

16th HPC Café

09.06.2026



Agenda HPC Café – 09.06.2026

Topics for today:

- **Focus Topic: HoreKa 2 – Design, Software and Migration**
- Discussion and open floor

As usual this format is meant to be interactive.
Don't hesitate to ask questions!

HoreKa 2 – Design, Software and Migration SCC



HorreKa 2

Organizational details

- Official name: “HoreKa 2”
- **Tendering and procurement**
 - Start of tendering: April 2025
 - Contract: August 2025
- **Availability schedules**
 - Phase 1 (everything except GPU): July 2026
 - Phase 2 (GPU): September/October 2026

■ User operation schedule

- **Decommissioning**
 - HoreKa Blue + HoreKa Green
- **Commissioning**
 - HoreKa Onyx (new CPU partition): Phase 1
 - HoreKa Jade (new GPU partition): Phase 2
- **Continued operation**
 - Teal + Ruby + Blue Extra Large Memory

Reminder: Technical Data Overview

Compute

- 164 CPU nodes
 - Computing power: 15 TFlop/s
 - Bandwidth: 980 TB/s
- 75 GPU nodes (NVIDIA GB200)
 - Computing power: 110 TFlop/s
 - Bandwidth: 650 + 7100 TB/s

Storage

- Home
 - Capacity: 6 PiB
 - Bandwidth r/w: 65/52 GB/s
- Work
 - Capacity: 14 PiB
 - Bandwidth r/w: 152/121 GB/s

Power consumption and cooling

- ~600 kW water (85%)
- ~100 kW air (15%)

New CPU-Partition

CPU nodes „Onyx“

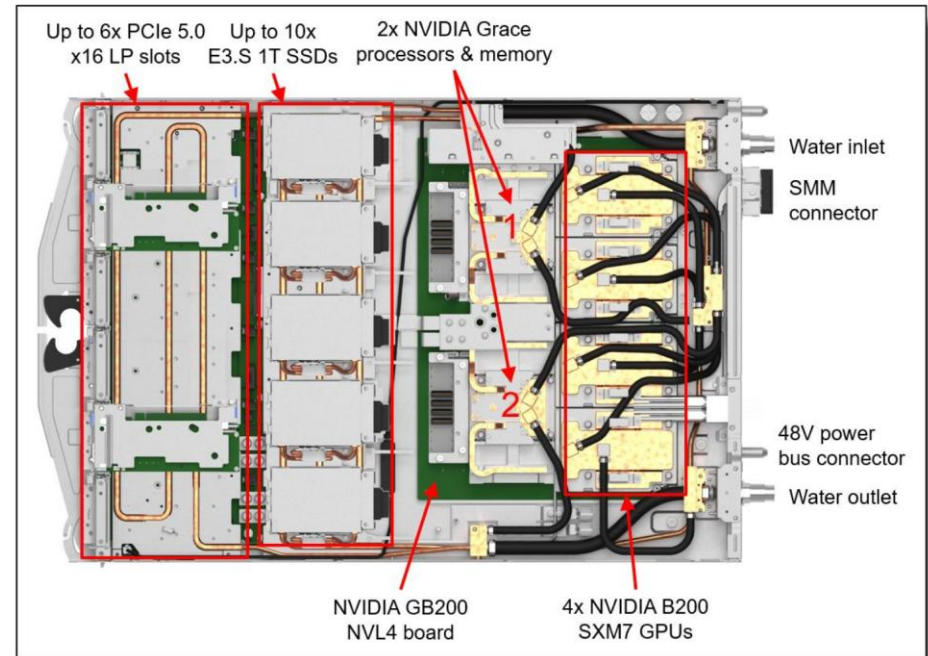
- 2x AMD EPYC 9655 with 96 cores
- 768 GiB RAM
- 1.92 TB NVMe
- Interconnect: 200 Gbit/s Infiniband
- DLC



New GPU-Partition

GPU nodes „Jade“

- 1x NVIDIA GB200 NVL4
- 2x Grace CPU and 4x B200 GPU
 - 72 cores and 480 GiB RAM per Grace CPU
 - 186 GiB VRAM per B200 GPU
- 15.36 TB NVMe
- Interconnect: 4x 200 Gbit/s Infiniband
- DLC



Storage

Main Storage System

- IBM Storage Scale ESS 6000
- Home, Work, Project
- NVMe + HDD Tier

Available filesystems

- \$HOME
- Project directory
- Workspaces
- \$TMPDIR
- LSF Online Storage
- BeeOND

