

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 <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. |

Purdue University is an equal access/equal opportunity university.

COMMUNITY CLUSTER

Quick Reference Card

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.