Pleiades
The Titan Clustered Information Server

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CS Faculty Lunch

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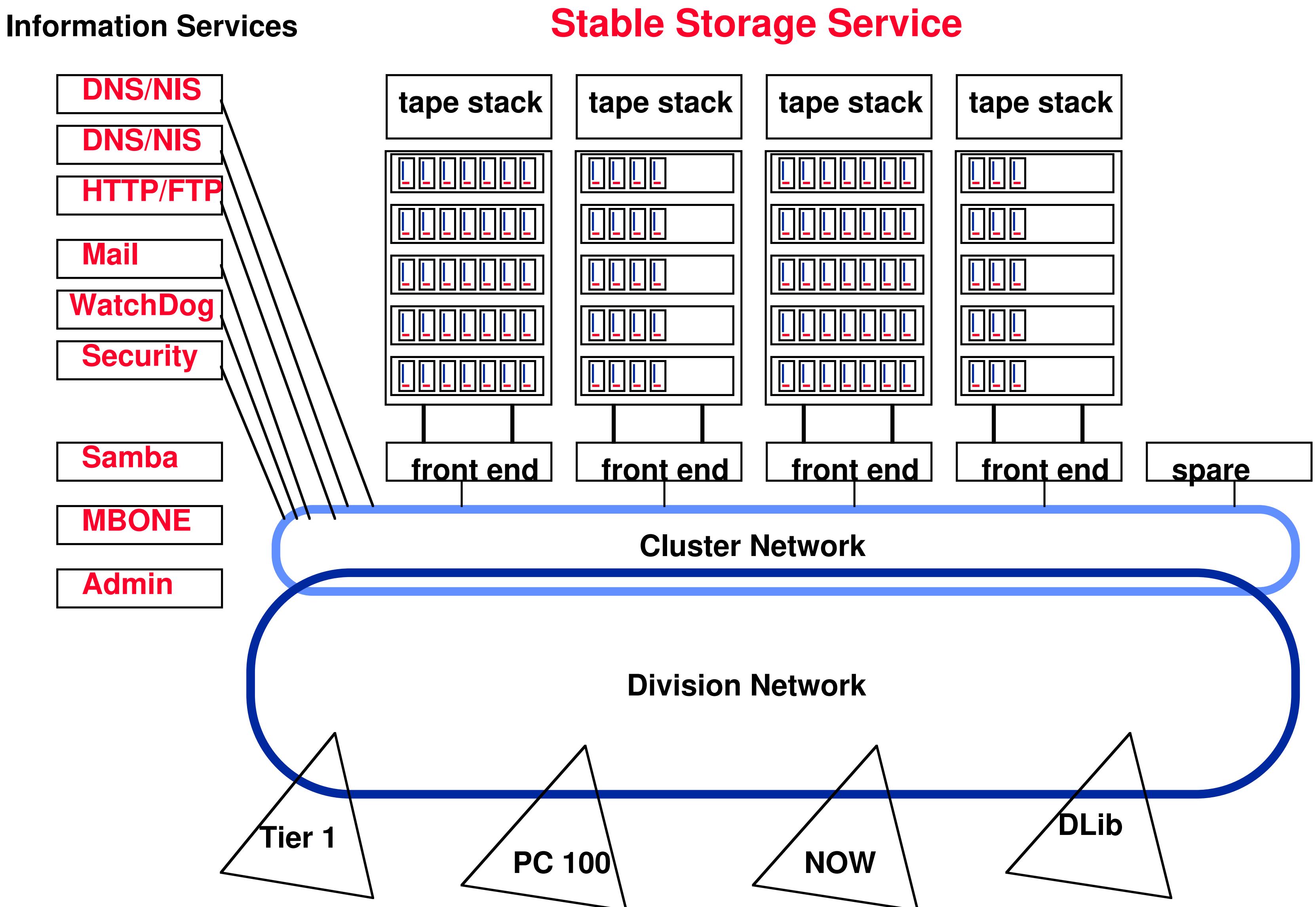
Goals

- We depend on a number of divisional services
- Critical storage and information services need to be
  - up essentially all the time
  - fast
  - Incrementally scalable
    - without faculty guessing all the details
  - cost effective
  - allow experimental services to be deployed within the infrastructure without duplicating it
  - rational
- Hardware is relatively cheap, *people time* is of the essence
  - employ basic cluster technology *ala* NOW and inktomi
  - dedicate functions to gain isolation and reliability

Titan Clustered Information Server



290 Soda

Nuts and Bolts

- **Basic storage unit**
  - **UltraSparc host with**
    - » **ATM, 100bt Ethernet,**
    - » **2 disks,**
    - » **2 UltraSCSI interfaces**
  - **RSM 2000 storage array**
    - » **5 SCSI chains with 7 drives each**
    - » **2 UltraSCSI RAID controllers (~ 300 GB)**
  - **800 GB tape stacker (6 MB/s)**
- **Server units**
  - **Sparcstations and UltraSparcs with ATM and 2 disks**
- **All units appear on all subnets using ATM virtual LAN emulation**
  - **build out the switched network from there**
- **backup bandwidth scales with capacity**

Levels of Defense

- **Independent Modular Units**
  - **lose some, not all**
- **Dedicated function**
  - **avoid exciting latent bugs**
  - **especially due to interactions among services**
- **RAID**
- **Dual Controllers**
- **Mirrored system disks**
- **Spares**

What this means for you?

- Services are UP and Fast
- Your investment in AUSPEX disks will be carried over
- You may buy new storage at 400 $/GB
  - up front
  - by the month
  - barter for $ of a particular color
  - buy capability no physical units
- Need to eliminate the current hard binding to physical machines
  - /home/orodruin/h/bair/wilensky
- AMD (automounter) provides a level of indirection
- Rational naming scheme seen from clients
  - /home/cs/wilensky
  - /share/cs/dlibs
- Add capacity => adjust mapping