

# NAG Fortran 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

To get the value of an INTEGER optional parameter. This routine can be used before or after calling E04WDF.

### 2 Specification

```
SUBROUTINE E04WKF (STRING, IVALUE, IW, RW, IFAIL)
INTEGER           IVALUE, IW(*), IFAIL
double precision 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 **Iterations** being output in ITNLIM.

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

### 4 References

None.

### 5 Parameters

1: STRING – CHARACTER\*(\*) *Input*  
*On entry:* a single valid keyword of an INTEGER optional parameter (as described in Section 11 of the document for E04WDF).

2: IVALUE – INTEGER *Output*  
*On exit:* the INTEGER value associated with the keyword in STRING.

3: IW(\*) – INTEGER array *Communication Array*  
 4: RW(\*) – **double precision** array *Communication Array*

The arrays IW and RW are defined in the document for E04WCF and **must not** be altered between calls to any of the routines E04WCF, E04WDF, E04WEF, E04WFF, E04WGF, E04WHF, E04WKF and E04WLF.

5: IFAIL – INTEGER *Input/Output*  
*On entry:* IFAIL must be set to 0, -1 or 1. Users who are unfamiliar with this parameter should refer to Chapter P01 for details.

*On exit:* IFAIL = 0 unless the routine detects an error (see Section 6).

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, for users 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.**

## 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 of the document for E04WEF.

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