

1. 登陆 166.111.143.18 或 166.111.143.19

```
teacher@ln1:~  
login as: teacher  
teacher@166.111.143.19's password:  
Last login: Wed Mar 13 21:29:27 2013 from 166.111.69.29  
=====ATTENTION=====  
=====This machine is for login only=====  
=====DO NOT RUN ANY JOB ON THIS MACHINE=====  
=====Otherwise will be complained by all users=====  
=====ATTENTION=====  
[teacher@ln1 ~]$
```

2. 登陆测试节点 : ssh c01b0[2-5]

```
teacher@c01b02:~  
login as: teacher  
teacher@166.111.143.19's password:  
Last login: Wed Mar 13 21:29:27 2013 from 166.111.69.29  
=====ATTENTION=====  
=====This machine is for login only=====  
=====DO NOT RUN ANY JOB ON THIS MACHINE=====  
=====Otherwise will be complained by all users=====  
=====ATTENTION=====  
[teacher@ln1 ~]$ ssh c01b02  
Last login: Wed Mar 13 20:55:57 2013 from 172.16.0.3  
[teacher@c01b02 ~]$
```

3. 进入 WORK 目录: cd WORK
4. 解压 test.tgz: tar xzvf test.tgz
5. 三个源码文件: hello_world_seq.c hello_world_omp.c hello_world_mpi.c, 分别为 hello_world 的串行版, openmp 版本, mpi 版本
6. 编译: 查看 makefile 文件, 明白含义。执行 make 命令

```
teacher@c01b02:~/WORK  
[teacher@c01b02 WORK]$ make  
icc -o hello_world_seq hello_world_seq.c  
mpicc -o hello_world_mpi hello_world_mpi.c  
icc -o hello_world_omp hello_world_omp.c -openmp  
[teacher@c01b02 WORK]$
```

7. 编译好的可执行程序分别为 hello_world_seq hello_world_omp hello_world_mpi
8. 运行串行程序: ./hello_world_seq
9. 运行 openmp 程序:
 - a) 设置线程数: export OMP_NUM_THREADS=8
 - b) 运行程序: ./hello_world_omp
10. 运行 mpi 程序:
 - a) 运行 1-11 进程程序: mpiexec -n 8 ./hello_world_mpi
 - b) 运行 12-128 进程程序: bsub -a intelmpi -q short -o output.%J -e error.%J -n 16 mpirun.lsf ./hello_world_mpi (红色部分不能改动)

- i. bjobs 查看当前任务状态

```
[teacher@ln1 WORK]$ bjobs  
JOBID USER STAT QUEUE FROM_HOST EXEC_HOST JOB_NAME SUBMIT_TIME  
857126 teacher RUN short ln1 12*c26b09 *world_mpi Mar 13 21:55  
4*c25b20  
[teacher@ln1 WORK]$
```

- ii. bpeek -f 查看当前标准输出

