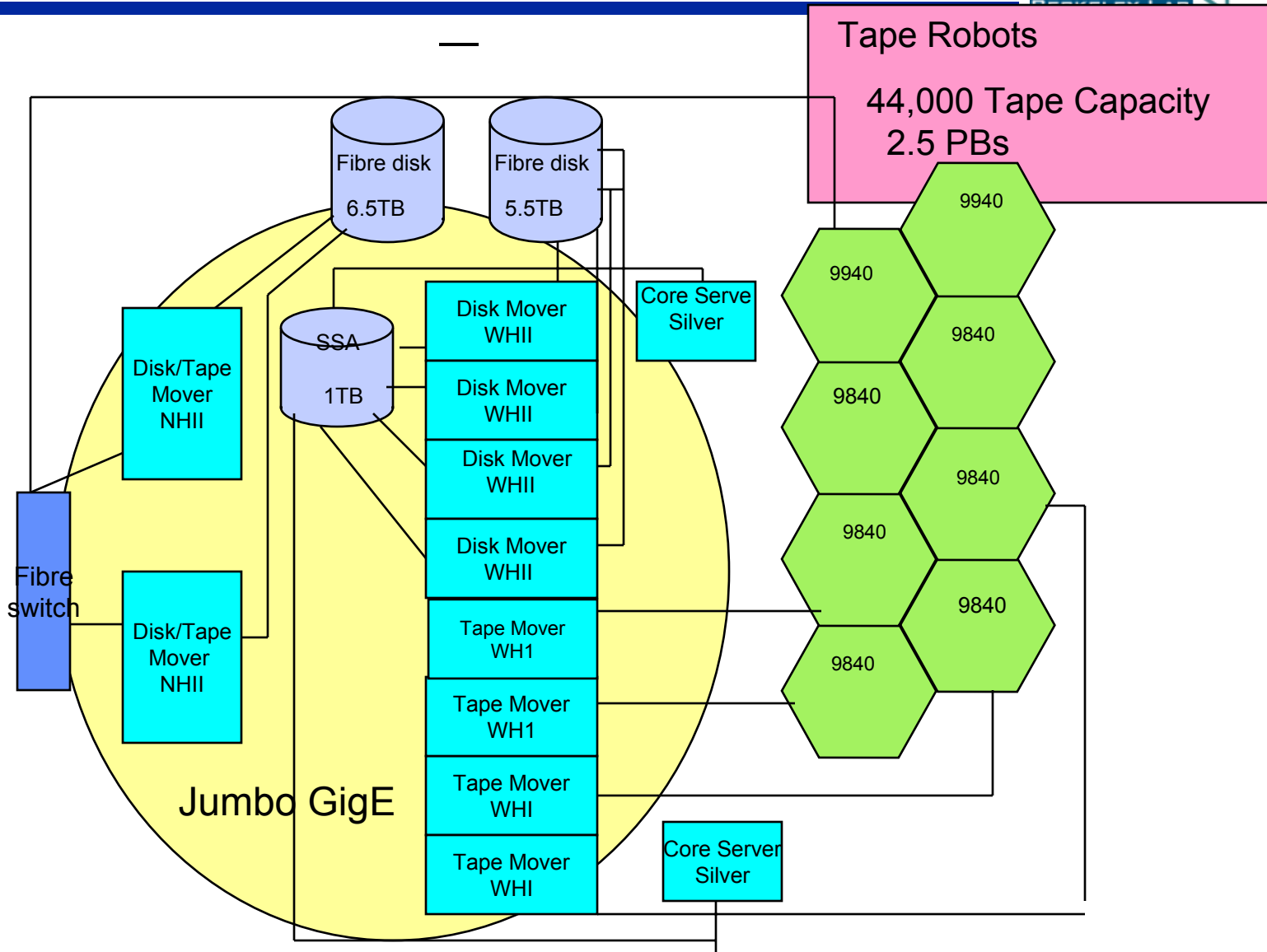
**PROBE**

# HPSS Production Systems

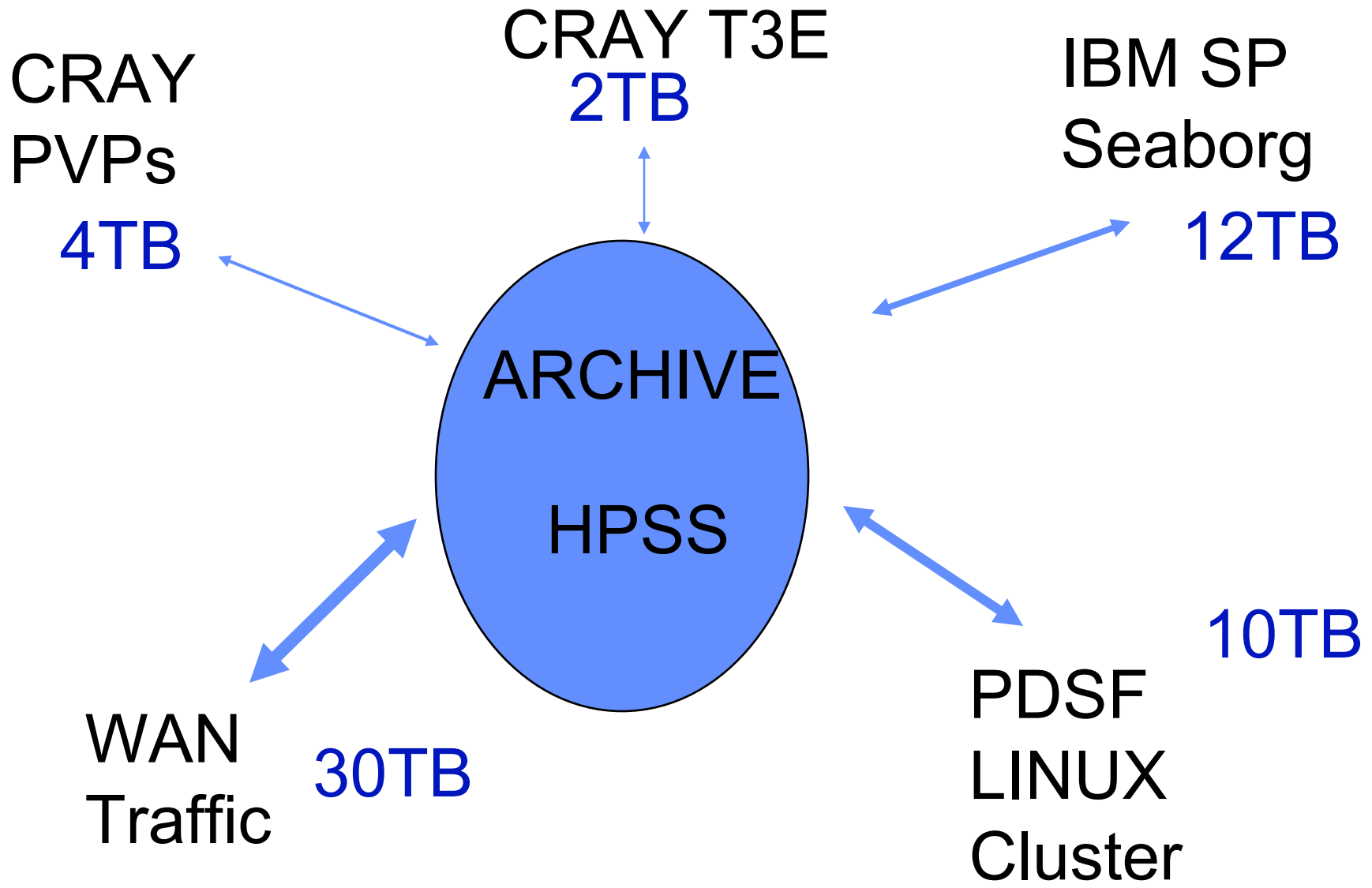


Disk Cache  
15TBs

All movers:  
GigE  
Jumbo GigE  
Hippi  
Fddi



# One Month of I/O Activity to Storage by Platform



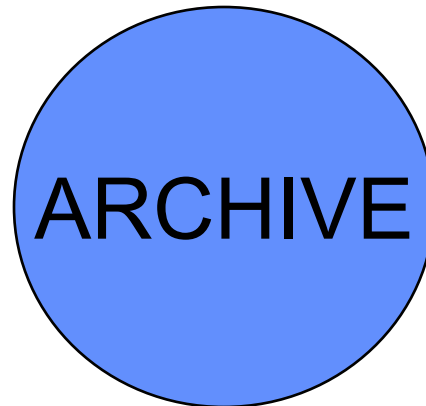
# Platforms/Project/Storage



**PVPs 2TB**  
Nuclear Physics  
Fusion

**T3E 1TB**  
HEP/QCD  
Climate  
Fusion

**Seaborg 6TB**  
HEP/QCD  
Climate  
Astrophysics  
Nuclear Physics  
Fusion  
Materials



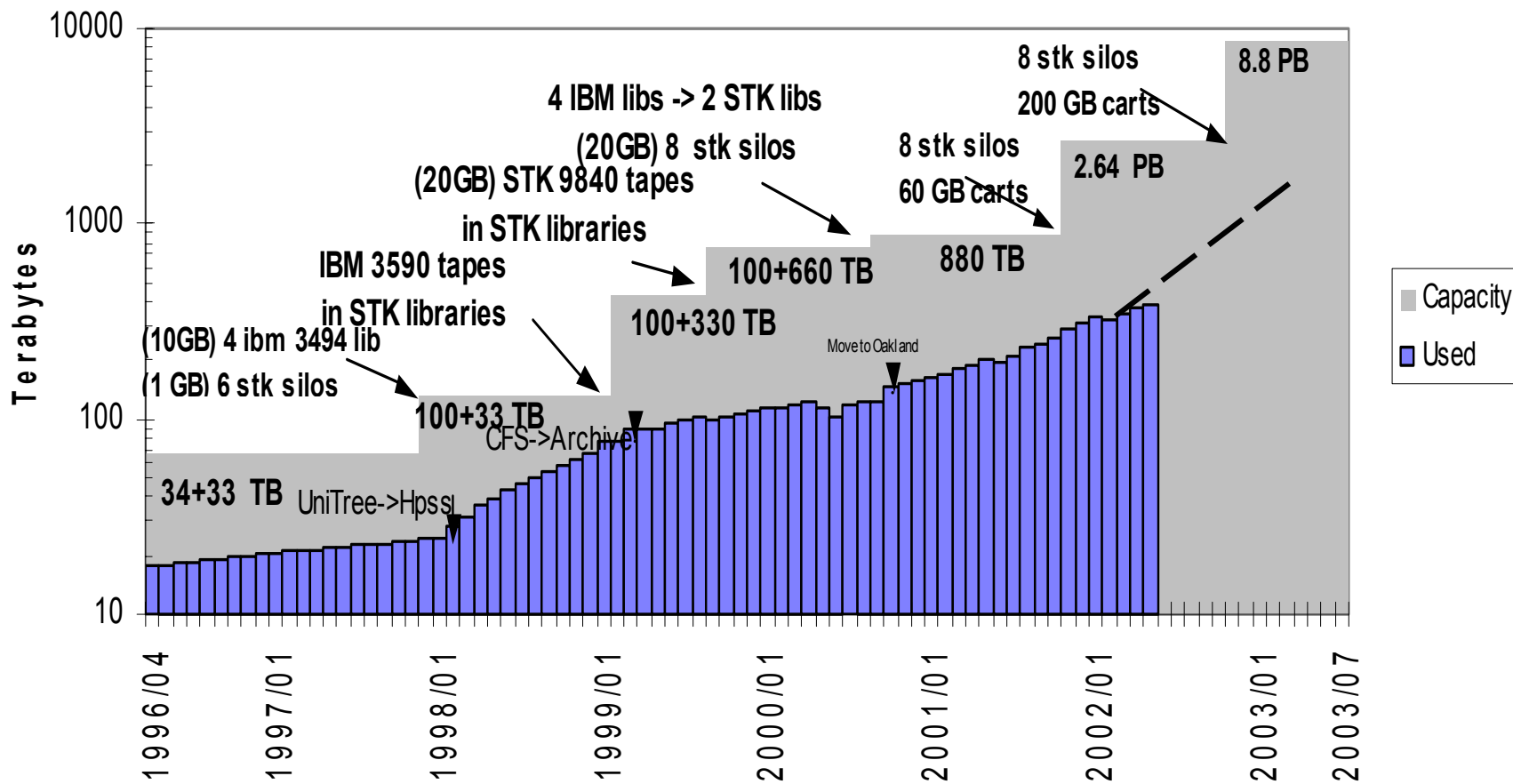
**WAN Traffic 25TB**  
HEP/QCD  
Climate  
Astrophysics

