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| **COMMAND(s)** | **DESCRIPTION** |
| ./runscript.solve > sim.log & disown | Command used to run the simulations in the background in CFDHub. This command saves the state of the simulation into the sim.log file. The disown part allows to detach the simulation from the current terminal so that one can exit the cluster without stopping the simulation. To stop the simulation, run “htop” command, pick a process ID related to the simulation (any) and in the terminal, run: kill -9 [process ID]. |
| Ctrl+Z | This suspends the currently running process (in this case, your simulation) and puts it in the background. The process is paused but still running in the background. |
| bg | This command resumes the suspended process in the background. It doesn't bring the process to the foreground, so the process continues running in the background. |
| disown | Disowns the background job. This command removes the process from the shell's job table, effectively disassociating it from the terminal. The process remains running in the background, and it won't be terminated when you close your terminal or log out. |
| tail -f /path/to/your/log/file (substitute by path of your simulation log file) | Used to monitor the latest updates to a log file of a simulation that's running in the background. The **-f** option allows you to follow the output of a file in real-time as it's being written to. This allows you to monitor the log file's updates in real-time without interrupting the background process. If you want to exit the **tail** command, you can press **Ctrl+C**. |
| nohup ./your\_simulation\_command\_or\_script > simulation.log 2>&1 & | Replace **your\_simulation\_command\_or\_script** with the actual command or script you want to run. The **> simulation.log 2>&1** part redirects both standard output and standard error to a log file named **simulation.log**. This allows you to review the simulation's progress and any potential errors later. After running this command, you can safely log out of the cluster or close your terminal session without affecting the simulation. |
| jobs | List the background jobs. This will show you a list of background jobs along with their job numbers. |
| fg %1  Replace 1 with the job number of your simulation | Used to bring the simulation back to the foreground. If your simulation has job number 1, then you can use **fg %1**. If it has a different job number, replace 1 accordingly. After running the **fg** command, the simulation should come to the foreground, and you'll be able to interact with it. If the simulation requires user input, you can provide it at this point. If you want to send it back to the background later, you can use **Ctrl+Z**, **bg**, and **disown** again. |
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