NAG C Library Function Document

nag_opt_sparse_convex_qp_option_set_double (e04nuc)

1   Purpose

nag_opt_sparse_convex_qp_option_set_double (e04nuc) may be used to supply individual double optional arguments to nag_opt_sparse_convex_qp_solve (e04nqc). The initialization function nag_opt_sparse_convex_qp_init (e04npc) **must** have been called prior to calling nag_opt_sparse_convex_qp_option_set_double (e04nuc).

2   Specification

```
#include <nag.h>
#include <nage04.h>
```

```
void nag_opt_sparse_convex_qp_option_set_double (const char *string,
     double rvalue, Nag_E04State *state, NagError *fail)
```

3   Description

nag_opt_sparse_convex_qp_option_set_double (e04nuc) may be used to supply values for double optional arguments to nag_opt_sparse_convex_qp_solve (e04nqc). It is only necessary to call nag_opt_sparse_convex_qp_option_set_double (e04nuc) for those arguments whose values are to be different from their default values. One call to nag_opt_sparse_convex_qp_option_set_double (e04nuc) sets one argument value.

Each double optional argument 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;
e04nuc ("LU Factor Tolerance", factol, &state, &fail);
```

Optional argument settings are preserved following a call to nag_opt_sparse_convex_qp_solve (e04nqc) and so the keyword **Defaults** is provided to allow you to reset all the optional arguments to their default values prior to a subsequent call to nag_opt_sparse_convex_qp_solve (e04nqc).

A complete list of optional arguments, their abbreviations, synonyms and default values is given in Section 11 of the document for nag_opt_sparse_convex_qp_solve (e04nqc).

4   References

None.

5   Arguments

1:    **string** – const char *   *Input*

On entry: a single valid keyword of a double optional argument (as described in Section 11 of the document for nag_opt_sparse_convex_qp_solve (e04nqc)).

2:    **rvalue** – double   *Input*

On entry: the value associated with the keyword in **string**.

3:    **state** – Nag_E04State *   *Communication Structure*

Note: **state** is a NAG defined type (see Section 2.2.1.1 of the Essential Introduction).

state contains internal information required for functions in this suite. It must not be modified in any way.

4:    **fail** – NagError *   *Input/Output*

The NAG error argument (see Section 2.6 of the Essential Introduction).

6   Error Indicators and Warnings

NE_BAD_PARAM

On entry, argument ⟨*value*⟩ had an illegal value.

NE_E04NPC_NOT_INIT

Initialization function nag_opt_sparse_convex_qp_init (e04npc) has not been called.

NE_E04_OPTION_INVALID

The supplied option is invalid. Check that the keywords are neither ambiguous nor misspelt. The option **string** is ⟨*value*⟩ and **rvalue** = ⟨*value*⟩.

NE_INTERNAL_ERROR

An internal error has occurred in this function. Check the function call and any array sizes. If the call is correct then please consult NAG for assistance.

7   Accuracy

Not applicable.

8   Further Comments

nag_opt_sparse_convex_qp_option_set_file (e04nrc)   or   nag_opt_sparse_convex_qp_option_set_string (e04nsc) may also be used to supply double optional arguments to nag_opt_sparse_convex_qp_solve (e04nqc).

9   Example

See Section 9 of the document for nag_opt_sparse_convex_qp_option_set_file (e04nrc).