

NAG Toolbox

nag_opt_nlp2_sparse_option_integer_get (e04vr)

1 Purpose

nag_opt_nlp2_sparse_option_integer_get (e04vr) is used to get the value of an integer optional parameter. nag_opt_nlp2_sparse_option_integer_get (e04vr) can be used before or after calling nag_opt_nlp2_sparse_solve (e04vh).

2 Syntax

```
[ivalue, cw, iw, rw, ifail] = nag_opt_nlp2_sparse_option_integer_get(string, cw,
iw, rw)
[ivalue, cw, iw, rw, ifail] = e04vr(string, cw, iw, rw)
```

3 Description

nag_opt_nlp2_sparse_option_integer_get (e04vr) obtains the current value of an integer option. For example

```
[itnlim, cw, iw, rw, ifail] = e04vr('Major Iterations', cw, iw, rw);
```

will result in the value of the optional parameter **Major Iterations Limit** being output in itnlim.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 12 in nag_opt_nlp2_sparse_solve (e04vh).

4 References

None.

5 Parameters

5.1 Compulsory Input Parameters

1: **string** – CHARACTER(*)

A single valid keyword of an integer optional parameter (as described in Section 12 in nag_opt_nlp2_sparse_solve (e04vh)).

2: **cw(:)** – CHARACTER(8) array

The dimension of the array **cw** must be at least **lencw** (see nag_opt_nlp2_sparse_init (e04vg))

3: **iw(:)** – INTEGER array

The dimension of the array **iw** must be at least **leniw** (see nag_opt_nlp2_sparse_init (e04vg))

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

The dimension of the array **rw** must be at least **lenrw** (see nag_opt_nlp2_sparse_init (e04vg))

5.2 Optional Input Parameters

None.

5.3 Output Parameters

- 1: **ivalue** – INTEGER
The integer value associated with the keyword in **string**.
- 2: **cw(:)** – CHARACTER(8) array
The dimension of the array **cw** will be **leniw** (see `nag_opt_nlp2_sparse_init` (e04vg))
- 3: **iw(:)** – INTEGER array
The dimension of the array **iw** will be **leniw** (see `nag_opt_nlp2_sparse_init` (e04vg))
- 4: **rw(:)** – REAL (KIND=`nag_wp`) array
The dimension of the array **rw** will be **lenrw** (see `nag_opt_nlp2_sparse_init` (e04vg))
- 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_nlp2_sparse_init` (e04vg) 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 e04vr_example

fprintf('e04vr example results\n\n');

string = 'Elastic mode';
elmode = nag_int(1);

% Initialize
[cw, iw, rw, ifail] = e04vg;

% Set option
[cw, iw, rw, ifail] = e04vm( ...
    string, elmode, cw, iw, rw);

% Get option value
[ivalue, cw, iw, rw, ifail] = e04vr( ...
    string, cw, iw, rw);

fprintf('%s has been set to %5d\n', string, ivalue);
```

9.2 Program Results

```
e04vr example results
Elastic mode has been set to      1
```
