RHIC/USATLAS Computing Facility Overview

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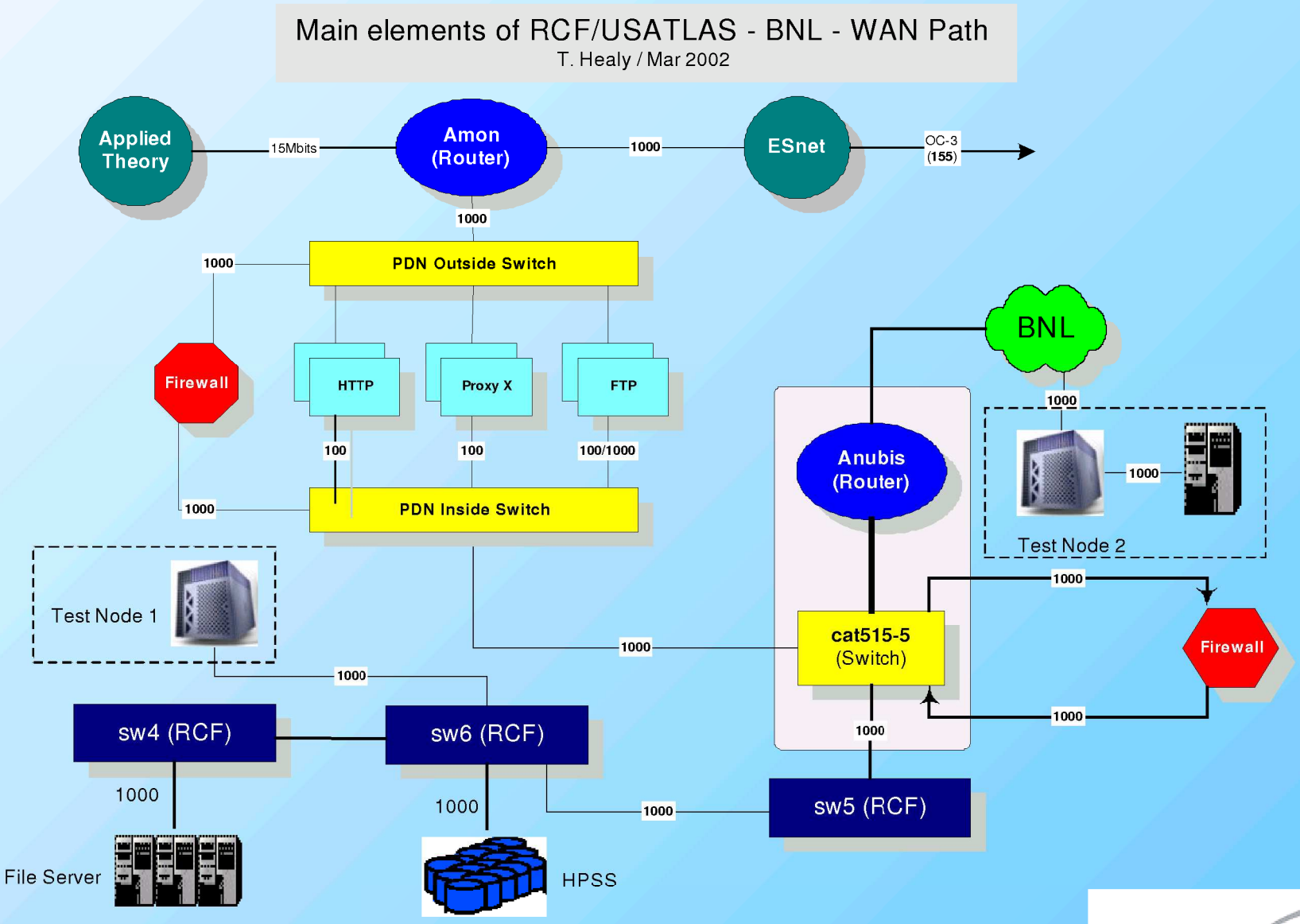
Overview

- BNL network infrastructure
- RHIC/USATLAS network infrastructure/Facility Layout
- Disk Storage System/NFS/AFS
- HPSS
- Linux Farm
- Grid Computing Environment

