

Compilar: `$ gmake aix=1`

Compila e linka *todos* os `“.f”` que estejam na directoria corrente.

Makefile

```
ifdef aix
LAMDIR=/ist/lam/current_64
FC = xlf
FFLAGS = -O2 -I$(LAMDIR)/include
LFLAGS = -L$(LAMDIR)/lib -llamf77mpi -lmpi -llam -lpthread
endif

ifdef linux
FC = gfortran
FFLAGS = -O2 -I/usr/include/mpi -Dlinux
LFLAGS = -lmpi
endif

# object files
#####
OBJS = test.o zp.o

# rules
#####

all : test_parallel

test_parallel : $(OBJS)
```

```
$(FC) -O -o $@ $(OBJS) $(LFLAGS)
chmod 755 test
```

```
clean :
    rm *.o
    rm test_parallel
```

Executar: \$./submiter

Versão paralela do programa "test.f"

Testámos sem este 'test.run' e sem consequências

test.run

```
lamboot -H -ssi boot tm
/users/u/civil/ist12764/parallel/test/test
lamwipe -H -ssi boot tm
```

submiter

```
submit-lam -n 4 -p 4 -N myjob -w 600 /users/u/civil/ist12764/parallel/test/test_parallel 22000
```

zp.f

```
program test_parallel
include 'mpif.h'
integer myrank, ierr, mysize, numargs, samples
character*100 arg
call MPI_INIT(ierr)
numargs = iargc()
write (*, *) 'numargs afinal deu', numargs
call getarg(1, arg)
write (*, *) 'Arg_1 afinal deu $', TRIM(arg), '$'
read (arg, '(I10)', err=100) samples
call MPI_COMM_RANK(MPI_COMM_WORLD, myrank, ierr)
call MPI_COMM_SIZE(MPI_COMM_WORLD, mysize, ierr)
write (*,*) 'Starting'
call test (samples, mysize, myrank)
call MPI_FINALIZE(ierr)
stop
100 continue
WRITE (*,*) 'Usage: programa TEST'
end
```

test.f

```
SUBROUTINE test (isamples, mysize, myrank)
CHARACTER*30 ficheiro
write (*, *) 'In Subroutine TEST:'
write (*, *) 'isamples, mysize, myrank,', isamples, mysize, myrank
isamproc = isamples / mysize
```

```
write (*, *) 'isamproc,', isamproc
WRITE (ficheiro, 2345) myrank
2345 FORMAT ('data-', I6.6, '.res')
write (*, *) 'Conteudo de ''ficheiro'' $', TRIM(ficheiro), '$'
open (98765, file=TRIM(ficheiro), status='unknown')
DO i=1, isamproc
!   WRITE (ficheiro, *) 'i =', i
   write (98765, *) 'i =', i
END DO
write (*, *) 'Out Subroutine TEST'
RETURN
END
```