

NAG Toolbox

nag_opt_qpconvex2_sparse_option_double_get (e04ny)

1 Purpose

nag_opt_qpconvex2_sparse_option_double_get (e04ny) is used to get the value of a double optional parameter. nag_opt_qpconvex2_sparse_option_double_get (e04ny) can be used before or after calling nag_opt_qpconvex2_sparse_solve (e04nq).

2 Syntax

```
[rvalue, cw, iw, rw, ifail] = nag_opt_qpconvex2_sparse_option_double_get(string,
cw, iw, rw)
[rvalue, cw, iw, rw, ifail] = e04ny(string, cw, iw, rw)
```

3 Description

nag_opt_qpconvex2_sparse_option_double_get (e04ny) obtains the current value of a double option. For example

```
[featol, cw, iw, rw, ifail] = e04ny('Feasibility Tolerance', cw, iw, rw);
```

will result in the value of the optional parameter **Feasibility Tolerance** being output in featol.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 12 in nag_opt_qpconvex2_sparse_solve (e04nq).

4 References

None.

5 Parameters

5.1 Compulsory Input Parameters

1: **string** – CHARACTER(*)

A single valid keyword of a double optional parameter (as described in Section 12 in nag_opt_qpconvex2_sparse_solve (e04nq)).

2: **cw(:)** – CHARACTER(8) array

The dimension of the array **cw** must be at least **lencw** (see nag_opt_qpconvex2_sparse_init (e04np))

3: **iw(:)** – INTEGER array

The dimension of the array **iw** must be at least **leniw** (see nag_opt_qpconvex2_sparse_init (e04np))

4: **rw(:)** – REAL (KIND=nag_wp) array

The dimension of the array **rw** must be at least **lenrw** (see nag_opt_qpconvex2_sparse_init (e04np))

5.2 Optional Input Parameters

None.

5.3 Output Parameters

- 1: **rvalue** – REAL (KIND=nag_wp)
The double value associated with the keyword in **string**.
- 2: **cw(:)** – CHARACTER(8) array
The dimension of the array **cw** will be **leniw** (see nag_opt_qpconvex2_sparse_init (e04np))
- 3: **iw(:)** – INTEGER array
The dimension of the array **iw** will be **leniw** (see nag_opt_qpconvex2_sparse_init (e04np))
- 4: **rw(:)** – REAL (KIND=nag_wp) array
The dimension of the array **rw** will be **lenrw** (see nag_opt_qpconvex2_sparse_init (e04np))
- 5: **ifail** – INTEGER
ifail = 0 unless the function detects an error (see Section 5).

6 Error Indicators and Warnings

Errors or warnings detected by the function:

ifail = 1

The initialization function nag_opt_qpconvex2_sparse_init (e04np) has not been called.

ifail = 2

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

ifail = -99

An unexpected error has been triggered by this routine. Please contact NAG.

ifail = -399

Your licence key may have expired or may not have been installed correctly.

ifail = -999

Dynamic memory allocation failed.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

9.1 Program Text

```
function e04ny_example

fprintf('e04ny example results\n\n');

string = 'Feasibility tolerance';
featol = 0.0001;

% Initialize
[cw, iw, rw, ifail] = e04np;
%Set option
[cw, iw, rw, ifail] = e04nu( ...
    string, featol, cw, iw, rw);
% Get option
[rvalue, cw, iw, rw, ifail] = e04ny( ...
    string, cw, iw, rw);

fprintf('%s has been set to %12.5e\n', string, rvalue);
```

9.2 Program Results

```
e04ny example results

Feasibility tolerance has been set to 1.00000e-04
```