**PDSF Cluster 10TB**  
HEP/QCD  
Astrophysics  
Nuclear Physics

# Nersc Storage Data & Capacity



Total Capacity and Data



## **Projects Completed:**

**HSI Upgraded to V2.6.2**

**One Production System converted from 4.1.1.3 to 4.3.3**

**Local mods to pftpd to reject clear text password logins**

## **Planning:**

**Add 20 TBs more disk cache (total = 30TBs)**

**Move core servers to faster bigger machines**

**Tape drive upgrade from 60 to 200 GBs**

## **Planning & Dreaming**

**Prototype WAN NERSC mover at PNNL**

**Grid Authentication added to HPSS daemons**

**Group of Linux machines to look at**

**HPSS linux mover**

**XFS backend to HPSS**

**MRAFS to XFS to HPSS prototype**

**Grid interfaces to storage data**

**Application interfaces to data**

**HSI enhancements and pki auth**

**Parallel File System backend to HPSS**

**More Interfaces to HPSS : Web, Grid, Applications,  
PFS backend  
Support for multiple security models.**

**Import/export capability: Improve WAN performance  
some ideas**

**Integrate new network technologies with movers**

**Add mover affinity to support remote movers.**

**Push or Pull data to movers (firewalls)**

**Add multiple parallel transfers to & btw daemons.**