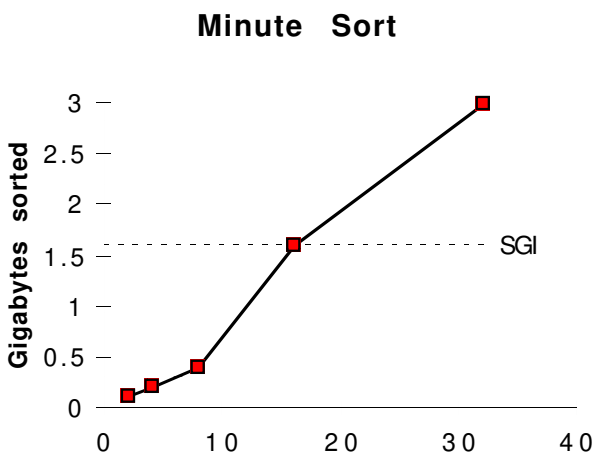
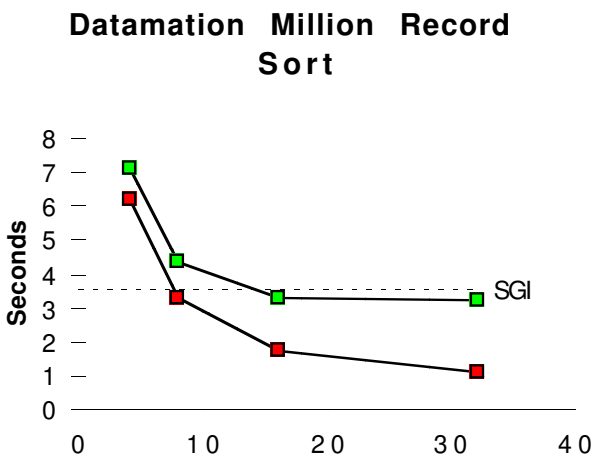
World-Record Disk-to-Disk Sort

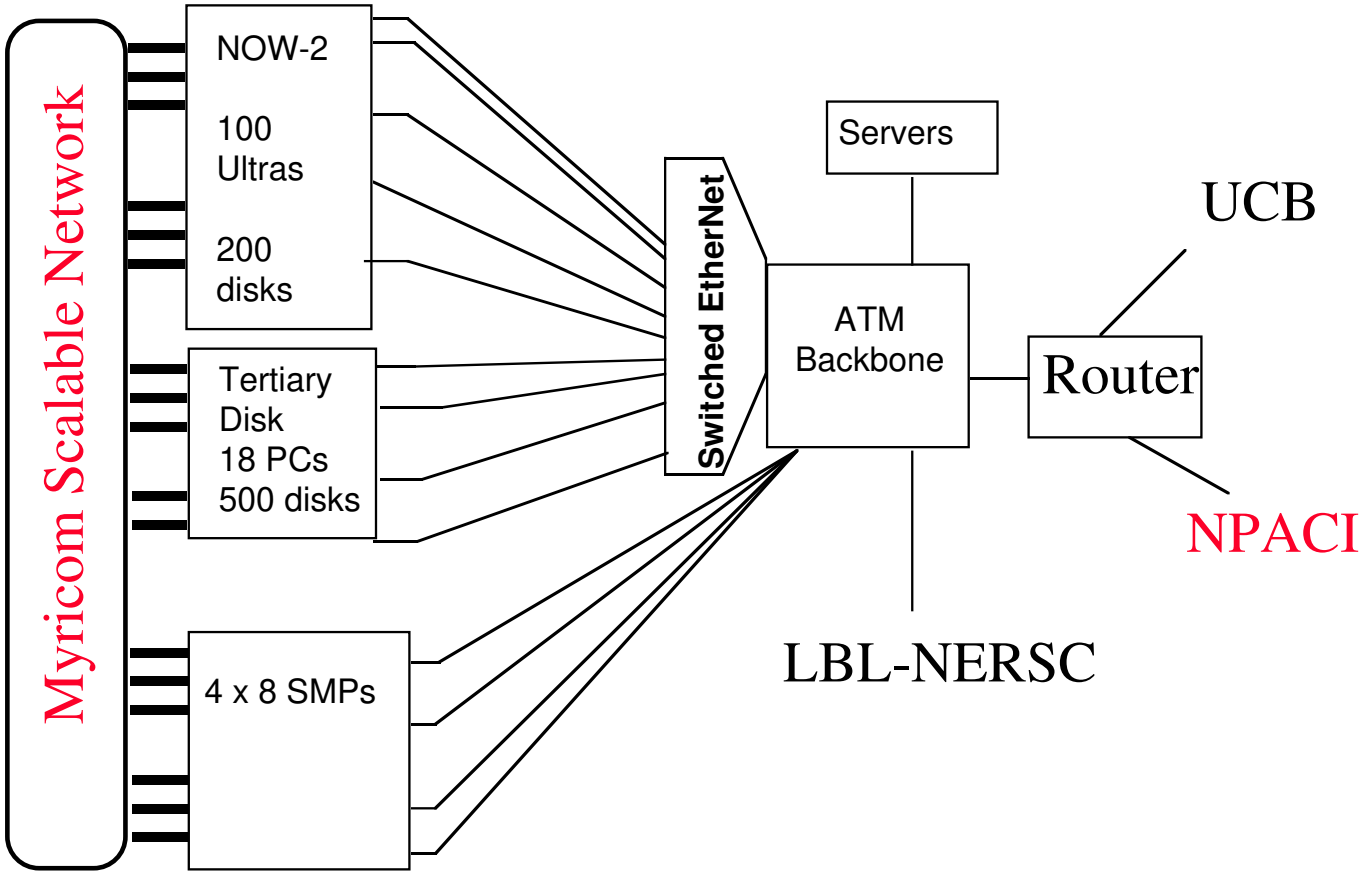




Toward Immense Disk Clusters

Clusters of SMPs (CLUMPS)

Overall System Configuration



Toward a Web O.S.

- Build on basic technology developed for NOW to provide a powerful operating environment for advanced web applications
- Global (URL-based) file system
  - imports home environment to NOW and vice versa
  - build services on a cache-coherent global file system
- OS "sandbox" isolates foreign entity
- Smart (java-based) browsers provide scalable, interactive front-end

- Rent-a-server when you're "too hot"
- Cooperative web caching around the planet
- Interactive services

Summary

- **Clusters / NOWs do represent a new class of system architectures**
  - **incrementally scalable**
  - **for throughput, capacity, or availability**
- **Low overhead comm. interface needed to exploit emerging interconnects**
  - **conventional APIs easily layered on top**
  - **support parallel clients, parallel servers, persistant apps**
- **Cluster technology key to a web OS**
  - **provide services**
  - **global operating environment for applications**