## Summary of the tutorial

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Transferri ng data to/from the clusters

Transferri ng data to/from Prince cluster using Globus

Submittin g jobs with sbatch

Available software

Licensed Software Available on the HPC Cluster

Building Software

Slurm Tutorial

Tutorials

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Scratch Area Cleanup

Programming for Biologists

Acknowle dge Statement

Research Gallery

HPC People
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 - squeue
• 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'