

This course material is free: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation. It is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

More details about the GNU General Public License can be seen at:
<<http://www.gnu.org/licenses/>>.

Tutorial: BwUniCluster 3.0/HoreKa

Workspaces

Simulation programs need memory for reading input data and write the results. On all supercomputers of SCC this functionality is presented by the workspaces. The concept is – the Home-directory is for installing additional software packages which are not available in our modules or for your own scripts, while the workspace(s) are the place to prepare and run OpenFOAM.

1. What is a workspace?

A workspace is a temporary directory used for calculations which is kept on a central file storage. Workspaces are meant to store data for a limited amount of time, usually for 60 days. After this time the information is deleted (you receive daily email warnings 1 week before this). The duration of a workspace can be prolonged 3 times for other 60 days.

Caution!: the data on the workspaces is not backed up (it is a so called 'scratch space') and might be lost if it comes to any problems concerning the storage system. Therefore, it is a good idea to copy (duplicate) the important information elsewhere, e.g. on your local HDD or on the bwDataArchive, bwSyncAndShare etc.

Note: If, – after 3 prolongations - the information on the workspace is still needed (e.g. for postprocessing), you should create a new workspace with a different name and move your data on the new workspace. This new workspace you can again prolongate it 3x60 days!

2. Creating a Workspace

You can create a workspace from anywhere on the cluster using the following command:

```
$> ws_allocate [name of the workspace] [lifetime in days]
```

For example:

```
$> ws_allocate myworkspace 60
```

Which generates the following response:

```
$> Info: creating workspace.  
$> /pfs/work9/workspace/scratch/ka_xz5860-myworkspace  
$> remaining extensions : 3  
$> remaining time in days: 60
```

The workspace will be then automatically deleted after 60 days. The yellow part “ka_xz5860” is specific for each user. You can work with the workspace like with every other directory, e.g you can go there using:

```
$> cd /pfs/work9/workspace/scratch/ka_xz5860-myworkspace
```

Advice: It is a good practice to give shorter names with version numbers like:

```
$> ws_allocate myws1 60
```

You can create more than one workspace. You can display the list of all your workspaces using the following command:

```
$> ws_list
```

which will list your workspaces along with their names, the dates of their creation, the remaining time until automatic deletion and the number of available extensions.

3. Accessing your workspace

You can find your workspace using the following command:

```
$> ws_find [name of the workspace]
```

This command simply displays the path of the directory of the chosen workspace. The same task is done also by “ws_list”.

You can access your workspace using the command:

```
$> cd [path of the workspace]
```

(For example: cd /pfs/work7/workspace/scratch/username-myworkspace)

Note: you can access your workspace directory also directly using programs for file transfer like WinSCP.

4. Extending the lifetime of a workspace

You can extend the lifetime of the workspace using the following line:

```
$> ws_extend [name of the workspace] [number of days]
```

For example:

```
$> ws_extend myws1 60
```

One week before the expiration of a workspace an automatic message will be sent directly to your university email address reminding you of the fact that the workspace is soon to be deleted. Reminder message will be re-sent to you every day until either the workspace has been deleted or its lifetime has been extended.

5. Deleting a workspace

You can delete a workspace using the following command:

```
$> ws_release myws1
```