

Petascale Hardware at NICs

Phil Andrews
Project Director, NICs



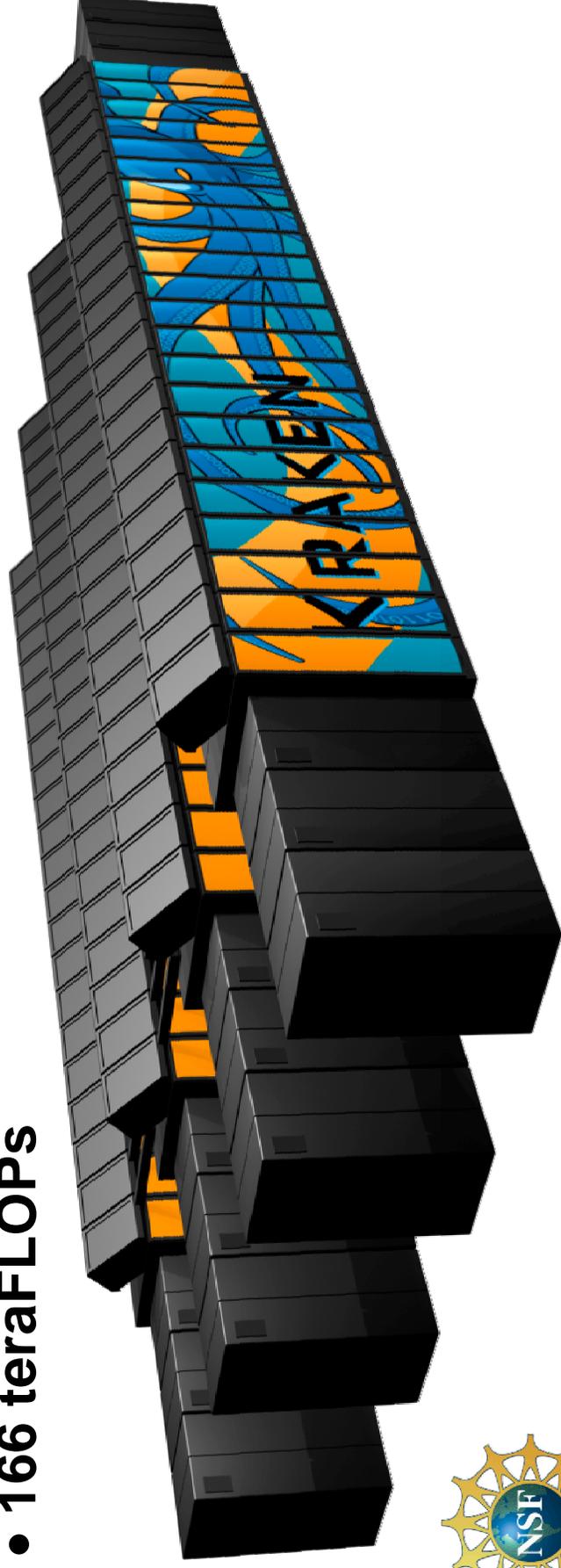
National Institute for Computational Sciences

- NICS is a collaboration between the University of Tennessee and ORNL
- Awarded the NSF Track 2B (\$65M)
- Phased deployment of Cray XT systems (culminating in ~1 PF in 2009)

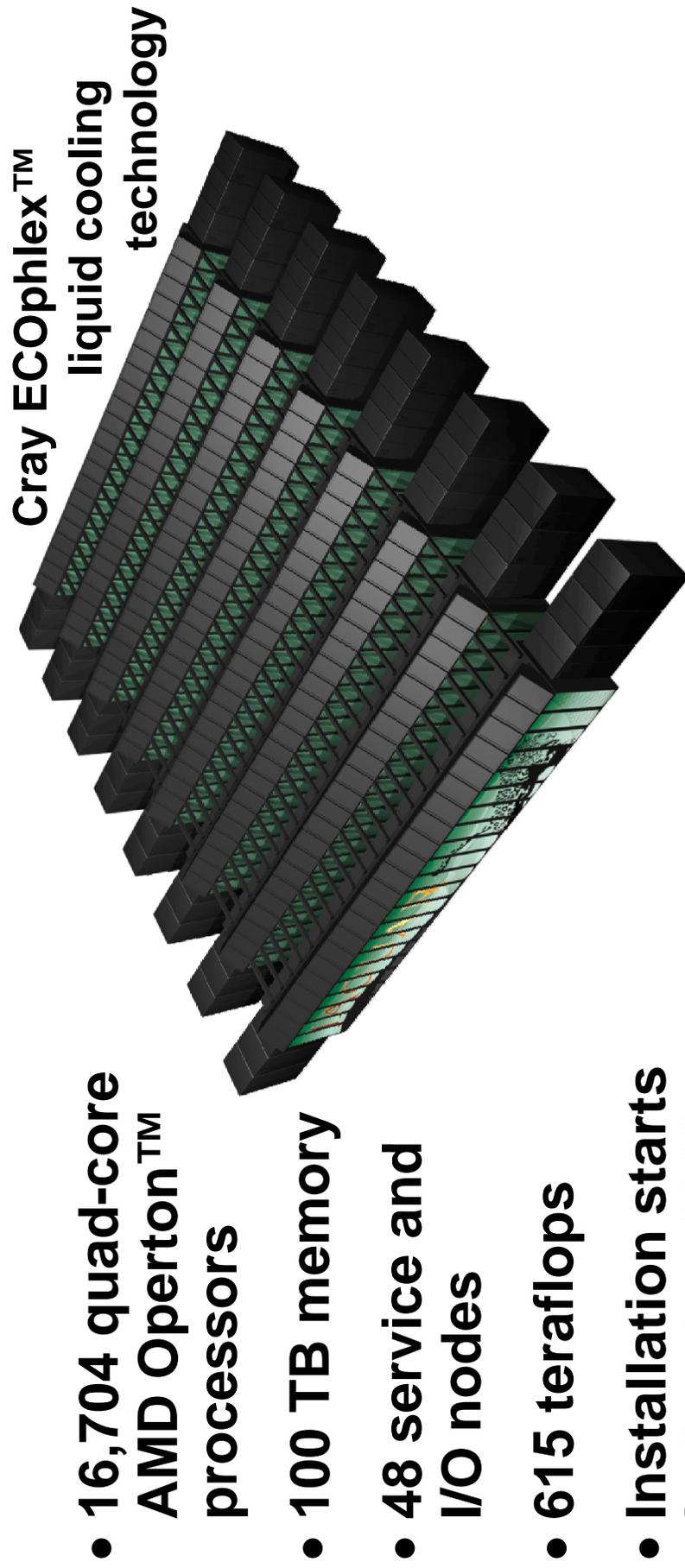


Kraken – Cray XT4 July 2008

- 4,512 Opteron quad-core processors (18,048 cores)
- 18 TB of memory
- 48 service and I/O nodes
- 166 teraFLOPs



Cray XT5 system – February 2009



Storage infrastructure



- Sun's Lustre-based file system will provide a shared, parallel file system linked to Kraken, the Teragrid, and HPSS archives
 - Over 3 petabytes of capacity
- HPSS provides archival storage for all systems
 - 15-petabytes of capacity
 - More than 10 million files stored today
 - Doubling stored data every year



HPSS



Phil Andrews

**Project Director
National Institute for Computational Sciences
andrewspl@ornl.gov**