RHIC/USATLAS Grid Computing Facility Overview

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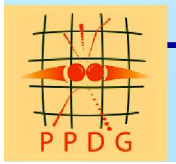
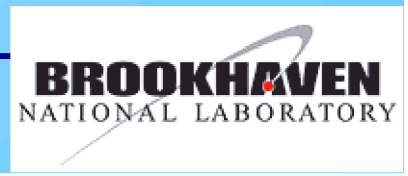
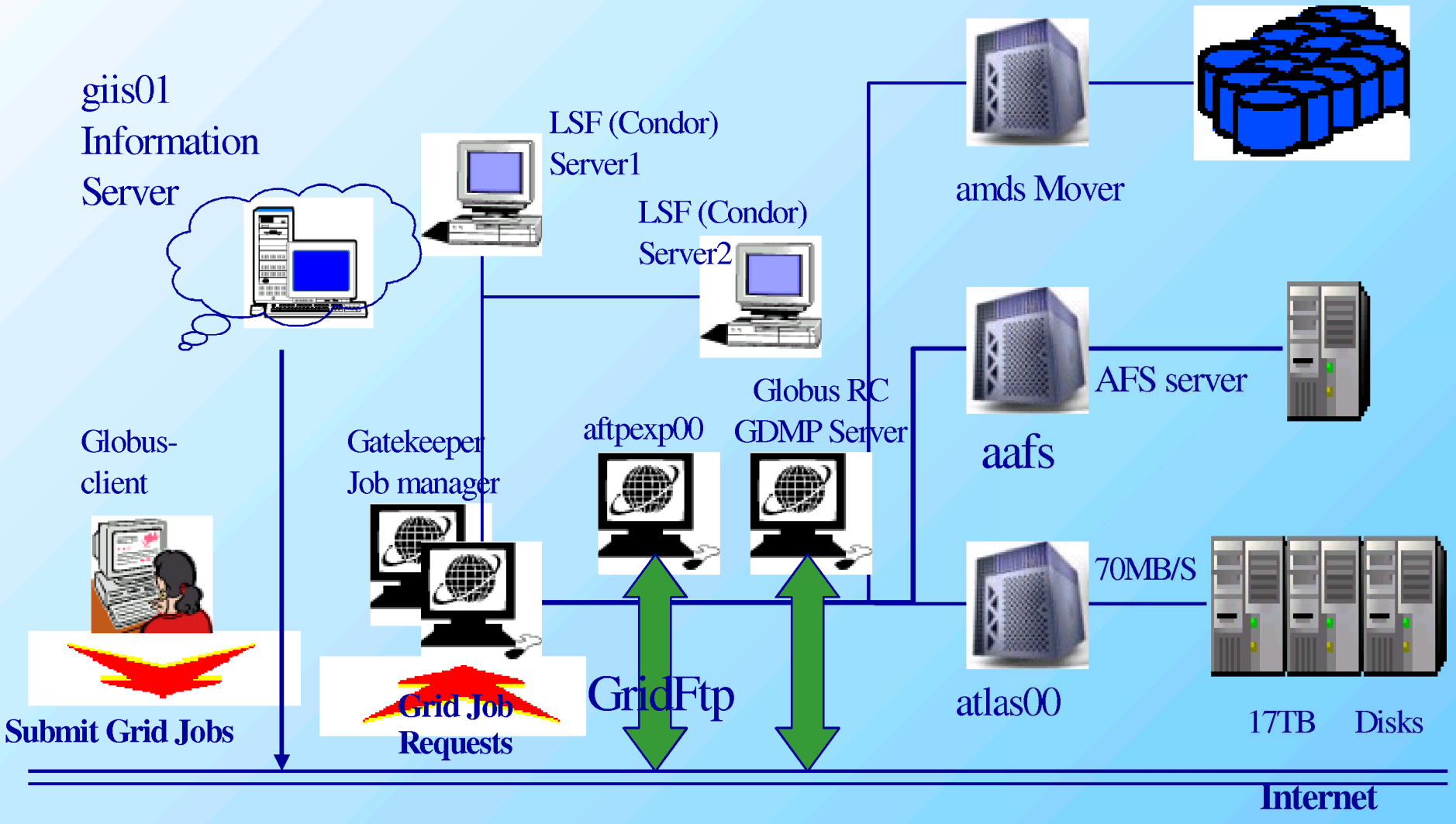




