RAD Lab
Computing Resources

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RAD Lab Cluster

- 40 Sun Microsystems X2200 M2 {r1-r40}
  - 2x Dual-Core AMD Opteron 2214 @ 2.2GHz
  - 4GB RAM
  - 1 250GB SATA Drives
  - GigE Network
  - Debian "etch" Linux 2.6.18 (64-bit)
  - OOB Management
    - Xen available
    - VMWare Server available
    - VMWare ESX doesn’t work w/ SATA drives
    - AMD PowerNow!?
“Thumper”

- 1 Sun Sun Fire X4500 {thumper}
  - 2 Dual-Core AMD Opteron 285
  - 16GB RAM
  - 48 500GB SATA
  - 4x GigE Network
  - Solaris
  - ZFS
  - 24TB in 4U*
Niagara

• 1 Sun T2000 {x50}
  – 1Ghz 8-core, 32-thread, Sparc
  – 8GB RAM
  – 2 73GB 2.5" SAS Drives
Niagara 2

- 1 Sun XXXXXX
- 1.4 Ghz 8-core, 64-thread, Sparc CPU
- 64GB RAM
- 2.5" SAS Drives
IBM BladeCenter

- 12 Dual Processor 3GHz Xeon blades
- 2 Storage Blades
- L4 switches

- Currently used to host Xtrace infrastructure
- Ask George Porter for details
• Cyber DEfense Technology Experimental Research
  – Based on Emulab (Utah)
  – 5-6 Ethernet Interfaces per server
  – At ISI (USC) and UC Berkeley
  – 300+ Servers
• For “approved” security projects
  – PI = Anthony Joseph
• Public “High-Performance” Computing
  – PSI Cluster
    • 64 Dual Socket Single Core Xeons
    • 20 Dual Socket Quad Core Xeons
  – CITRIS
    • 96 Dual Socket Single Core Itanium 2
• Other Private Clusters
  – i3 (Ion Stoica)
    • 15 Dual Socket Single Core Xeons
• Datacenter in a 20’ Shipping Container
  – 7 Racks ~= 250 Servers
  – Ready to go*

* Does not include Servers, Ethernet, 200KW 3-phase AC, 45°F chilled water loop, physical security, or somewhere to park it.
• Rack Based Cooling
  – 20+KW per Rack!
  – 45°F chilled water loop
  – Optional rack or row containment

• For the EECS Instructional Cluster (Google/Intel)
  – 26 8-core Xeon servers
  – Map Reduce
  – Multicore
Wrong!
• Millennium Accounts & Information:
  – http://www.millennium.berkeley.edu/
  – http://radlab.cs.berkeley.edu/

• Questions, etc.
  – radlab-support@cs.berkeley.edu