

NAG Fortran Library Routine Document

E04WBF

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

E04WBF is used to initialise routines: E04DGA, E04MFA, E04NCA, E04NFA, E04NKA, E04UCA, E04UFA, E04UGA and E04USA.

2 Specification

```

SUBROUTINE E04WBF(RNAME, CWSAV, LCWSAV, LWSAV, LLWSAV, IWSAV, LIWSAV,
1      RWSAV, LRWSAV, IFAIL)
  INTEGER          LCWSAV, LLWSAV, IWSAV(LIWSAV), LIWSAV, LRWSAV, IFAIL
  real            RWSAV(LRWSAV)
  LOGICAL          LWSAV(LLWSAV)
  CHARACTER*6      RNAME
  CHARACTER*80     CWSAV(LCWSAV)

```

3 Description

E04WBF initialises some or all of the arrays CWSAV, LWSAV, IWSAV and RWSAV for the routine specified by RNAME, and any associated option setting routines.

4 References

None.

5 Parameters

- | | | |
|----|--|------------------|
| 1: | RNAME – CHARACTER*6 | <i>Input</i> |
| | <i>On entry:</i> the name of the routine to be initialised. | |
| | <i>Constraint:</i> RNAME must be a valid routine name. | |
| 2: | CWSAV(LCWSAV) – CHARACTER*80 array | <i>Workspace</i> |
| 3: | LCWSAV – INTEGER | <i>Input</i> |
| | <i>On entry:</i> the first dimension of the array CWSAV as declared in the (sub)program from which E04WBF is called. | |
| | <i>Constraint:</i> see routine RNAME for the minimum value of LCWSAV. | |
| 4: | LWSAV(LLWSAV) – LOGICAL array | <i>Workspace</i> |
| 5: | LLWSAV – INTEGER | <i>Input</i> |
| | <i>On entry:</i> the first dimension of the array LWSAV as declared in the (sub)program from which E04WBF is called. | |
| | <i>Constraint:</i> see routine RNAME for the minimum value of LLWSAV. | |

- 6: IWSAV(LIWSAV) – INTEGER array *Workspace*
 7: LIWSAV – INTEGER *Input*
- On entry:* the first dimension of the array IWSAV as declared in the (sub)program from which E04WBF is called.
- Constraint:* see routine RNAME for the minimum value of LIWSAV.
- 8: RWSAV(LRWSAV) – *real* array *Workspace*
 9: LRWSAV – INTEGER *Input*
- On entry:* the first dimension of the array RWSAV as declared in the (sub)program from which E04WBF is called.
- Constraint:* see routine RNAME for the minimum value of LRWSAV.
- 10: 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 routine name supplied in RNAME is invalid

IFAIL = 2

One or more of the workspace array lengths LCWSAV, LLWSAV, LIWSAV or LRWSAV is too small.

7 Accuracy

Not applicable.

8 Further Comments

The time taken by this routine is negligible.

9 Example

The use of E04WBF is illustrated by the example programs of the routines listed in E04WBF.