Overview

- US ATLAS Computing Facility Overview.
- Star Computing Facility Overview.
- Future Plan

BNL USATLAS Grid Configuration



BNL USATLAS site status

hardware and software configuration

- List of principal gatekeeper and specialized gatekeepers
  - gremlin.usatlas.bnl.gov:
    - Dual PII 550, 18GB local disks, Fast ethernet
    - Redhat 7.2,Globus 2.0 Beta suite, Condor, lsf software. BU:ATLAS packages
  - spider.usatlas.bnl.gov:
    - Dual PIII 700, 36GB raid disks, Gigabit Network connection
    - Redhat 7.2, Globus 2.0 suite, Globus Replica Catalog, Patched version of GridFtp which supports stable parallel data transfer.
    - GDMP 3.0.11.
  - Aftpexp.bnl.gov
    - PIII 800, 72 GB Cheetah SCSI, Dual gigabit network connection
    - Redhat 7.2, Globus Replica Catalog, Patched version of GridFtp.
  - Giis01.usatlas.bnl.gov
    - BNL MDS site organization server, Backup USATLAS giis server.
    - Participate ivdgl testbed
  - BNL VO Server.

Continued

computational cluster (type, size, queues)

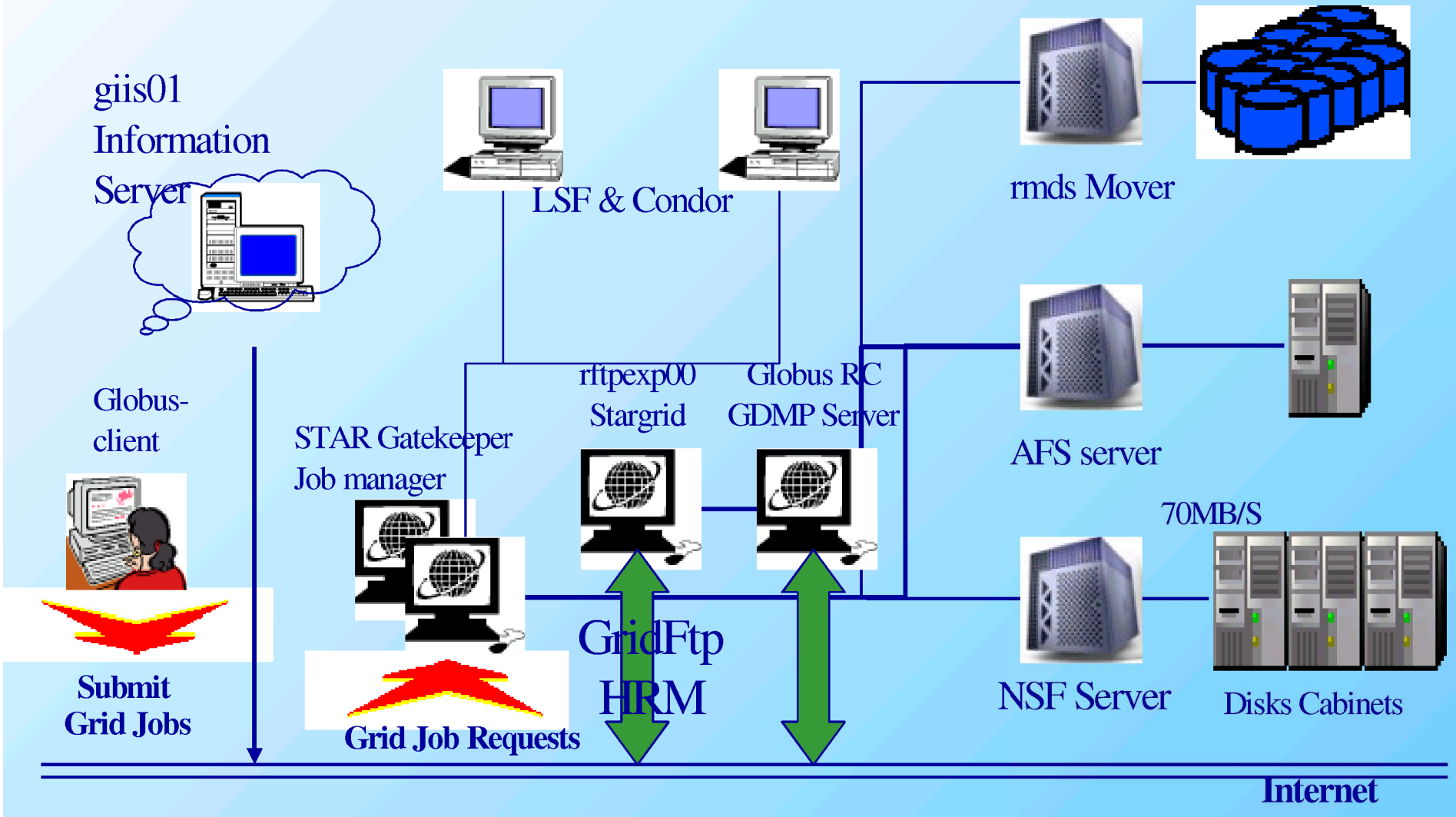
- lsf, two worker nodes (Dual 700Mhz, 9GB), can be scaled up to 50 worker nodes.
- condor, two worker nodes (Dual 700Mhz, 9GB),

