NAG Library Function Document

nag_opt_nlp_option_set_double (e04whc)

1   Purpose

nag_opt_nlp_option_set_double (e04whc) may be used to supply individual double optional arguments
to nag_opt_nlp_solve (e04wdc). The initialization function nag_opt_nlp_init (e04wcc) **must** have been
called before calling nag_opt_nlp_option_set_double (e04whc).

2   Specification

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

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

3   Description

nag_opt_nlp_option_set_double (e04whc) may be used to supply values for double optional arguments
to nag_opt_nlp_solve (e04wdc). It is only necessary to call nag_opt_nlp_option_set_double (e04whc) for
those arguments whose values are to be different from their default values. One call to
nag_opt_nlp_option_set_double (e04whc) 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;
e04whc ("LU Factor Tolerance", factol, &state, &fail);
```

Optional argument settings are preserved following a call to nag_opt_nlp_solve (e04wdc) 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_nlp_solve (e04wdc).

A complete list of optional arguments, their abbreviations, synonyms and default values is given in
Section 12 in nag_opt_nlp_solve (e04wdc).

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 12 in
    nag_opt_nlp_solve (e04wdc)).

2:    **rvalue** – double   *Input*

    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.

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

  The NAG error argument (see Section 3.6 in the Essential Introduction).

6   Error Indicators and Warnings

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 '$\langle value \rangle$' and **rvalue** $= \langle value \rangle$.

NE_E04WCC_NOT_INIT

  Initialization function nag_opt_nlp_init (e04wcc) 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.

7   Accuracy

Not applicable.

8   Parallelism and Performance

Not applicable.

9   Further Comments

nag_opt_nlp_option_set_file (e04wec) or nag_opt_nlp_option_set_string (e04wfc) may also be used to supply double optional arguments to nag_opt_nlp_solve (e04wdc).

10   Example

See Section 10 in nag_opt_nlp_option_set_file (e04wec).

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