Sandia National Laboratories HPSS

HUF 2011
Site Presentation*

October 18, 2011

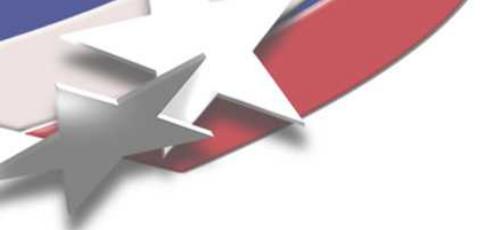Bloomington, Indiana

By:

Connie Sutton

Agenda

- **Cielo**
- **Lynx**
- **64 Bit/Linux upgrade progress**
- **HSI/Transfer Agent (TA) Enhancements**

Cielo

- **Tri-lab Discom WAN Performance**
  - **Network Monitoring (eg. Iperf)**
- **Partnered with LANL/LLNL to install and tune data transfer tools**
- **Increased storage requirements**

Sandia
National
Laboratories

- **Dedicated transfer cluster**
  - **Joint project with cluster admins**
- **Shared site global filesystems**
- **Tuned HPSS/LAN/WAN performance**
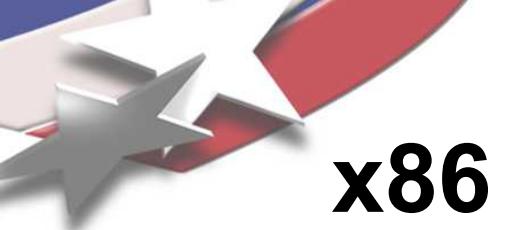- **Data Transfer tools in one location**

Current Hardware

- **2 AIX Core servers(32bit)**
  - **AIX 5.3**
  - **IBM 7078-6C4, 2 1.4GHz, 8GB memory**
- **4 Disk Movers**
  - **RHEL WS 5**
  - **IBM X3650?, 2 DC 3.0GHz, 6GB memory**
  - **Qlogic 2460?**
  - **Chelsio S310 LR**

Sandia
National
Laboratories

Current Hdwe Cont'd

- **20 Tape Movers**
  - **RH 5 Client (64)**
  - **Dell R610 4 QC 2.93GHz, 6GB memory (32bit HPSS)**
  - **Qlogic 2460**
  - **Chelsio S310 LR**
- **2 Oracle SL8500**
  - **4 Expansions (6500 cells)**
- **20 Titanium 10K A Tape drives**

Sandia National Laboratories

x86 64bit Hardware Upgrade

- **Core Server**
  - **IBM X3950M2**
    - **4 QC 2.13GHz 16GB memory**
- **Disk Mover**
  - **IBM X3650M2, 4 QC 2.93GHz, 24GB memory**
- **Tape Mover**
  - **Dell R610, 4 QC 2.93GHz, 6GB memory**

Future

- **SpectraLogic LTO Libraries**
  - **T200**
  - **T50e**
  - **LTO 5 Drives**
- **8Gb FC Disk Cache**
  - **Shifting away from direct to tape transfers**
- **Replace T10K A drives**

Sandia National Laboratories

HSI/Transfer Agent (TA) Enhancements

- **HSI 4.0**
  - **Multi-thread transfers**
  - **Host < -- > Host (non HPSS HSIgw)**
  - **HPSS < -- > HPSS improved performance**
- **Transfer Agent (TA)**
  - **Multi concurrent TA transfers (planned)**

Questions