High Performance Computing

Managing world-class supercomputing centers

Read caption +
The Trinity supercomputer is designed to provide increased computational capability for the NNSA Nuclear Security Enterprise in support of ever-demanding workloads

13:01
Gary Grider, HPC Division Leader

The High Performance Computing (HPC) Division supports the Laboratory mission by managing world-class Supercomputing Centers.

This includes specifying, operating, and assisting in the use of both open and secure high performance computing, storage, and emerging data-intensive information science production systems for multiple programs.

About

• Expertly translate computing industry trends into a robust high performance computing environment;
• Design and operate the physical infrastructure supporting LANL’s computing needs;
• Operate and enable effective use of the full high performance computing environment;
• Leverage high performance computing systems, processes, and expertise, beyond traditional HPC, to advance innovative Laboratory scientific efforts;
• Engage in research, development, and state-of-the-art software engineering, supporting development, design, and effective use of increasingly complex large-scale data and computational environments.

Capabilities

HPC Division translates evolving HPC technologies into the assets that are deployed in the Centers as well as

• performing applied research,
• advanced software engineering,
• user support,
• facilities maintenance, and
• full-system integration
to provide the unprecedented-scale computing capabilities required to provide solutions to complex problems of strategic national interest.

Programs supported

- Advanced Simulation and Computing (ASC)
- Institutional Computing
- Other emerging Information Science programs