

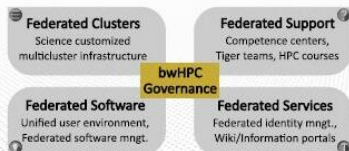
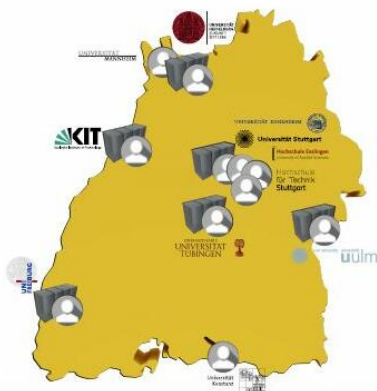
bwUniCluster -first steps



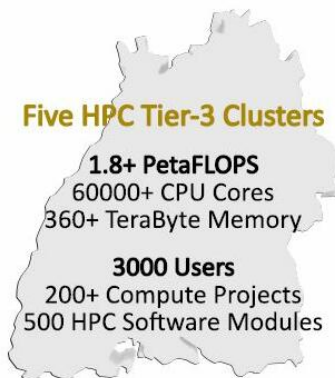
bwHPC support team Hohenheim

bwUniCluster in a nutshell

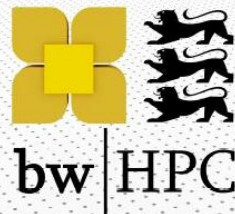
Baden-Württemberg Federated HPC



Baden-Württemberg High Performance Computing



www.bwhpc.de

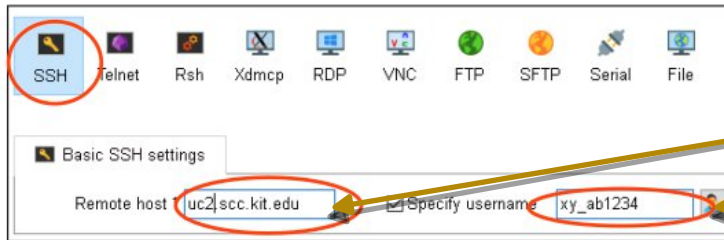


- The bwUniCluster ist part of the Baden-Württemberg High Performance Computing infrastructure, funded by the state of Baden-Württemberg
- Provides computational ressources to members of several universities (including Hohenheim) - free of charge
- Many computations per user at the same time (in parallel)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

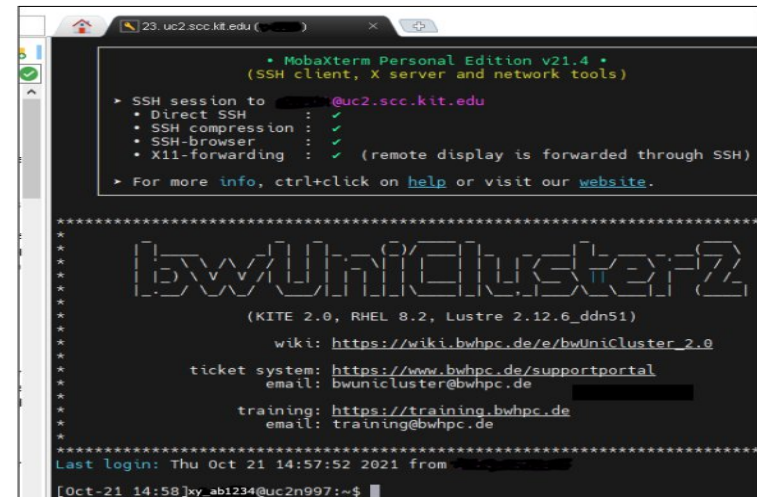
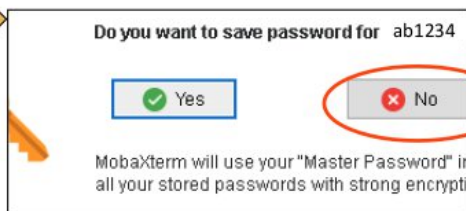
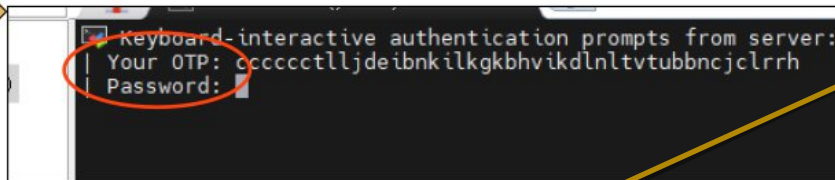
Access the cluster (Windows, via MobaXterm)

Prerequisites: user name **ho_name**, service password bwUniCluster, (T)OTP from 2FA device, command line, MobaXterm terminal, inside the Hohenheim network

1. Open SSH tab
2. Log in on host **bwunicluster.scc.kit.edu** with your own user name **ho_name**



1. Enter (T)OTP and your service password
2. **DON'T** save password (safety...)
3. You're in!



[illegible]

After login: You start on the command line in your home directory

- For using the bwUniCluster, you will usually write scripts of bash commands to execute.
- Simple easy-to-use text editor: **nano <filename>**. If you open a non-existing file it will create this file (as soon as you save within nano). Usually available on any Linux.
- **nano** has not many functions/options. A much more performative editor is **vim** (which we will not need today)
 - **vim <filename>** opens the file
 - There is a built-in 25-30 min tutorial of vim, which is started by command **vimtutor** (resp. **vimtutor -g <language>**)

You will need your 2FA device again
(and you need to be in the university network)!

- Linux/MacOS: Use scp
 - From bwUniCluster to your computer
scp <ho_name>@bwunicluster.scc.kit.edu:<remote file> <local file>
 - From your computer to bwUniCluster
scp <local file> <ho_name>@bwunicluster.scc.kit.edu:<remote file>
- Windows: via MobaXterm

After entering the command, you will be prompted for an (T)OTP and your service password

non-Hohenheim users: User name has different prefix

- Under linux systems (e.g. Ubuntu): You can mount a folder from bwUniCluster on your local computer via **sshfs** - see details
 - In German: <https://wiki.ubuntuusers.de/FUSE/sshfs/>
 - In English: <https://embraceubuntu.com/2005/10/28/how-to-mount-a-remote-ssh-filesystem-using-sshfs/>
- You can copy code/software to the bwUniCluster and compile programs. However, you have no sudo rights