

NAG Toolbox for MATLAB

e04wh

1 Purpose

e04wh may be used to supply individual double optional parameters to e04wd. The initialization function e04wc **must** have been called before calling e04wh.

2 Syntax

```
[iw, rw, ifail] = e04wh(string, rvalue, iw, rw)
```

3 Description

e04wh may be used to supply values for double optional parameters to e04wd. It is only necessary to call e04wh for those parameters whose values are to be different from their default values. One call to e04wh sets one parameter value.

Each double optional parameter is defined by a single character string in **string** and the corresponding value in **rvalue**. For example the following illustrates how the *LU* stability tolerance could be defined:

```
factol = 100.0
if (illcon)
    factol = 5.0;
end
[iw, rw, ifail] = e04wh('LU Factor Tolerance', factol, iw, rw);
```

Optional parameter settings are preserved following a call to e04wd and so the keyword **Defaults** is provided to allow you to reset all the optional parameters to their default values before a subsequent call to e04wd.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 11 of the document for e04wd.

4 References

None.

5 Parameters

5.1 Compulsory Input Parameters

1: **string – string**

A single valid keyword of a double optional parameter (as described in Section 11 of the document for e04wd).

2: **rvalue – double scalar**

The value associated with the keyword in **string**.

3: **iw(*)** – **int32** array

Note: the dimension of the array **iw** must be at least **leniw** (see e04wc).

4: **rw(*)** – **double** array

Note: the dimension of the array **rw** must be at least **lenrw** (see e04wc).

5.2 Optional Input Parameters

None.

5.3 Input Parameters Omitted from the MATLAB Interface

None.

5.4 Output Parameters

1: **iw(*)** – **int32** array

Note: the dimension of the array **iw** must be at least **leniw** (see e04wc).

2: **rw(*)** – **double** array

Note: the dimension of the array **rw** must be at least **lenrw** (see e04wc).

3: **ifail** – **int32** scalar

0 unless the function detects an error (see Section 6).

6 Error Indicators and Warnings

Errors or warnings detected by the function:

ifail = 1

The initialization function e04wc 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

e04wf may also be used to supply double optional parameters to e04wd.

9 Example

```
string = 'Infinite bound size';
rvalue = 10000000000;
[iw, rw, ifail] = e04wc();
[iw, rw, ifail] = e04wh(string, rvalue, iw, rw);
[rvalueOut, iw, rw, ifail] = e04wl(string, iw, rw)

rvalueOut =
    1.0000e+10
```

```
iw =  
    array elided  
rw =  
    array elided  
ifail =  
        0
```