BNL Network Topology



RCF Gigabit Snapshot

http://net1.rhic.bnl.gov:8100/RcfPortGraph/RcfGig.js

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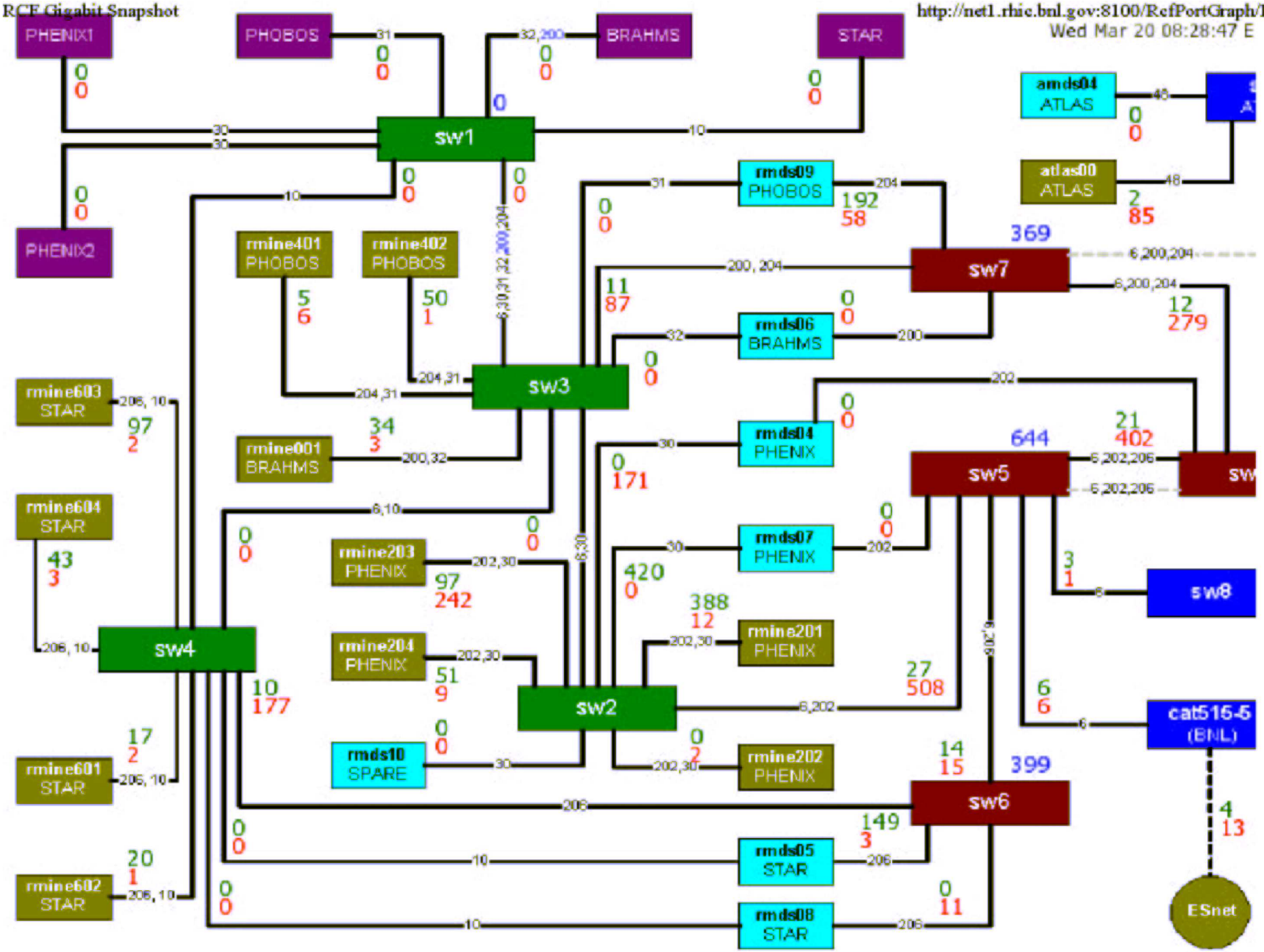

BLUE = *Out from switch,* ***GREEN*** = *Into switch All values Megabits/Sec.*

Disk Storage/NFS

Manufacture	Size	InterFace
ZZYZX	23 TB	SCSI
MTI Technology	33 TB	Fiber Channel
Data Direct Network	12 TB	Fiber Channel

NFS Server: Sun Enterprise 450 4 CPU, 4GRAM, 2 Fiber Channel, 2 Gigabit Ethernet card

Distribution

STAR 17TB, PHENIX 17TB, BRAHMS 4TB, PHOBOS 4 TB, ATLAS 2TB
(12 TB disks will be purchased soon).

Disk Storage System/AFS

Capacity 536 Gbytes

Two afs servers, each has 6 73G SCSI Disks which are in RAID 5 system.

File servers: AIX RX6000 Model 170. 333Mhz CPU

HPSS

Tapes: 9840 (50GB), 9940(60GB), about 7000 tapes

Movers: IBM RS6000, H70,H80 (Rack Mounted), 780 (tower)

- STAR movers: H70, H80
- PHENIX movers: H70 and H80
- BRAHMS mover: H70
- PHOBOS mover: H80
- ATLAS mover: 780

Linux Farm Overview

Mostly rack-mounted systems

642 dual-CPU systems with 597 GB of RAM and 37 TB of local disk

Listed as 3rd largest cluster in Clusters Top500 site
(http://clusters.top500.org)

Used for mass processing of RHIC data

Nodes subdivided by experiment

Further subdivided into CAS and CRS nodes

Linux Farm Hardware

Brand	CPU (MHz)	Memory (MHz)	Disk (GB)	Quantity
ASL	200	512	18	8
Dell	300	256	5	21
Alta	333	256	5	6
IBM	400	256	9	21
VA Linux	450	256-1024	9-120	134
VA Linux	800	512-1024	9-120	148
IBM	1000	512-1024	18-144	292