

Instalación de OPEN-MPI

Instalación

- Consultar link:
 - <http://www.sysads.co.uk/2014/05/install-open-mpi-1-8-ubuntu-14-04-13-10/>
- Descargar software:
 - <http://www.open-mpi.org/software/ompi/v1.8/>

Instalación en Ubuntu

- Descargar:
 - [openmpi-1.8.4.tar.gz](http://openmpi.org/ftp/openmpi-1.8.4.tar.gz)
- Descomprimir el archivo
 - `tar -xvf openmpi-1.8.4.tar.gz`
 - `cd openmpi-1.8.4.tar.gz`
- Configurar el archivo de instalación
 - `./configure --prefix="/home/$USER/.openmpi"`
- Instala OpenMPI
 - `make`
 - `sudo make install`
- Inserta MPI en variables de ambiente
 - `export PATH="$PATH:/home/$USER/.openmpi/bin"`
 - `export LD_LIBRARY_PATH="$LD_LIBRARY_PATH:/home/$USER/.openmpi/lib/"`
- Prueba si la instalación fue exitosa
 - `mpirun`

```
mireya@nlke:~/MPI/openmpi-1.8.4$ mpi
mpic++      mpicc-vt      mpicxx      mpif77      mpif90-vt   mpirun
mpicc       mpiCC-vt      mpicxx-vt   mpif77-vt   mpifort
mpiCC       mpic++-vt    mpiexec     mpif90      mpifort-vt
mireya@nlke:~/MPI/openmpi-1.8.4$ mpirun
```

mpirun could not find anything to do.

It is possible that you forgot to specify how many processes to run via the "-np" argument.

mireya@nlke:~/MPI/openmpi-1.8.4\$ ls

aclocal.m4	config.log	contrib	LICENSE	NEWS	README
AUTHORS	config.lt	Doxyfile	Makefile	mpi	README.JAVA.txt
autogen.pl	config.status	examples	Makefile.am	opal	test
autogen.sh	configure	INSTALL	Makefile.in	orte	VERSION
config	configure.ac	libtool	Makefile.man-page-rules	oshmem	

```
mireya@nlke:~/MPI/Programas$ mpicc productol.c
mireya@nlke:~/MPI/Programas$ ls
a.out lamhost productol.c
mireya@nlke:~/MPI/Programas$ mpicc productol.c -o productol
mireya@nlke:~/MPI/Programas$ ls
a.out lamhost productol productol.c
mireya@nlke:~/MPI/Programas$ rm a.out
mireya@nlke:~/MPI/Programas$ mpirun -np 2 productol
computing rank 0 (from row 0 to 1)
finished rank 0
computing rank 1 (from row 2 to 4)
finished rank 1
finished fill rank 0
```

```
|    0    1    2    3    4 |
|    5    6    7    8    9 |
|   10   11   12   13   14 |
|   15   16   17   18   19 |
|   20   21   22   23   24 |
```

```
|    0    1    2    3    4 |
|    5    6    7    8    9 |
|   10   11   12   13   14 |
|   15   16   17   18   19 |
|   20   21   22   23   24 |
```

Matrix multiplication done.

```
|   150   160   170   180   190 |
|   400   435   470   505   540 |
|   650   710   770   830   890 |
|   900   985  1070  1155  1240 |
|  1150  1260  1370  1480  1590 |
```

Execution time: 0.000062 secs. 2.016129 MIPS

```
mireya@nlke:~/MPI/Programas$ █
```

```
mireya@nlke:~/MPI/Programas$ mpirun -np 3 producto1
computing rank 1 (from row 1 to 2)
finished rank 1
computing rank 2 (from row 3 to 4)
finished rank 2
computing rank 0 (from row 0 to 0)
finished rank 0
finished fill rank 0
finished fill rank 0
```

```
| 0 1 2 3 4 |
| 5 6 7 8 9 |
| 10 11 12 13 14 |
| 15 16 17 18 19 |
| 20 21 22 23 24 |
```

```
| 0 1 2 3 4 |
| 5 6 7 8 9 |
| 10 11 12 13 14 |
| 15 16 17 18 19 |
| 20 21 22 23 24 |
```

Matrix multiplication done.

```
| 150 160 170 180 190 |
| 400 435 470 505 540 |
| 650 710 770 830 890 |
| 900 985 1070 1155 1240 |
| 1150 1260 1370 1480 1590 |
```

Execution time: 0.000078 secs. 1.602564 MIPS

```
mireya@nlke:~/MPI/Programas$ █
```