## How to use Modules

**1) ssh to login node**

[yuki07@desktop ~]$ ssh yuki07@hpf.ccm.sickkids.ca

yuki07@hpf.ccm.sickkids.ca's password:

Last login: Fri Apr 11 18:14:51 2014 from 172.16.47.78

[yuki07@hpf24 ~]$ module avail

-bash: module: command not found *# module does not exist on login nodes. Good*.

**2) qlogin**

[yuki07@hpf24 ~]$ qlogin

qsub: waiting for job 1035732.moabmaster.hpf.cluster to start

qsub: job 1035732.moabmaster.hpf.cluster ready

**3) See what modules are loaded.**

[yuki07@qlogin1 ~]$ module list

No Modulefiles Currently Loaded.

**4) See what modules are available**

[yuki07@qlogin1 ~]$ module avail

-------------------------------------- /hpf/tools/centos6/modulefiles ---------------------------------------

bedtools/2.17.0 control-freec/6.2 gatk/2.8.1 python/3.4.0 tophat/2.0.11

bedtools/2.19.1 dcmtk/3.6.0 liftover/1.91 R/3.0.3 varscan/2.3.6

bowtie/1.0.1 dtiprep/1.1.6 perl/5.18.2 samtools/0.1.13 vcf2diploid/0.2.3

bowtie/2.2.1 gatk/2.6.4 picard-tools/1.103 samtools/0.1.19

bwa/0.6.1 gatk/2.6.5 pindel/0.2.4 tabix/0.2.6

camino/2014.02.06 gatk/2.7.4 python/2.7.6 template8) Automatically load certain modules

Append "module load XYZ" to .bashrc

[yuki07@r1a-1 ~]$ echo module load python/2.7.6 perl/5.18.2 R/3.0.3 >> .bashrc

[yuki07@r1a-1 ~]$ logout

[root@r1a-1 ~]# su - yuki07

[yuki07@r1a-1 ~]$ module list

Currently Loaded Modulefiles:

1) python/2.7.6 2) perl/5.18.2 3) R/3.0.3

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**5) Load the Python 2.7.6 module**

[yuki07@qlogin1 ~]$ which python

**/usr/bin/python**

[yuki07@qlogin1 ~]$ python --version

Python **2.6.6**

[yuki07@qlogin1 ~]$ module load python/**2.7.6**

[yuki07@qlogin1 ~]$ which python

**/hpf/tools/centos6/python/2.7.6/bin/python**

[yuki07@qlogin1 ~]$ python

Python **2.7.6** (default, Apr 9 2014, 14:25:39)

[GCC 4.4.7 20120313 (Red Hat 4.4.7-3)] on linux2

Type "help", "copyright", "credits" or "license" for more information.

>>> exit()

**6) See what changes the module file makes**

[yuki07@qlogin1 ~]$ module display python/2.7.6

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/hpf/tools/centos6/modulefiles/python/2.7.6:

module-whatis adds Python to your environment variables.

prepend-path PATH /hpf/tools/centos6/python/2.7.6/bin

prepend-path MANPATH /hpf/tools/centos6/python/2.7.6/share/man

prepend-path LD\_LIBRARY\_PATH /hpf/tools/centos6/python/2.7.6/lib/

setenv PYTHONSTARTUP /hpf/tools/centos6/python/2.7.6/.pythonstartup

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**7) Using modules inside job scripts**

[yuki07@qlogin1 ~]$ cat << EOF

#!/bin/bash

module load python/2.7.6

python --version

EOF > env.sh

[yuki07@qlogin1 ~]$ qsub env.sh -j oe

1035734.moabmaster.hpf.cluster

[yuki07@qlogin1 ~]$ cat env.sh.o1035734

r4b-6

Python **2.7.6**

**8) Automatically load certain modules**

Append "module load XYZ" to .bashrc

[yuki07@r1a-1 ~]$ echo module load python/2.7.6 perl/5.18.2 R/3.0.3 >> .bashrc

[yuki07@r1a-1 ~]$ logout

[root@r1a-1 ~]# su - yuki07

**[yuki07@r1a-1 ~]$ module list**

**Currently Loaded Modulefiles:**

**1) python/2.7.6 2) perl/5.18.2 3) R/3.0.3**

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**Commonly used Module Commands**

module

(no arguments) print usage instructions

avail or av list available software modules

whatis as above with brief descriptions

load <modulename> add a module to your environment

unload <modulename> remove a module

purge remove all modules

reference:

http://www.admin-magazine.com/HPC/Articles/Environment-Modules