High Performance Computing

File system

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Current working directory

In the terminal, you work relative to your current working directory, which you can query by the command pwd.

All commands that you enter are understood relative to your current working directory.

Change directory

To change your current working directory use the command cd. The directory that you provide to this command usually is relative to your current one.

Directory tree

The totality of all directories can be viewed as a tree, each node of which corresponds to a directory.

Some directories can be referred to by special characters or strings:

Current directory can be referred to by `.`, a dot.

Parent directory can be referred to by `..`, two dots.

Home directory can be referred to by `~`, a tilde.

Root directory can be referred to by `/`, a slash.

Previously current directory can be referred to by `-`, a dash.

Inspecting directories

To list all files and directories in the current one, you can use the command `ls`.

The command `ls` also accepts one or more directories as arguments. It then prints the content of all these.

To print the tree of all subdirectories and the files in there, you can use the command `tree`.

When writing out a path you can use the Tab-key to complete what you typed or obtain a list of possible completions, if there is several.

Making a directory

To make a new directory, you can use the command mkdir.

This allows you to create one directory, but if you need to create a chain of directories, you have to provide the flag −p.

Moving files

To move a file or directory, you can use the command mv. The first argument is the source, the last one is the destination.

Instead of merely one source, you can provide several.

The destination can be an existing directory followed by a slash /. Then mv will move the source into that directory, preserving its name.

Moving a file to another file in the same directory is usually understood as renaming the file.

Copying files

To move a file, you can use the command cp. The first argument is the source, the last one is the destination.

Instead of merely one source, you can provide several.

As in the case of mv, the destination can be an existing directory followed by a slash /. Then cp will copy the source into that directory, preserving its name.

To copy directories, you need to add the flag −r, which stands for recursive.

Overwriting files

Be careful when moving and copying files. This operation overwrites existing files without further confirmation.

Removing files

To remove a file, you can use the command rm. You can provide several arguments, if you want to remove several files.

To remove directories, you need to add the flag –r as in the case of cp.