|  |  |
| --- | --- |
| Pwd | Print working directory |
| Open /users/dj | Open the folder or directory as a window |
| Ls | Ls = list 🡪 prints all the elements in the current directory |
| Cd | Change directory: cd Finanzen |
| Cd .. | Going back one directory  Cd .. one directory back  Cd . is the current directory |
| Clear | Inserts some white space for better visuals  Command K does the same |
| Cd ~ | Home directory |
| Touch test\_file.txt | Create a file |
| Open test\_file.txt | Opens the file |
| Nano test\_file.txt | Opens the file with nano and lets you change it. One should navigate without mouse in there |
| History | Shows you all the command you used |
| Rm test\_file.txt | Delete a file |
| Mkdir test\_dir | Create a new directory (folder) |
| Touch test\_dir/test\_file.txt | Create a new file in a folder without opening it |
| Rm -r test\_dir | Delecte the whole directory |
| Mv test\_file.txt test\_dir | Replace a file into a folder. Mv = move |
| Mv test\_dir/test\_file.txt test\_file.txt | Take a file and put it outside a folder. Mv = move |
| Cp test\_file.txt test\_dir | Copy file from directory into a folder |
| Mv test\_dir/test\_file.txt test\_dir/renamed.txt | Rename a file in a folder |
| python | Create a python shell. All the code that follows must be python code. In order to exit it, type quit() |
| Toch test.py | Create a python file |
| code test.py | Open the file and write code in visual studio code |
| Python test.py | Runs the python file and if there is a print in there, it will be printed to the terminal |
| <https://github.com/0nn0/terminal-mac-cheatsheet> |  |
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**SURFsara tutorial (**[**https://servicedesk.surfsara.nl/wiki/display/WIKI/First+time+usage+of+Lisa**](https://servicedesk.surfsara.nl/wiki/display/WIKI/First+time+usage+of+Lisa)**)**

|  |  |
| --- | --- |
| bc  8\*5+19\*4  2^6  quit | The program bs is like python. It is being used for calculations. It can be terminated with quit |
| cat bcin | Inspect contents of files. Output:  wiltest@login4:~/lisatutorial/simple$ cat file2.txt  Using the .txt suffix, probability that the file is correctly  handled by Windows is enhanced.  wiltest@login4:~/lisatutorial/simple$ cat bcin  # **this** is a file **for** bc.  # note: bc ignores lines, starting with #  # let’s make a complicated computation:  3+128\*9877-123\*(45+98)  wiltest@login4:~/lisatutorial/simple$ |
| bc < bcin | Don’t read form the terminal, but rather use a file. Bc is like python which allows one to do computations  The ‘<’ instructs the shell to start bc, and let bc use the file bcin as standard input |
| bc < bcin > bcout  ls -l  cat bcout | To redirect standard output to a file, use ‘>’ before the filename.  A new file is being created with name bcout with the results of bcin |
| cat bcin  cat bcin | bc | It is also possible to let one program directly read the output of another porgram.  Will put the contents of the file bcin to standard output, default your screen. We can take care, that the standard output does not go to your screen, but is used as input for another command, for example ‘bc’: |
| $PATH | $PATH is used by the shell to find programs: in this case the shell will search the following directories to find a program |
| echo $myvar  myvar=”something”  echo $myvar  which bc  $PATH | Shell variables are a means to store values, without having to use files. But, when you want to use the value, prefix the name with a ‘$’  command which tells you where a program is found |
| $HOME  $HOME may be abbreviated by ‘~’ | It is equal to the name of your home directory. So, if you want to cd to the lisatutorial/scripts directory, irrespective of the current directory, you can type:  cd $HOME/lisatutorial/scripts |

**SURFsara Tutorial 2 (**[**https://servicedesk.surfsara.nl/wiki/pages/viewpage.action?pageId=30660216**](https://servicedesk.surfsara.nl/wiki/pages/viewpage.action?pageId=30660216)**)**

|  |  |
| --- | --- |
| ssh jungd@lisa.surfsara.nl | Log in to HPC |
| Scp  To copy a file sourcefile to the $HOME/destinationdir folder on the HPC systems, use  scp sourcefile <username>@lisa.surfsara.nl:destinationdir  To copy a complete directory, use the -r argument, e.g.  scp -r sourcedir <username>@lisa.surfsara.nl:destinationdir | Transferring files using the terminal (scp). Scp works similar to the copy (cp) command on Linux, except that it copies data between different machines.  Desktop source dir:  /Users/dj/Desktop  LISA source dir:  /home/jungd |
| To copy from the HPC system to your local PC, simply reverse the order of arguments. For example, to copy the file sourcefile from the remote home directory to the local home directory (~), use  scp -r <username>@lisa.surfsara.nl:sourcefile ~ |  |
| echo -e ‘This will be the text in the file \n this is the new line’ >> file.txt | Creating a new text file and write some stuff |
| ssh [jungd@login-gpu.lisa.surfsara.nl](mailto:jungd@login-gpu.lisa.surfsara.nl) | Login to GPU |
|  |  |
| Screen -S <name> | For creating a new terminal window |
| scancel 8929813 | Kills the job |
| cd Documents/GitHub/Master\_Thesis/Code/Random\_Code |  |
| 1000c300d1000s\_test.csv 1000c300d1000s\_train.csv 100c300d1000s\_test.csv 100c300d1000s\_train.csv 10c300d1000s\_test.csv 10c300d1000s\_train.csv | Current datasets that are available on LISA |

