

# Installation of MPI on Linux

There are 2 main implementations of MPI MPICH and Open MPI.

Below is the installation for open MPI.

For mpich See this [link](#).

## Installation

Type in a terminal:

```
sudo apt-get install libopenmpi-dev  
openmpi-bin
```

## Small test

Download the file below.

[hello\\_world.f90](#)

```
! Fortran example  
program hello  
  include 'mpif.h'  
  integer rank, size, ierror, tag, status(MPI_STATUS_SIZE)  
  
  call MPI_INIT(ierror)  
  call MPI_COMM_SIZE(MPI_COMM_WORLD, size, ierror)  
  call MPI_COMM_RANK(MPI_COMM_WORLD, rank, ierror)  
  print*, 'node', rank, ': Hello world'  
  call MPI_FINALIZE(ierror)  
end
```

Type in a terminal:

```
mpif90 hello_world.f90 -o  
hello_world  
mpiexec -n 4 ./hello_world
```

It should display:

```
node          0 : Hello world
```

```
node      1 : Hello world
node      2 : Hello world
node      3 : Hello world
```

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Last update: **2017/03/24 13:59**

