

Comet: System Characteristics

- **Total peak flops ~2.76 PF**
- **Dell primary integrator**
 - Intel Haswell processors w/ AVX2
 - Mellanox FDR InfiniBand
- **1944 Standard compute nodes (46,656 cores)**
 - Dual CPUs, each 12-core, 2.5 GHz
 - 128 GB DDR4 2133 MHz DRAM
 - 2*160GB GB SSDs (local disk)
- **72 GPU nodes**
 - 36 nodes same as standard nodes *plus* Two NVIDIA K80 cards, each with dual Kepler3 GPUs
 - 36 nodes with 2 14-core Intel Broadwell CPUs plus 4 NVIDIA P100 GPUs
- **4 large-memory nodes**
 - 1.5 TB DDR4 1866 MHz DRAM
 - Four Haswell processors/node
 - 64 cores/node
- **Hybrid fat-tree topology**
 - FDR (56 Gbps) InfiniBand (bisection)
 - Rack-level (72 nodes, 1,728 cores) full bisection bandwidth
 - 4:1 oversubscription cross-rack
- **Performance Storage**
 - 7.6 PB, 200 GB/s; Lustre
 - Scratch & Persistent Storage segments
- **Durable Storage**
 - 6 PB, 100 GB/s; Lustre
 - Automatic backups of critical data
- **Home directory storage**
- **Gateway hosting nodes**
- **Virtual image repository**
- **100 Gbps external connectivity to Internet2 & ESNet**