Changes

- \$HOME associated to a person
 - ... not to a project

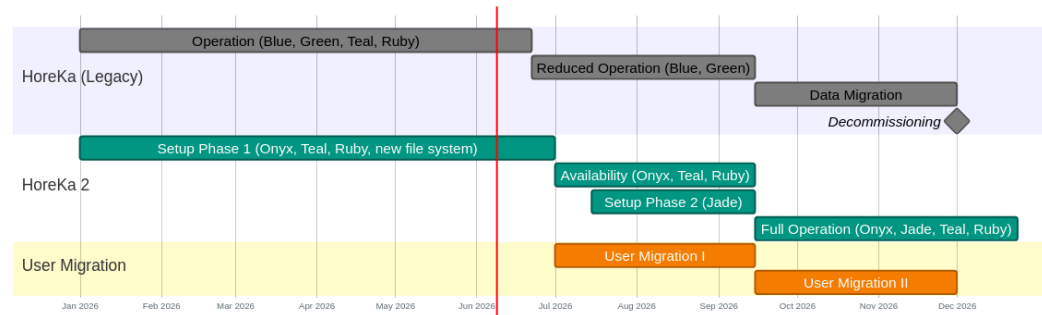
Software Modules on HoreKa 2

- Non-commercial software will be provided/built via EasyBuild
- Module software is still Lmod
- Naming of software modules has changed

Migration plan from HoreKa to HoreKa 2

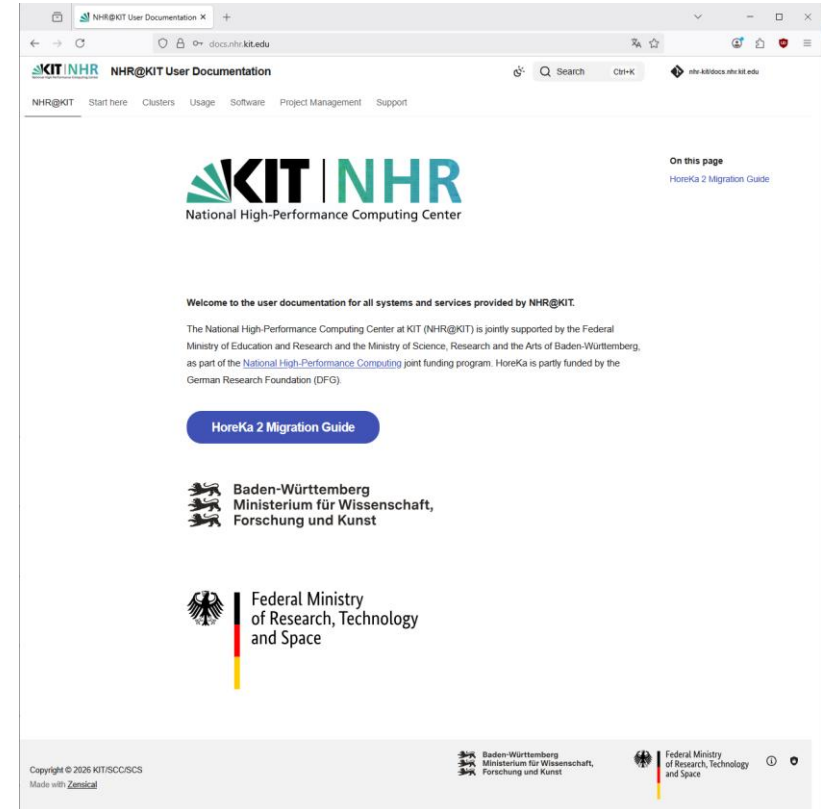
- Migration will happen in two phases
 - Phase 1: Starting with availability HoreKa Onyx
 - Recommended migration to HoreKa 2 for projects with a high CPU demand
 - Projects relying on large amounts of GPU resources should stay on HoreKa
 - Phase 2: Starting with availability HoreKa Jade
 - Migration for all remaining projects
- In both cases
 - We take care of migrating the compute time
 - You need to migrate all necessary data

More information in the [userdocs](#)



Update for the User Documentation

- Working on revising and updating the user documentation
 - Modified, logical structure
 - Avoid duplicate pages
- Will be available here:
<https://docs.nhr.kit.edu>
 - Still password protected
 - “userdocs” / “docs”
- Contributions are welcome!
 - <https://gitlab.kit.edu/kit/nhr-kit/docs.nhr.kit.edu>
- Availability: Starting with Phase 1



Time for Discussion



Next HPC Café

- Next HPC Café planned for **2 July 2026, 10 am**
- Reminder: regular timeslot for the HPC Café
 - Every **first Thursday of the month 10:00 am**
- As always, open to hear ideas for topics and talks, from ...
 - Yourself
 - Colleagues and collaborators
 - Also just expressions for “topics of interest”