
Procedure TEST_TEMPS

1 Drank

This macro-command measures the time spent in the commands and compares this value with times of reference.

This command has meaning only for the cases tests in order to make sure that the execution times do not vary in an uncontrolled way.

2 Syntax

```
TEST_TEMPS (
  ◆ RESU= _F (
    ◆ COMMANDE=cmde , [kN]
    ◇NUMÉRIQUE_ORDRE=/ numord [I]
    /1
  [DEFAULT]
    ◆ MACHINE=l_mach , [l_Kn]
    ◆ VALE=l_val , [l_R]
    ◇TYPE_TEST=/ "USER+SYS",
  [DEFAULT]
    /"USER",
    /"SYSTEM",
    /"ELAPSED"
    ◇CRITERE = "RELATIF",
  [DEFAULT]
    /"ABSOLU",
    ◇PRECISION = epsi, [R]
    /1.E-2,
  [DEFAULT]
  ),
  ◇INFO =/1 , [DEFAULT]
  /2 ,
)
```

3 Operands

3.1 Key word RESU

The factor key word RESU is répétable to test the execution times of several commands.

3.1.1 Operands ORDERS / NUME_ORDRE

It acts of the command which one must check the execution time.

If the command is called several times in the command file, NUME_ORDRE makes it possible to select the occurrence to be tested.

3.1.2 Operand MACHINE / VALE

the execution time can vary significantly according to the machine.

To identify the various machines tested, one can indicate a label in the config.txt file under field ID_PERF. If the field is not indicated, TEST_TEMPS built a label of the Linux-i686-ifort form (from the command uname and of the name of compiler FORTRAN used).

One then provides under VALE the values of reference of the execution time of the command and under MACHINE the list of the corresponding ID_PERF

3.1.3 Operand TYPE_TEST

It acts of time tested:

- USER: time CPU;
- SYSTEM: time system;
- USER+SYS: office plurality of the two precedents (default);
- ELAPSED : past time.

3.1.4 Operands CRITERE/PRECISION

As for all the TEST_xxx commands, it is a question of specifying if the comparison criterion is ABSOLU or RELATIF as well as the associated accuracy. One compares the value obtained on the file with the value of reference provided to the key word VALE.

3.2 Operand INFO

Specifies the detail of the information printed in the message file.

In INFO=2, one prints a table containing the group of the execution time similar to that which one finds in the file .resu at the end of the execution.

4 Example

4.1 Of the different values of reference per machine

Let us suppose that one wishes of the command to check the execution time `MODE_ITER_SIMULT` on 4 machines from which the performances are rather distant. On each machine, one takes care to define a label to identify them in the `config.txt` file. For example:

```
ID_PERF      | id      | -      | machine1
```

One will make:

```
TEST_TEMPS (
  RESU= ( _F (
    COMMAND   = "MODE_ITER_SIMULT",
    NUME_ORDRE = 1,
    MACHINE    = ("machine1", "machine2", "machine3", "machine4"),
    VALE      = ( 30,          35,          48,          40      ),
    accuracy  = 0 05, ) ,
  ) , )
```

At the object time:

- one seeks 1'ID_PERF in the `config.txt` file,
- if one finds it among those provides under `MACHINE`, one takes the corresponding value of reference, if not one takes the first value (an alarm is emitted),
- one compares time measured with the value of reference with a margin of 5%.

4.2 Example of printing

Here, `ID_PERF` is not defined on the machine, it is built automatically. He does not belong to the values provided under `MACHINE`, an alarm informs us.

```
! -----!
! <A> <TEST0_9>                                     !
! Times of reference are not known for the identifier "Linux-i686-ifort". !
! One uses the values of "Server".                                     !
! -----!

-----
File of configuration                : config.txt
Identifier for the measurement of the performances: Linux-i686-ifort
-----

! -----!
! Order      ! Order ! Reference ! Measure  ! Difference! Diagnosis!
! -----!
! MODE_ITER_SIMULT!      1!    65.00!    25.18!    -39.82!    OK      !
! DEFI_BASE_MODAL!      1!   144.00!    60.09!    -83.91!   NOOK    !
! MACR_ELEM_DYNA  !      1!    73.00!    40.38!    -32.62!    OK      !
! MODE_ITER_SIMULT!      2!    13.00!     4.52!     -8.48!    OK      !
! -----!
```