Summary of the tutorial

Quick Links

HPC Home
Getting an account
Gentle Introduction to using HPC
Getting started on Prince
Prince How-to Articles
Logging in
  Windows
  Mac / Linux
Clusters and Storage
  Prince (HPC)
  Dumbo (Hadoop)
  Brooklyn (OpenStack)
  Dalma (NYU Abu Dhabi)
Transferring data to/from the clusters
Transferring data to/from Prince cluster using Globus
Submitting jobs with sbatch
Available software
Licensed Software
Available on the HPC Cluster
Running jobs on the Prince Cluster

Accessing the Prince Cluster
- From Windows workstation
- From Mac workstation

Software and Environment Module
- Job script and resource request
  - Introduction to job scheduling
  - Submitting jobs with `sbatch`
  - Requesting resources
  - Using computing nodes interactively

Monitoring batch jobs
- Monitoring batch jobs with `squeue`
- What is running and where? `slurmtop`

Canceling your jobs

Compiling your own software

Putting all pieces together
- An Amber example
- A R example

Summary

- You can compile, edit scripts and view results on the login nodes, but computational work should be run on the compute nodes
- You can access compute nodes with `srun`
- Either via a job script, or interactively
- Compute nodes are allocated to jobs by the scheduler, so your job might not start immediately
- Jobs must request resources, but mostly need not specify a queue.
- Requesting just slightly more than when you expect to need is generally the best practice
- Short jobs get higher priority, and short or small jobs are easier to schedule quickly
- You can monitor your job's progress with `squeue`, `sstat`, `sacct`, `scontrol` or `slurmtop`
- Software is managed by Environment Modules
  - Use `module avail` to find software packages
  - And `module load` to load them into your environment
  - including within job scripts!
  - Use `module purge` to return to a clean environment before loading a new set of modules
  - Other useful commands are `module list` and `module show`