

# NAG Fortran Library Routine Document

## E04NXF

**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 E04NQF.

### 2 Specification

```
SUBROUTINE E04NXF (STRING, IVALUE, CW, IW, RW, IFAIL)
INTEGER           IVALUE, IW(*), IFAIL
double precision RW(*)
CHARACTER*(*)    STRING
CHARACTER*8      CW(*)
```

### 3 Description

E04NXF obtains the current value of an integer option. For example

```
CALL E04NXF ('Iterations', ITNLIM, CW, 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 E04NQF.

### 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 of the document for E04NQF).  |                            |
| 2: | IVALUE – INTEGER   | <i>Output</i>              |
|    | <i>On exit:</i> the INTEGER value associated with the keyword in STRING.   |                            |
| 3: | CW(*) – CHARACTER*8 array  | <i>Communication Array</i> |
| 4: | IW(*) – INTEGER array  | <i>Communication Array</i> |
| 5: | RW(*) – <b>double precision</b> array  | <i>Communication Array</i> |
|    | The arrays CW, IW and RW are defined in the document for E04NPF and <b>must not</b> be altered between calls to any of the routines E04NPF, E04NQF, E04NRF, E04NSF, E04NTF, E04NUF, E04NXF and E04NYF. |                            |
| 6: | IFAIL – INTEGER  | <i>Input/Output</i>        |
|    | <i>On entry:</i> IFAIL must be set to 0, -1 or 1. Users who are unfamiliar with this parameter should refer to Chapter P01 for details.  |                            |
|    | <i>On exit:</i> 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 E04NPF 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 E04NRF.

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