

# Introduction to Kamiak

## Follow Along

### Logging in to Kamiak

Terminal >> New Window  
ssh *your.name*@kamiak.wsu.edu

### Transferring Files to and from Kamiak

#### **Copy from Kamiak**

Terminal >> New Window  
scp *your.name*@kamiak.wsu.edu:~/bashrc .  
ls -l .bashrc  
mv .bashrc newbash

#### **Copy to Kamiak**

scp newbash *your.name*@kamiak.wsu.edu:~  
scp -r *your.name*@kamiak.wsu.edu:/opt/apps/samples/training .  
ls -l training

#### **Synchronize**

rsync -avx newbash *your.name*@kamiak.wsu.edu:~

### Submitting Batch Jobs to Kamiak

#### **Log into Kamiak**

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

#### **Setup only for this training**

cp -r opt/apps/samples/training .  
cd training  
. 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**

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

### **See output**

```
cat myJob*.out
```

### **Cancel the job**

```
scancel jobNumber
```

### **View job history and details**

```
sacct -S 2/26/18 -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**

```
queue -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-per-node=2 -t 360
module avail
module load python/2.7.10
module list
python -i
    print "Hello World!"
    exit()
srun -l python helloWorld.py --nowait
exit
```

## Job Arrays

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

## Using Available Software on Kamiak

```
module load python           # load latest version
module load python3/3.5.0    # load specific version
module list                  # see loaded modules
module whatis anaconda3      # see what a module does
module help wrf              # see help for a module
module avail                 # available compatible modules
module spider                # see all modules
module unload python3        # unload a module
module purge                 # unload all modules
which python                 # see that python is in your path
printenv PATH                # see effects of loading modules
printenv LD_LIBRARY_PATH
```

## Using Scratch Storage

```
export myScratch = "$(mkworkspace -q)"
echo $myScratch
export myScratch = "$(mkworkspace -q -b /local)"
echo $myScratch
```

## Getting Help

[hpc.wsu.edu](http://hpc.wsu.edu)

***Support & Drop-in Hours***