

Introduction to Kamiak

Follow Along

Transferring Files to and from Kamiak

Copy from Kamiak to your laptop

```
Terminal >> New Window (for Windows, Start >> Ubuntu)
scp -r your.name@kamiak.wsu.edu:/opt/apps/samples/training .
ls -l training
```

Copy from your laptop to Kamiak

```
scp -r training your.name@kamiak.wsu.edu:~/
```

Synchronize

```
rsync -ravx training/ your.name@kamiak.wsu.edu:~/training
```

Logging into Kamiak

Log into Kamiak

```
Terminal >> New Window (for Windows, Start >> Ubuntu)
ssh your.name@kamiak.wsu.edu
exit
```

Submitting Batch Jobs to Kamiak

Log back into Kamiak

```
ssh your.name@kamiak.wsu.edu
```

Setup only for this training

```
cd training
source training_only_setup.sh
```

Create/edit a job script

```
cat myJob.sh
```

Submit the job script

```
sbatch myJob.sh # To test: sbatch --test-only myJob.sh
```

View the job queue

```
squeue -u your.name # Shows pending and running jobs
squeue -j jobNumber
```

See output

```
cat myJob*.out
```

Cancel the job

```
scancel jobNumber
```

View job history and details

```
sacct -S 10/5/21 -u your.name      # Past job history  
scontrol show job jobNumber        # Job details
```

Viewing Information about the Cluster

What partitions and nodes are available

```
sinfo -a | more                    # Availability (alloc, idle, mix)
```

View all running and queued jobs

```
squeue -a | more                   # Queued jobs for all partitions
```

View node details

```
scontrol show node cn93            # Amount of memory, cpus, GPUs
```

Interactive Jobs

```
idev -N 1 --ntasks=1 --cpus-per-task=2 -t 360  
module avail  
module help python/2.7.15  
module load python/2.7.15  
module list  
python -i  
    print "Hello World!"  
    exit()  
srun -l python helloWorld.py  
exit
```

Using Scratch Storage

```
export myscratch="$(mkworkspace)"  
echo $myscratch  
lsworkspace
```

Job Arrays

```
cat jobArray.sh
sbatch jobArray.sh
squeue -u your.name
cat output/myJobArray*.out
scancel jobNumber
```

Using Available Software on Kamiak

```
module avail # Available modules compatible with compiler
module load python3/3.4.3 # Load specific version (recommended)
module list # See loaded modules
module avail python3 # See available python3 modules
module load python3 # Load latest version
module unload python3 # Unload a module
module spider # See all modules
module whatis anaconda3 # See what a module does
module help anaconda3 # See help for a module
which python3 # See that python is in your path
printenv PATH # See effects of loading modules
printenv LD_LIBRARY_PATH
```

Getting Help

```
hpc.wsu.edu Support & Zoom Help Desk Hours
hpc.wsu.edu/cheat-sheet User's Guide / Kamiak Cheat Sheet
hpc.wsu.edu/training/slides
hpc.wsu.edu/training/follow-along
```