NAG 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 before calling nag_opt_sparse_convex_qp_option_set_double (e04nuc).

2 Specification

```c
#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:

```c
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 before 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 12 in nag_opt_sparse_convex_qp_solve (e04nqc).

4 References
None.

5 Arguments

1: string – const char *
   
   On entry: a single valid keyword of a double optional argument (as described in Section 12 in nag_opt_sparse_convex_qp_solve (e04nqc)).

2: rvalue – double
   
   On entry: the value associated with the keyword in `string`.

3: state – Nag_E04State *
   
   Communication Structure
   
   state contains internal information required for functions in this suite. It must not be modified in any way.
Error Indicators and Warnings

**NE_ALLOC_FAIL**
Dynamic memory allocation failed.
See Section 3.2.1.2 in the Essential Introduction for further information.

**NE_BAD_PARAM**
On entry, argument \langle value \rangle had an illegal value.

**NE_E04_OPTION_INVALID**
The supplied option is invalid. Check that the keywords are neither ambiguous nor misspelt. The option string is \langle \langle value \rangle \rangle and \langle \langle value \rangle \rangle and \langle \langle value \rangle \rangle = \langle \langle value \rangle \rangle.

**NE_E04NPC_NOT_INIT**
The initialization function nag_opt_sparse_convex_qp_init (e04npc) has not been called.

**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 contact NAG for assistance.
An unexpected error has been triggered by this function. Please contact NAG.
See Section 3.6.6 in the Essential Introduction for further information.

**NE_NO_LICENCE**
Your licence key may have expired or may not have been installed correctly.
See Section 3.6.5 in the Essential Introduction for further information.

Accuracy
Not applicable.

Parallelism and Performance
Not applicable.

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).

Example
See Section 10 in nag_opt_sparse_convex_qp_option_set_file (e04nrc).