

Configuring your MPI environment

Some adjustments (in red) will allow you to run an MPI ring on all C4lab machines.

STEP 0:

Log on one of the C4 lab machines (c4labpc16...-c4labpc29.csee.usf.edu).
Do not log on c4labpc13, 14, and 15 to launch mpd, but they can be in your mpd.hosts file.
Make sure you are in the tcsh shell

STEP1:

```
cd $HOME
touch .mpd.conf
chmod 600 .mpd.conf
Then use an editor to place a line like:
secretword=mr45-j9z
into the file. (Of course use a different secret word than mr45-j9z.)
```

STEP 2:

Create a file consisting of a list of machine names, one per line. Name this file mpd.hosts. These hostnames will be used as targets for ssh or rsh, so include full domain names if necessary. (Such as, while connected to c4labpc18.csee.usf.edu, create mpd.hosts and enter c4labpc29.csee.usf.edu in the file)

STEP 3:

```
mpdboot -r rsh -n <number to start> -f mpd.hosts
```

<number to start> can be less than 1 + number of hosts in mpd.hosts, but cannot be greater than 1 + the number of hosts in the file.

STEP 4:

Test the ring by running:
mpdtrace

This command will display all the machines that are now configured to run an MPI program.

(In the case above, it will display:

```
c4labpc18
c4labpc29
)
```

STEP 5:

```
cd <some directory you want your MPI code to be>
cp -r ~/anda/public.html/PDS/MPI-examples/ .
mpicc -o cpi cpi.c
mpiexec -n 5 cpi
```

To understand what happens when compiling, run: mpicc -compile_info