

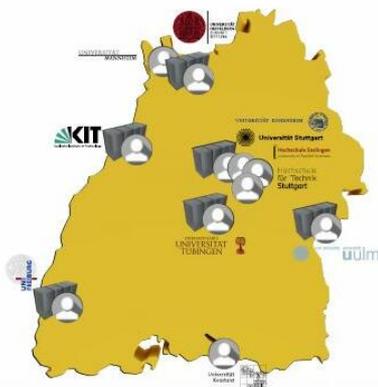
Workspaces/file systems on the bwUniCluster



bwHPC support team Hohenheim

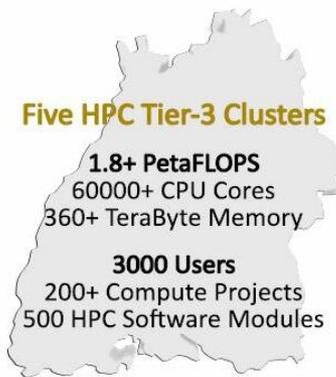
bwUniCluster in a nutshell

Baden-Württemberg Federated HPC



- Federated Clusters**
Science customized multicluster infrastructure
 - Federated Support**
Competence centers, Tiger teams, HPC courses
 - Federated Software**
Unified user environment, Federated software mgmt.
 - Federated Services**
Federated identity mgmt., Wiki/Information portals
- bwHPC Governance**

Baden-Württemberg High Performance Computing

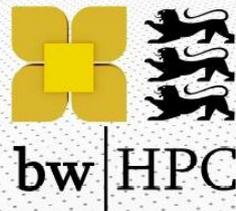


Five HPC Tier-3 Clusters

1.8+ PetaFLOPS
60000+ CPU Cores
360+ TeraByte Memory

3000 Users
200+ Compute Projects
500 HPC Software Modules

www.bwhpc.de



- The bwUniCluster ist part of the Baden-Württemberg High Performance Computing infrastructure, funded by the state of Baden-Württemberg
- Provides computational ressources to members of several universities (including Hohenheim) - free of charge
- Many computations per user at the same time (in parallel) by distributing them across many computation nodes/cores

Type	\$HOME	workspaces	\$TMP
What for	Software, configuration files, final results	Intermediate (temp.?) results, scripts for your analysis, sbatch scripts	Any I/O data, temporary results, software sources
Don't use for	Intermediate/temp. results, avoid writing many files (I/O operations)	Very many I/O operations	Anything permanent, \$TMP deleted after your job ends (you copy what you want to keep to a workspace,...)
Info	Each user at most 1TiB ¹ , auto backup	Up to 3x 60 days available, up to 40 TiB ¹ designed for parallel access + high throughput to large files	File system (SSD) linked to computation resources you reserved, 960 GB - 6.4 TB per job

1 TiB \approx 1.1 TB

Further file systems on demand: BeeOnd, LSFM. More details: [bwHPC-Wiki](#)

- Workspaces can be created by any user (=you)
- It is NOT in your home directory (even in a different physical object)
- By default, only the user creating it has any read/write/execute access. This can be changed by managing [ACLs](#) (access control lists).
- You can have multiple workspaces (e.g. one for each project)
- You can copy from/to a workspace, it is a normal directory

Let's create one for today (and tomorrow), see **ws_allocate -h** for all options/arguments

```
$ ws_allocate schul1 2
```

Name of workspace

Duration (in days)

- `$ ws_allocate <workspace name> <duration in days>` creates workspace
- `$ ws_list` lists all of your workspaces
- `$ ws_find <workspace name>` shows the path to a workspace
- `$ ws_extend <workspace name> <duration in days>` extends a workspace's lifespan for the given duration (each workspace can be extended 3x)
- `$ ws_release <workspace name>` deletes a workspace

For each command `<command> -h` shows all options

Sharing data: Use access control lists to share workspaces

https://wiki.bwhpc.de/e/Workspace#Sharing_Workspace_Data_within_your_Work_group

Exercises:

- Change to your working space directory
- Thinking question: What do you do when you cannot extend a workspace further, but still want to keep its data?
- After a few days you log in again. How do you navigate to your workspace?