NAG Library Function Document

nag_opt_sparse_nlp_option_set_double (e04vnc)

1 Purpose

nag_opt_sparse_nlp_option_set_double (e04vnc) may be used to supply individual double optional arguments to nag_opt_sparse_nlp_solve (e04vhc). The initialization function nag_opt_sparse_nlp_init (e04vgc) **must** have been called before calling nag_opt_sparse_nlp_option_set_double (e04vnc).

2 Specification

```
#include <nag.h>
#include <nage04.h>
void nag_opt_sparse_nlp_option_set_double (const char *string,
     double rvalue, Nag_E04State *state, NagError *fail)
```

3 Description

nag_opt_sparse_nlp_option_set_double (e04vnc) may be used to supply values for double optional arguments to nag_opt_sparse_nlp_solve (e04vhc). It is only necessary to call nag_opt_sparse_nlp_option_set_double (e04vnc) for those arguments whose values are to be different from their default values. One call to nag_opt_sparse_nlp_option_set_double (e04vnc) 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;
e04vnc ("LU Factor Tolerance", factol, &state, &fail);
```

Optional argument settings are preserved following a call to nag_opt_sparse_nlp_solve (e04vhc) 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_nlp_solve (e04vhc).

A complete list of optional arguments, their abbreviations, synonyms and default values is given in Section 12 in nag_opt_sparse_nlp_solve (e04vhc).

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_sparse_nlp_solve (e04vhc)).

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 ⟨*value*⟩ 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 '⟨*value*⟩' and **rvalue** = ⟨*value*⟩.

NE_E04VGC_NOT_INIT

Initialization function nag_opt_sparse_nlp_init (e04vgc) 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_sparse_nlp_option_set_file (e04vkc) or nag_opt_sparse_nlp_option_set_string (e04vlc) may also be used to supply double optional arguments to nag_opt_sparse_nlp_solve (e04vhc).

10 Example

See Section 10 in nag_opt_sparse_nlp_option_set_file (e04vkc).