Tutorial: BwUniCluster 2.0/HoreKa
Workspaces

Simulation programs need memory for reading input data and writing the results. On all supercomputers of SCC this functionality is presented by the workspaces.

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 prolongated 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.

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 copy (or move) your data on the new workspace.

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:

$> Workspace created. Duration is 1440 hours.
$> Further extensions available: 3
$> /work/workspace/scratch/username-myworkspace-0

The workspace will be then automatically deleted after 1440 hours.

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

$> ws allocate myws1 60

At any time 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 availible 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.

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
```

which extends the lifetime of the workspace by 60 days.
The default number of days is the number of days used in the last extension. In our case simply inputting the following command after the first one:

```
$>  ws_extend myws1
```

will result in the lifetime of the workspace being extended by additional 60 days.
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. Said 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 myws
```