







Aurora¹

Leadership Computing Facility
Exascale Supercomputer

PEAK PERFORMANCE
≅ 2 Exaflops DP

Intel GPU

Ponte Vecchio

Intel Xeon PROCESSOR

Sapphire Rapids + HBM

PLATFORM

HPE Cray-Ex

Compute Node

2 SPR+HBM processor;
6 PVC; Unified
Memory Architecture;
8 fabric endpoints;

GPU Architecture

Xe arch-based “Ponte
Vecchio” GPU
Tile-based chiplets
HBM stack
Foveros 3D integration

System Interconnect

HPE Slingshot 11; Dragonfly
topology with adaptive routing

Network Switch

25.6 Tb/s per switch, from 64–200
Gb/s ports (25 GB/s per direction)

Node Performance

>130 TF

System Size

>9,000 nodes

Aggregate System Memory

>10 PB aggregate System
Memory

High-Performance Storage

220 PB @ EC16+2, ≅**25 TB/s**
DAOS

Programming Models

oneAPI, MPI, OpenMP, C/C++,
Fortran, SYCL/DPC++
Python-based environments

ML + Deep learning frameworks

1: *The Computer That Will Change Everything*



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Aurora Compute Node

- 6 Xe Architecture based GPUs (Ponte Vecchio)
 - All to all connection
- 2 Intel Xeon (Sapphire Rapids) processors
- Unified Memory Architecture across CPUs and GPUs
- 8 Slingshot Fabric endpoints

