

# MPI installation

## OpenMPI

is already installed on it

## MVAPICH2

Get MPI distro form <http://mvapich.cse.ohio-state.edu/downloads/>

```
wget http://mvapich.cse.ohio-state.edu/download/mvapich/mv2/mvapich2-2.1.tar.gz
tar -xvzf mvapich2-2.1.tar.gz
```

put this into /usr/include/asm/timex.h - no need actually

```
#ifndef _ARCH_ARMV7L_H
#define _ARCH_ARMV7L_H
#ifdef __cplusplus
extern "C" {
#endif
#define mb()    asm volatile("dmb":::"memory")
#include <stdlib.h>
#include <sys/time.h>
typedef unsigned long long cycles_t;
static inline cycles_t get_cycles (void)
{
    cycles_t thetime;
    struct timeval tv;
    if (gettimeofday(&tv, NULL) != 0)
        return 0;
    thetime = ((cycles_t)tv.tv_sec) * 1000000ULL + ((cycles_t)tv.tv_usec);
    return (cycles_t)thetime;
}
#ifdef __cplusplus
}
#endif
#endif /* _ARCH_ARMV7L_H */
```

configure and deploy on the head node

```
sudo apt-get install byacc
cd mvapich2-2.1
./configure --enable-fast=all,O3 --enable-shared --enable-threads=multiple --enable-cuda=basic --disable-
fortran --disable-mcast --with-cuda=/usr/local/cuda --with-device=ch3:nemesis --enable-timer-type=clock_gettime
#gettimeofday
make
make install
```

## MPI Test