NAG Library Routine Document

E05JKF

Note: before using this routine, please read the Users' Note for your implementation to check the interpretation of ***bold italicised*** terms and other implementation-dependent details.

1 Purpose

E05JKF is used to get the value of an integer E05JBF optional parameter. E05JKF can be used before or after calling E05JBF, but the initialization routine E05JAF **must** have been called before calling E05JKF.

2 Specification

```
SUBROUTINE E05JKF (OPTSTR, IVALUE, COMM, LCOMM, IFAIL)
INTEGER            IVALUE, LCOMM, IFAIL
REAL (KIND=nag_wp) COMM(LCOMM)
CHARACTER(*)       OPTSTR
```

3 Description

E05JKF obtains the current value of an integer-valued optional parameter. For example

```
CALL E05JKF ('Local Searches Limit', LOCLIM, COMM, LCOMM, IFAIL)
```

will result in the value of the optional parameter **Local Searches Limit** being output in `LOCLIM`.

The default values of the optional parameters **Function Evaluations Limit**, **Splits Limit** and **Static Limit** depend on the problem parameter n_r (the number of non-fixed variables). A default value for each of these optional parameters will be set in the first call to the solver E05JBF: before that time, getting the value of any of these optional parameters using E05JKF will not return a meaningful result.

A complete list of optional parameters, their symbolic names and default values is given in Section 12 in E05JBF.

4 References

None.

5 Parameters

1: OPTSTR – CHARACTER(*) *Input*

On entry: a string identifying an integer-valued optional parameter (as described in Section 12 in E05JBF).

2: IVALUE – INTEGER *Output*

On exit: if IFAIL $= 0$ on exit, IVALUE contains the integer value associated with the optional parameter in OPTSTR.

3: COMM(LCOMM) – REAL (KIND=nag_wp) array *Communication Array*

On entry: communication data as initialized by E05JAF.

4: LCOMM – INTEGER *Input*

On entry: the dimension of the array COMM as declared in the (sub)program from which E05JKF is called.

Constraint: LCOMM ≥ 100.

5: IFAIL – INTEGER *Input/Output*

On entry: IFAIL must be set to 0, -1 or 1. If you are unfamiliar with this parameter you should refer to Section 3.3 in the Essential Introduction for details.

For environments where it might be inappropriate to halt program execution when an error is detected, the value -1 or 1 is recommended. If the output of error messages is undesirable, then the value 1 is recommended. Otherwise, if you are not familiar with this parameter, the recommended value is 0. **When the value -1 or 1 is used it is essential to test the value of IFAIL on exit.**

On exit: IFAIL $= 0$ unless the routine detects an error or a warning has been flagged (see Section 6).

6 Error Indicators and Warnings

If on entry IFAIL $= 0$ or -1, explanatory error messages are output on the current error message unit (as defined by X04AAF).

Errors or warnings detected by the routine:

IFAIL $= 1$

Initialization routine E05JAF has not been called.

On entry, LCOMM $= \langle value \rangle$.
Constraint: LCOMM ≥ 100.

IFAIL $= 2$

The supplied optional parameter is invalid. A keyword or keyword combination was not recognized.

IFAIL $= -99$

An unexpected error has been triggered by this routine. Please contact NAG.

See Section 3.8 in the Essential Introduction for further information.

IFAIL $= -399$

Your licence key may have expired or may not have been installed correctly.

See Section 3.7 in the Essential Introduction for further information.

IFAIL $= -999$

Dynamic memory allocation failed.

See Section 3.6 in the Essential Introduction for further information.

7 Accuracy

Not applicable.

8 Parallelism and Performance

Not applicable.

9 Further Comments

None.

10 Example

See Section 10 in E05JCF.