

COMMUNITY CLUSTER

Quick Reference Card

FREQUENTLY ASKED QUESTIONS

How do I log in?	Use <code>ssh -Y</code> to connect to <code>myclustername.rcac.purdue.edu</code> .
How do I run my applications?	You must submit jobs to PBS queues for your applications, as described below. Any applications run directly on the front-end you log in to will automatically be terminated after a short time.
Which queues can I use?	Use <code>q1ist</code> to see the names, status, and limits of all your queues.
Where is my scratch directory?	Use the environment variable <code>\$RCAC_SCRATCH</code> or run <code>myscratch</code> .
How much disk space do I have?	Use <code>myquota</code> to see how much disk space is available to you in both your home and scratch directories.
Which files in my scratch are scheduled to be purged?	Use <code>purge1ist</code> to list all your files that are scheduled to be purged.
Can I recover a file deleted from my home directory?	Yes. Use <code>flost</code> to recover files deleted from your home directory.
Can I recover a file deleted from my scratch directory?	No. Files in your scratch directory are not backed up and cannot be recovered. Use the Fortress HPSS system to archive your data.
How do I use the Fortress HPSS data archive?	Use <code>hsi</code> and <code>htar</code> to transfer files to and from the Fortress HPSS data archive. See the Fortress user guide for more information.

USING PBS

To submit the job submission file `myfile` to the queue `myqueue` and request 4 nodes with 8 processor cores per node and 8 MPI ranks per node for a maximum run time of 5 hours:

```
qsub -q myqueue -l nodes=4:ppn=8,walltime=5:00:00 myfile
```

To submit an interactive job to the queue `myqueue` and request one core (for the default 30 minutes):

```
qsub -q myqueue -I -v DISPLAY
```

Options to `qsub` can also be placed in your job submission file using “#PBS” directives after the shell in the first line. However, any options to `qsub` on the command line will override options in the file.

```
#!/bin/sh -l
#PBS -q myqueue
#PBS -l nodes=4:ppn=8
#PBS -l walltime=5:00:00
#PBS -N myjobname
```

OTHER PBS COMMANDS

<code>q1ist</code>	List all queues I can use and their current status and limits.
<code>qstat -an1 myqueue</code>	List all current jobs in the queue <code>myqueue</code> .
<code>qstat -u myusername</code>	List all current jobs from the user <code>myusername</code> .
<code>qstat -f myjobid</code>	View all information about the job ID <code>myjobid</code> .
<code>qpeek myjobid</code>	View output from the currently running job ID <code>myjobid</code> .
<code>qdel [-w force] myjobid</code>	Stop and delete the job ID <code>myjobid</code> (optional “-W force”).
<code>qhold myjobid</code>	Hold the job ID <code>myjobid</code> in the queue so it will not run.
<code>qr1s myjobid</code>	Release the held job ID <code>myjobid</code> , and allow it to run.

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WORKING WITH FILES ON UNIX

<code>ls</code>	List all files and subdirectories.
<code>pwd</code>	Show the current directory.
<code>cd mydir</code>	Change the current directory to <code>mydir</code> .
<code>mkdir mydir</code>	Create a directory named <code>mydir</code> .
<code>rmdir mydir</code>	Remove the directory <code>mydir</code> .
<code>cp myfile1 myfile2</code>	Copy the file <code>myfile1</code> to <code>myfile2</code> .
<code>mv myfile1 myfile2</code>	Rename the file <code>myfile1</code> to <code>myfile2</code> .
<code>mv myfile mydir</code>	Move the file <code>myfile</code> into <code>mydir</code> .
<code>rm myfile</code>	Delete the file <code>myfile</code> .
<code>cat myfile</code>	Display the entire contents of the file <code>myfile</code> .
<code>more myfile</code>	Display the contents of the file <code>myfile</code> , one page at a time.
<code>edit myfile</code>	Edit the file <code>myfile</code> with a simple text editor.
<code>.</code>	Shorthand for your current directory.
<code>..</code>	Shorthand for your current directory's parent directory.

OTHER USEFUL UNIX COMMANDS

<code>hostname</code>	Display the name of the system you are currently logged in to.
<code>ps -u myusername</code>	List all programs you are currently running on your login host.
<code>grep "mytext" myfile</code>	Search for the text “mytext” in the file <code>myfile</code> .
<code>head myfile</code>	Display the first ten lines of the file <code>myfile</code> .
<code>tail myfile</code>	Display the last ten lines of the file <code>myfile</code> .
<code>scp myfile myhost:mydir</code>	Copy <code>myfile</code> to the directory <code>mydir</code> on the remote system <code>myhost</code> .
<code>du -sh mydir</code>	Report disk space used by the directory <code>mydir</code> and all its contents.
<code>mycmd1 mycmd2</code>	Send the output of command <code>mycmd1</code> to <code>mycmd2</code> as input (“pipe”).
<code>exit</code>	Log out of your current session.

NEED TO LEARN MORE ABOUT A COMMAND?

<code>man mycommand</code>	Display the manual page for the command <code>mycommand</code> .
<code>man -k myword</code>	List all commands whose manual pages include the word “myword”.

NEED HELP?

Online Documentation: www.rcac.purdue.edu/userinfo

Email Support: rcac-help@purdue.edu

Please include which cluster you are using, your PBS job ID, and any error messages or output you have received.