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## 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’