**FROM PC TO HPC**

scp -r SynDat\_HBL jungd@lisa.surfsara.nl:/home/jungd/HBL

scp sd\_job.txt jungd@lisa.surfsara.nl:/home/jungd/HBL/SynDat\_HBL

**FROM HPC TO PC**

scp jungd@lisa.surfsara.nl:/home/jungd/Playground/Test\_Folder/ /Users/dj/Desktop/Target

scp -r [jungd@lisa.surfsara.nl:/home/jungd/HBL/Image\_Net\_HBL/runs /Users/dj/](mailto:jungd@lisa.surfsara.nl:/home/jungd/HBL/Image_Net_HBL/runs%20/Users/dj/)Desktop

Documents/GitHub/Master\_Thesis/Code/SynDat\_HBL

**Directory Home Github**

cd Documents/GitHub/Master\_Thesis/Code/SynDat\_HBL/

**Queue**

|  |  |
| --- | --- |
| Squeue -u jungd | See the current job |
|  |  |
| Slurm-8760733.out |  |
|  |  |

**Conda**

|  |  |
| --- | --- |
| Conda config –set auto\_activate\_base false | If you want to deactivate the automatic launch of anaconda |
| Conda env list |  |
| Conda create –name NAMEOFENV |  |
| Conda activate NAMEOFENV |  |
| Conda deactivate NAMEOFENV |  |
| Conda list | For all the packages |
| Conda install numpy |  |
|  |  |

**Tensorboard**

|  |  |
| --- | --- |
| tensorboard --logdir=runs | http://localhost:6006/ |
| tensorboard --logdir=runs --bind\_all | http://login-gpu1.lisa.surfsara.nl:6006/ |
| tensorboard --logdir=runs --bind\_all --load\_fast=false --port=6000 | Blank webpage  http://login-gpu1.lisa.surfsara.nl:6000/ |
| tensorboard --logdir=runs --bind\_all --load\_fast=false --port=6006 | http://login-gpu1.lisa.surfsara.nl:6006/ |

|  |  |
| --- | --- |
| tensorboard --logdir=/Users/dj/Desktop/Test\_Folder/Target/test/ |  |
| tensorboard --logdir=/Users/dj/Desktop/Test\_Folder/Target/test/ |  |

**DataGenerator.py**

|  |  |
| --- | --- |
| python DataGenerator.py -c 10 -d 300 -sd 3 -ss 1000 -t 0.2 -s 300 -csv True | Create csv file |
| python NN\_SynData.py -c 10 -d 300 -sd 3 -ss 1000 -t 0.2 -s 300 -di syn\_data -e 3 | Feed Nn Syndata |
| cd Documents/GitHub/Master\_Thesis/Code/Random\_Code |  |
|  |  |
|  |  |

**Sbatch systems**

Filename: pytorch\_job.txt

*#!/bin/bash*

*#SBATCH --nodes=1*

*#SBATCH --ntasks=1*

*#SBATCH --gpus=1*

*#SBATCH --partition=gpu\_shared*

*#SBATCH --time=00:45:00*

*cd /home/jungd/HBL/HBL\_GPU*

*source /home/jungd/anaconda3/etc/profile.d/conda.sh*

*conda activate torchconda*

*python HBL.py --data\_name cifar100 -e 100 -s 128 -r adam -l 0.0005 -c 0.00005 --mult 0.1 --datadir data/ --resdir runs/output\_dir/cifar/ --hpnfile prototypes/prototypes-50d-100c.npy --logdir test --do\_decay True --drop1 90 --drop2 95 --seed 100*

sbatch pytorch\_job.txt

cd Documents/GitHub/Master\_Thesis/Code

**Mina Code Command from Terminal**

python HBL.py --data\_name syndat -e 10 -s 100 -r adam -l 1e-3 -c 0.00005 --mult 0.1 --datadir data/ --resdir runs/output\_dir/syndat/ --hpnfile prototypes/prototypes-10d-10c.npy --logdir test --do\_decay True --drop1 7 --drop2 9 --seed 300 -nc 10 -d 300 -ss 1000 -n fullcon