

# NAG Library Routine Document

## E04WKF

**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

E04WKF is used to get the value of an integer optional parameter. E04WKF can be used before or after calling E04WDF.

### 2 Specification

```
SUBROUTINE E04WKF (STRING, IVALUE, IW, RW, IFAIL)
```

```
INTEGER          IVALUE, IW(*), IFAIL
REAL (KIND=nag_wp) RW(*)
CHARACTER(*)     STRING
```

### 3 Description

E04WKF obtains the current value of an integer option. For example

```
CALL E04WKF ('Iterations', ITNLIM, IW, RW, IFAIL)
```

will result in the value of the optional parameter **Major Iterations Limit** being output in ITNLIM.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 11 in E04WDF.

### 4 References

None.

### 5 Parameters

- |    |  |                            |
|----|--|----------------------------|
| 1: | STRING – CHARACTER(*)  | <i>Input</i>               |
|    | <i>On entry:</i> a single valid keyword of an integer optional parameter (as described in Section 11 in E04WDF).   |                            |
| 2: | IVALUE – INTEGER   | <i>Output</i>              |
|    | <i>On exit:</i> the integer value associated with the keyword in STRING.   |                            |
| 3: | IW(*) – INTEGER array  | <i>Communication Array</i> |
|    | <b>Note:</b> the dimension of the array IW must be at least LENIW (see E04WCF).  |                            |
| 4: | RW(*) – REAL (KIND=nag_wp) array   | <i>Communication Array</i> |
|    | <b>Note:</b> the dimension of the array RW must be at least LENRW (see E04WCF).  |                            |
| 5: | IFAIL – INTEGER  | <i>Input/Output</i>        |
|    | <i>On entry:</i> 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

The initialization routine E04WCF has not been called.

IFAIL = 2

The supplied option is invalid. Check that the keywords are neither ambiguous nor misspelt.

## 7 Accuracy

Not applicable.

## 8 Further Comments

None.

## 9 Example

See Section 9 in E04WEF.

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