Accessing the SCC from a Linux/Unix/MacOS terminal

```
sandvik@buphy:~> ssh sandvik@scc1.bu.edu
```

after entering your password, you will be in your home directory

```
[sandvik@scc1 admin]$ pwd
/projectnb/py502/admin
```

(your ID instead of “admin”)

If you are part of another SCC project, you may end up in that directory; if so, do

```
$ cd /projectnb/py502/yourid
```

To use Julia, you have to load the module

```
$ module load julia
```

If you are planning to use Jupyter notebooks, you should add the IJulia module first

```
(@v1.10) pkg> add IJulia
```

and any other packages you plan to use, e.g.,

```
(@v1.10) pkg> add Plots
```

You should not do long runs on the login node (max 15 min)
- submit batch jobs or use SCC OnDemand

Example of batch jobs submitted in different directories

More at: **https://www.bu.edu/tech/support/research/system-usage/running-jobs/submitting-jobs/**

Contents of current directory by “ls”:

```
Random64.jl  r01  r02  r03  r04  r05  res.dat  submit  wolff.jl  wolff.sh
```

We want to run the Julia program wolff.jl from all the directories r01,…,r05
- the purpose is to generate statistical data that we combine later on

The jobs are submitted to the by “source submit”, where submit is a Linux script file looking like this:

```
module load julia
X1=1
X2=5
X=$X1
while((X<=$X2))
do
cd r0$X
qsub  -l h_rt=1:00:00 ../wolff.sh
cd ..
let X=X+1
done
```

this line is all you need for submitting a single job

The line containing the command submitting to the SCC batch queue is

```
qsub  -l h_rt=1:00:00 ../wolff.sh
```

where -l h_rt=1:00:00 specifies the run time (wall clock) time 1 h max

- jobs requiring less than 12 h will have higher priority than longer runs
- Other -l options can also be given; see the SCC web site

The submitted file is wolff.sh, which contains

```
julia ../wolff.jl
exit
```

Upon typing “source submit”, we get these messages:

```
Your job 9818511 ("wolff.sh") has been submitted
Your job 9818512 ("wolff.sh") has been submitted
Your job 9818513 ("wolff.sh") has been submitted
Your job 9818514 ("wolff.sh") has been submitted
Your job 9818515 ("wolff.sh") has been submitted
```

The jobs will write their output in the directories r01,…,r05

You can check the status of all your jobs and kill them if needed:

```
qstat -u yourid
qdel jobid
```

You will see “r” for running and “qw” for waiting
you will also see the job id

Interactive Jobs

- OnDemand – access the SCC via your browser
- https://scc-ondemand1.bu.edu/