

20-Jun-06

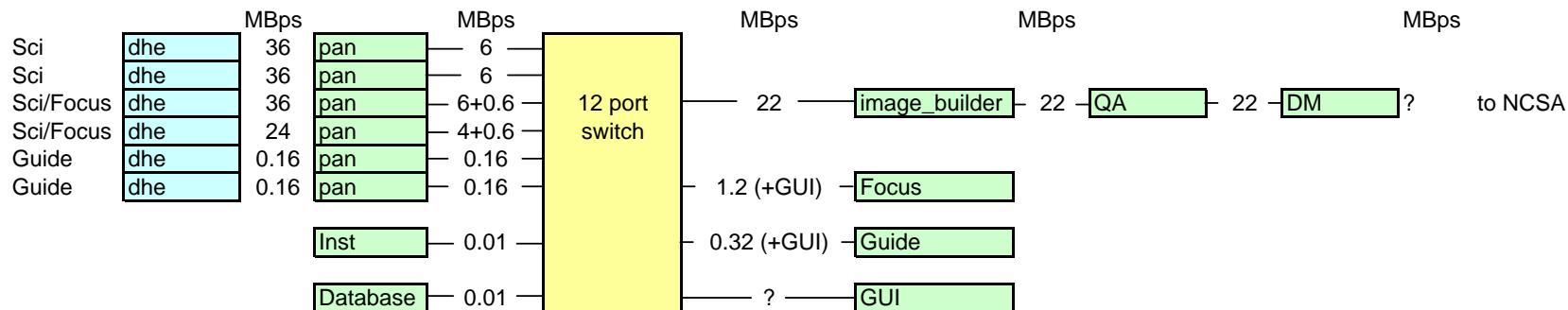
M. Haney

Two "architectures" to fit Jon Thaler's SISPI block diagrams

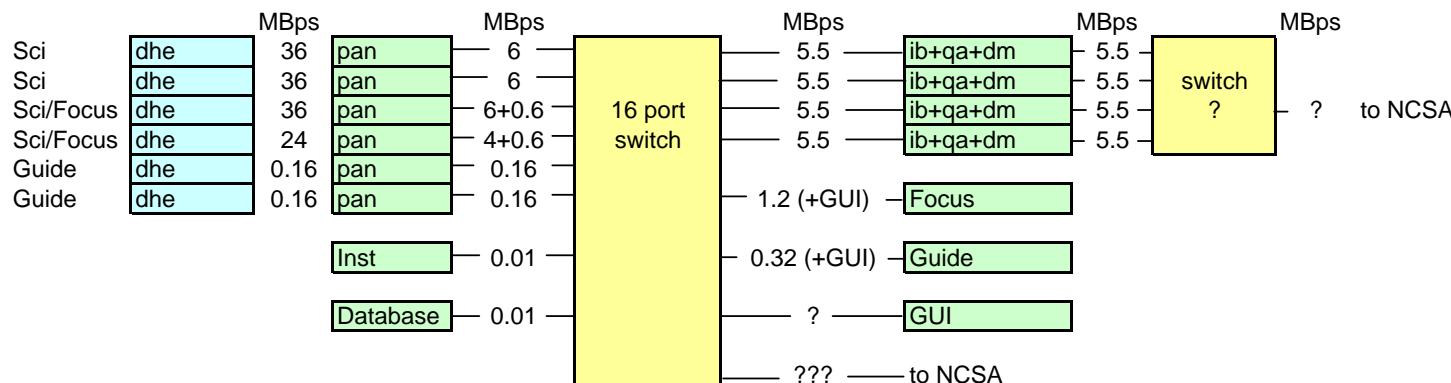
"Simple" attempts to follow the diagram more or less as-is

"Commodity" attempts to use less expensive networking (100MbE instead of GbE)

Simple



Commodity



#### Assumptions

dual NIC (on a server node) is "cheap"	\$0	Gateway
effective data rate for GbE	30 MBs	wild guess
effective data rate for 100MbE	4 to 6 MBs	web search
typical storage per (server) node?	1 to 2 Tbyte	Gateway
24PORT 10/100/1000 GBIT SWITCH	\$500	Linksys
data rate to disk?	150 MBs 20-50 MBs 66 MBs	SATA (1.5Gbs) typical/random, Maxtor ATA ATA-66 (ATA-133 available)

#### Questions

- total bytes per night? 
- could "N" ib+qa+dm nodes be sufficient for storage? (N TBytes)  
or is SAN/NAS needed?
- data rate to NCSA?  
will one switch suffice? 