Hardware
National Institute for Computational Sciences (NICS): Computing Resources for the Future at the National Institute for Computational Sciences

Presented by

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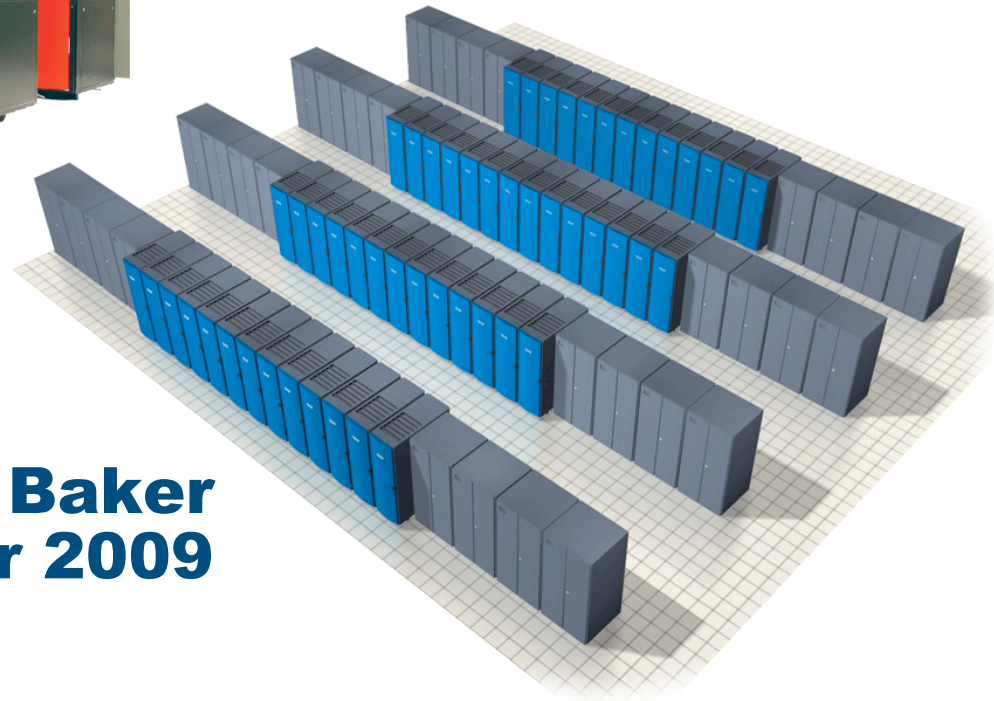
Enabling Transformational Science

SC07

UT

NSF

OAK RIDGE
National Laboratory

Proposed
Cray 170 TF system

Proposed Cray Baker system for 2009

Schedule	
November 2007	NSF access of DOE system
March 2008	Delivery of XT4
May 2008	In production
2009	Delivery of "Baker" system
2010	Upgrade "Baker" CPUs

Networks

- 20-year IRU on dark fiber to Atlanta and Chicago

- Capability of up to
  - 192 10 Gb/s connections
  - 96 40 Gb/s or 100 Gb/s connections

- Connected to every major research network
  - TeraGrid: OC-192
  - Internet2: OC-192
  - CHEETAH: OC-192
  - ESnet: OC-192 with OC-48 backup link
  - UltraScience Net: 2xOC-192
  - Gloriad: OC-192
  - NLR: 2xOC-192

ESnet
TeraGrid
UltraScience Net / NLR
Internet2
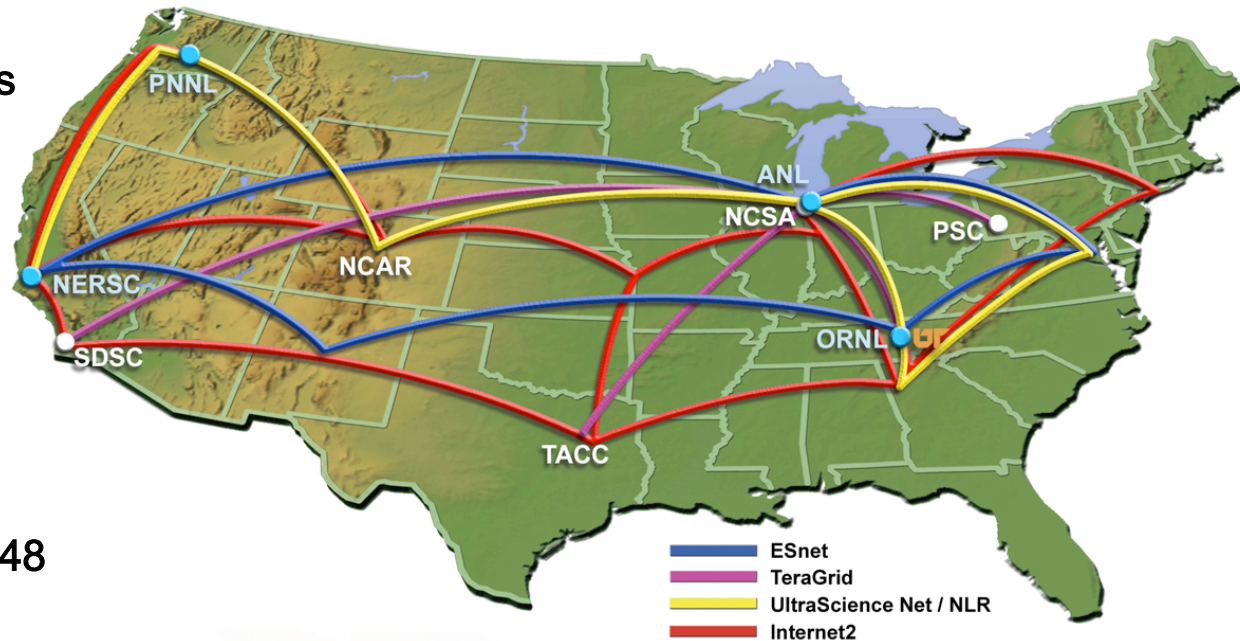
Facilities Computer Center

Part of a three-building 365,000 ft^2 complex built in 2003

- 35,670 ft^2 building

- Includes 40,000 ft^2 raised-floor computer room on two floors

- Staffed 24/7/365 by operators, security, electricians, and HVAC mechanics

Joint Institute for Computational Sciences Building

- 52,000 ft^2 building

- Offices, classrooms, and laboratories

- Distance-learning infrastructure

Contact

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