Data Storage & Management

X-Ray Facility

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Current Data

Home

- ~1 dataset a week
- ~1.5 GB a week
- ~15 GB a quarter
- Data needed half year

Synchrotron

- ~4 trips a year
- ~30 GB a trip
- ~60 GB in half year
- Data needed half year

Total storage ~150 GB/year

Future Data

Home	Synchrotron
Remain about same	Will increase
~1 dataset a week	~6 trips a year
~1.5 GB data a week	~30 GB a trip
~15 GB a quarter	~90 GB half year
Data needed half year	Data needed half year

Total storage ~250 GB/year

Problems

- Raw and processed data scattered across platforms, machines, and groups
- Inadequate disk capacity and disk failure
- No central way to process or archive data
- No failsafe mechanism to protect data
- FireWires get full and fail due to transport

Solution

- Dedicated Network Attached Storage (NAS)
- Protect data with RAID 5 and tape
- Half year of all data available anytime
- Older data archived in tapes
- Centrally maintained
- Access and space for each group
- Process at Facility or home lab

Option 1

NAS400m | 1 TB

Snap4500 | 1 TB

CP3100 | 160GB | DDS-5

NAS2000: $5,500 or

Snap4500: $5,500 and

CP3100: $2,100

Total: $16,000 (w/ hardware)

= 1 year KLB's SER-CAR share

Option 2

Snap2200 | 500 GB

NAS200d | 500 GB

DAT72 | DDS-5

Snap2200: $2,500 or

NAS200d: $2,500 and

DAT72: $1,500

Total: $9,000 (w/ hardware)

= ½ year KLB's SER-CAT share