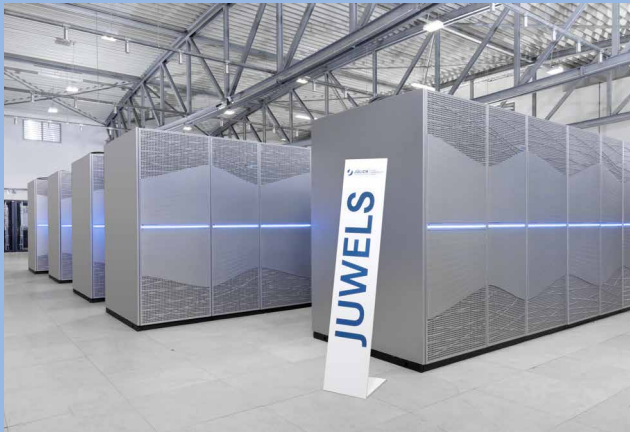


JUWELS: CLUSTER MODULE

CLUSTER MODULE IN THE JÜLICH WIZARD FOR EUROPEAN LEADERSHIP SCIENCE



JUWELS Cluster

- Versatile multi-core Cluster augmenting the highly-scalable Booster
- Designed to support a broad range of scalable CPU workloads
- Research vehicle for next-generation cluster architectures
- Project partners: Eviden, ParTec

System architecture

- Multi-core processor based Cluster module: 12 Petaflop/s peak performance in 10 Bull sequana X1000 cells
- 121,648 Intel Skylake cores, 269 TB main memory
- 100 Gb/s Mellanox EDR interconnect with fat-tree network with 2:1 pruning at leaf level
- 224 Nvidia V100 GPUs



JUWELS X1120 Compute Blade (Copyright: Eviden)

Software

- Unified software stack
- Rocky Linux distribution
- Slurm batch system with ParaStation resource management
- ParaStation MPI / Intel MPI / OpenMPI
- Intel Professional Fortran, C/C++ Compiler
- Intel Math Kernel Library



BullSequana X1000 (Copyright: Eviden)