High Performance Computing

Invoking Commands

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Executing commands

The commands mv, cp, and rm, but also ssh from the very beginning are executable binary files (binaries) on the system.

The terminal displays a program called shell, for example bash (Bourne Again SHell), through which you interact with the system.

When entering a command in the terminal, the shell searches for an executable with this name in the "PATH"-directories, running the first one found.

Absolute paths for commands

To run executables that are not in the PATH-directories, or are not the first one found when transitioning them, you need to call them through an absolute path.

An absolute path is one that starts by a node in the directory tree that is not relative to the current working directory. For instance, the path ., the path .., the path ~, or the path /.

Getting help for commands

Many commands allow to pass a flag −h or −−help to receive help.

The command man provides manuals for many commands.

Canceling a command line

Instead of deleting the command line with backspace, you can hit CTRL−c to cancel it completely. This usually works, too, to cancel execution of a program.

Running scripts

To run arbitrary scripts as opposed to binaries you can call them explicitly with the correct interpreter.

Alternatively add the first line

#!/ABSOLUTE_PATH/TO/INTERPRETER

and provide the execution privilege through the command chmod.

Command line history

When working on the terminal, it is convenient to access the history of commands that you have invoked.

By pressing CTRL−p you step back to the previous command in your command line history, by CTRL−n you step to the next one.