user and account model: each user has NIS account. Some of Grid users are mapped to grid_a (group account), some of users are mapped to their local accounts.

software environment:

http://www.acf.bnl.gov/UserInfo/Facilities/Grid/bnl-atlas-pacman-installation.html

STAR Grid Configuration



BNL site status

hardware and software configuration

- list of principal gatekeeper and specialized gatekeepers
  - Stargrid01.rcf.bnl.gov:
    - Dual PII 450, 62GB local disks, Fast ethernet.
    - Redhat 6.2,Globus 2.0 suite, Condor, lsf software.
    - HRM software.
  - Stargrid02.rcf.bnl.gov:
    - Dual PIII 1.4GHz, 146GB raid disks, Dual Gigabit Network connection
    - Redhat 7.3, Globus 2.0 suite, Globus Replica Catalog 2.1, GDMP 3.0.11.
    - Patched version of GridFtp 1.0 which supports stable parallel data transfer.
    - HRM Software
  - rftpexp.bnl.gov
    - PIII 800, 68 GB SCSI, Dual gigabit network connection
    - Redhat 7.1, Patched version of GridFtp 2.1.
  - Giis01.usatlas.bnl.gov
    - BNL MDS site organization server.
    - Participate ivdgl testbed
    - MDS 2.0, 2.1

Current and Future Works

List and brief description of Grid related R&D project your site (and people) are participating in or supplying resources

- Deploy HRM & SRM: storage resource management. Can be used to replica data from HPSS to another HPSS, Dantong
- HPSS enabled GridFtp. Enhance GridFtp to copy files from/to HPSS, Dantong
- Facility (Grid) Monitoring, use home grow monitoring tools and Ganglia to monitor the local fabrication (http://130.199.81.28/ganglia/), integrate it into MDS, Jason Smith and Dantong Yu
- Network research: network performance monitoring, tuning.

Work on difference network tools, iperf, netperf, network weather server.

Near future plans for upgrades and projects:

Deploy VDT 1.1.2, increase the size of Grid lsf and condor pool to all available atlas computing nodes.

Continue on Grid Monitoring Project.