JURECA: CLUSTER MODULE

GENERAL-PURPOSE MODULE IN CLUSTER-BOOSTER SYSTEM

Jülich Research on Exascale Cluster Architectures

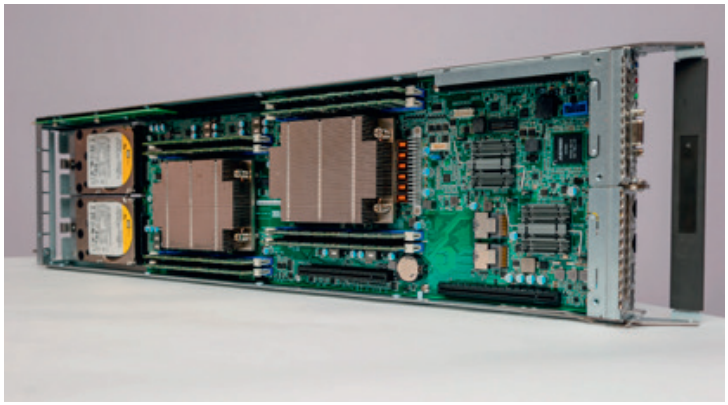
- Successor of the JUROPA system
- Cluster architecture targeting capability and capacity workloads
- Suitable for compute- and data-intense research
- Low entrance barrier for new users
- Research vehicle for next-generation cluster architectures
- Project partners: T-Platforms, ParTec

System architecture

- 2.2 Petaflop/s peak performance
  - 45,216 Intel Xeon Haswell cores
  - 150 NVIDIA K80 GPUs
- 272 TiB main memory
- Based on T-Platforms scalable V-class architecture
- 100 Gb/s Mellanox EDR interconnect with non-blocking full fat tree topology
- 100 GiB+/s storage connection to central IBM Spectrum Scale-based JUST storage cluster
- 20 Tb/s cross-module communication bandwidth to Booster module

Software

- CentOS 7 Enterprise-Linux distribution
- ParaStation Cluster Management
- Slurm batch system with ParaStation resource management
- Software Infrastructure shared with Booster module



View of a T-Platforms V-Class V210S dual-socket blade server as used in JURECA.

View of the T-Platforms V5050 chassis. Each chassis can host ten V210S or, alternatively, five GPU-equipped V210F blades.

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