The HiROC and HiCAT
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HiROC Computer Facility

1 FLOOR PLAN
LEVEL 1

Cooling:
2 6-ton fan coil units

Backup power:
50KW generator

Security:
Elevator keylock
Stairwell door locks
Computer room door lock
Facility details

- FM200 fire control system.
- Computer floor is 6 inches of concrete covered with static dissipative tile.
- Clipped drop ceiling.
- Designed for 3 sets of 4 72U racks, 3 12KVA UPSs
- Maximum power dissipation in room is 45KW (12 tons cooling spec’ed), redundant chilled water coolers.
- 240 Category 6 network connections throughout building
- 24 pair “fiber triangle” in between Kuiper Space Sciences and CCIT. Tested at 10Gb/sec.
HiCAT hardware support during ATLO

- PIRL (Planetary Image Research Laboratory) computing facilities presently used for testing of HiCAT.
- MySQL server running on Sun Enterprise 3500.
- New MySQL server to be installed on SunFire V210 dedicated to HiRISE.
- 2TB SATA array available for data storage, catalogs, locally attached to Sunfire system, dedicated to HiRISE.
HiCAT Support during Ops

- Dual database servers attached to Fiber SAN.
- Catalog backed up on mirrored RAID array, working image possibly completely in memory on HiCAT servers.
- 1Gb (at least) connection to internal network. Trunked?
- Fully redundant failover operation.
- Access to HiCAT catalog server via filter application to provide extra security?
- Remote backup site?
The HiROC

HiRISE Operations Center (HiROC)
- Components FY 06 unless otherwise noted.
- All external sites communicate with HiCAT via request interface.
  - Access to all HiRISE data.
  - Authenticated access to target planning database.
  - Co-I access guaranteed via "traffic shaping" at router level.
- Processing engines outside firewall are used for generating specialized "on the fly" data products for HiWEB.

- 15 dual-CPU processors (FY06)
- 15 dual-CPU processors (FY07)
- 15 dual-CPU processors (FY08)

HiCAT Data Slave Database Engine Command & Control, FTE

HiCAT Data Server Database Engine Command & Control, FTE

Switch

Firewall/router

Switch

Firewall/router

Network uplink

World

HiROC staff systems

2 Web Servers (FY06)

4 processing engines (FY06)

2 processing engines (FY07)

External Cache

Applications

Tape Library

DVD Printer

Router

SOCN

JPL

Co-I sites

Public知识分子 & Displays