## SuperMUC-NG

### System Overview

SuperMUC-NG consists of:
- **6,336 Thin compute nodes** each with 48 cores and 96 GB memory
- **144 Fat compute nodes** each with 48 cores and 768 GB memory per node

In total 311,040 compute cores with a main memory of 719 TB and a peak performance of 26.9 PetaFlop/s are available. All compute nodes are equipped with Intel Xeon Skylake processors. The internal interconnect is a fast OmniPath network with 100 Gbit/s.

The compute nodes are bundled into 8 domains (islands). Within one island, the OmniPath network topology is a 'fat tree' for highly efficient communication. The OmniPath connection between the islands is pruned (pruning factor 1:4).

In addition to the compute nodes there are 64 nodes in the Compute Cloud of SuperMUC-NG (half of them equipped with 2 GPUs each), and one huge memory node with 6 TB and 192 cores.

For details see: [Hardware of SuperMUC-NG](#).

### Documentation

**Support**
- Support and Servicedesk for SuperMUC-NG
- FAQ and Troubleshooting

**Access to System**
- Access and Login to SuperMUC-NG

**Using the System**
- Building and Running applications on SuperMUC-NG
- Job Processing with SLURM on SuperMUC-NG
- File Systems of SuperMUC-NG
  - Data Transfer Options on SuperMUC-NG
- HPC Software and Programming
  - MPI - Message Passing Interface
  - OpenMP - shared memory and device parallelism
  - Tuning and Optimization for HPC
  - see also: lrztools and lrzlib on SuperMUC-NG
  - also: use command sw-info, or command module avail
- User Guides for HPC
- Compute Cloud of SuperMUC-NG

### Courses
- Courses, Training and Events for HPC

### User Affairs

- Access and Login to SuperMUC-NG
- Application for a project on SuperMUC-NG
  - Acknowledgement of SuperMUC-NG
  - Reporting obligations on SuperMUC-NG
- HPC Calls for projects, allocations, support or funding

### Public Relations

- Gauss Centre for Supercomputing
- Public Relations for HPC (including the scientific results obtained)

### Status

- SuperMUC-NG Status
- Usage Statistics for SuperMUC-NG

### Application Labs

- HPC Application Labs

### Legal

- Data Privacy
- Rules