HSUper workshop - 28.09.2023

High Perfomance Computing & Introduction to HSUper

Place: H1 / seminar room: 1002 (Komplexraum)
registration: workshops-hpc-bw@hsu-hh.de

Schedule

Time	*Content*	*Presenter*
8.30 – 8.45	Welcome, workshop objectives, and introduction of participants	Philipp Neumann
Block I: HPC-Introduction		
8.45 – 9.00	Introduction to high performance computing, node vs. cluster	Philipp Neumann
9.00 – 9.45	Introduction to the Linux terminal, basic commands and file management, using environment variables	Piet Jarmatz
9.45 – 10.15	*Coffee break*	
Block II: HSUper Cluster / CBRZ		
10.15 – 12.15	• Data transfer to and from HSUper (e.g. SCP, WinSCP, git, wget, sshfs) • Understanding system resources: ◦ Storage systems, disk quotas and filesystem paths ◦ Obtaining hardware information, e.g. available RAM, CPU cores ◦ Infos about current login node utilization ◦ Available nodes, partitions, cluster utilization (job queue)	Piet Jarmatz
12.15 – 13.15	*Lunch break*	
13.15 – 13.45	HSUper-Tour: Container, compute racks, cooling system	Hauke Preuß & Piet Jarmatz
Block III: Writing, Submitting and Using Slurm Jobs		
13.45 – 15.30	• How to use the module system to load installed software • Interactive compute node allocations • Writing and submitting Slurm jobs, understanding job status, handling jobs	Piet Jarmatz
15.30 – 16.00	*Coffee break*	
Block IV: Installing and Using Application Software and GPUs		
16.00 – 17.15	• Loading and installing software with Spack • Running graphical applications with X11 forwarding	Hauke Preuß
17.15 – 17.45	How to use the GPU nodes (PyTorch AI example)	Yannis Schumann
17.45 – 18.00	Conclusion	