LEAP2 High Performance Computing at Texas State University

PERFORMANCE

338 Tflops peak; 5,808 CPU cores; 12 NVIDIA GPUs; 30 TB total memory; 48 TB aggregate SSD disk

CURRENT APPLICATIONS

Computational Biology
- Bioinformatics
- Genomics
- Proteomics
- Ecology
- Oncology

Computational Physics
- Atomic materials modeling
- Quantum molecular mechanics
- Semiconductor sims
- Epitaxial engineering
- Fluid dynamics
- Astrophysics

Common workflows
- Data processing
- Computational Chemistry
- Machine Learning
- Data science
- Cross-disciplinary data analysis

SYSTEM SPECIFICATIONS

Standard Compute Nodes (108 total)
Intel Xeon Gold 6336Y; (Ice Lake) 2.4 GHz dual socket, 24 cores/socket; 256 GB DDR4 memory, 172 GB/s memory bandwidth, 400 GB SSD disk

GPU Nodes (8 total)
4 x 1 NVIDIA A100 GPU per node; 4 x 2 NVIDIA A100 GPU per node; Intel Xeon Gold 6336Y; (Ice Lake) 2.4 GHz dual socket, 24 cores/socket; 256 GB DDR4 memory; 172 GB/s memory bandwidth; 400 GB SSD disk

Large-memory Nodes (2 total)
1.5 TB total DDR4 memory; 172 GB/s memory bandwidth Intel Xeon Gold 6336Y; (Ice Lake) 2.4 GHz dual socket, 24 cores/socket, 800 GB SSD disk

Interconnect
HDR InfiniBand; Hybrid Fat-Tree topology; 100 Gb/s (unidirectional) link bandwidth.

1.5 PB GPFS-based Parallel File System