

NAG C Library Function Document

nag_opt_nlp_option_set_integer (e04wgc)

1 Purpose

nag_opt_nlp_option_set_integer (e04wgc) may be used to supply individual Integer optional arguments to nag_opt_nlp_solve (e04wdc). The initialization function nag_opt_nlp_init (e04wcc) **must** have been called prior to calling nag_opt_nlp_option_set_integer (e04wgc).

2 Specification

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

```
void nag_opt_nlp_option_set_integer (const char *string, Integer ivalue,
    Nag_E04State *state, NagError *fail)
```

3 Description

nag_opt_nlp_option_set_integer (e04wgc) may be used to supply values for Integer optional arguments to nag_opt_nlp_solve (e04wdc). It is only necessary to call nag_opt_nlp_option_set_integer (e04wgc) for those arguments whose values are to be different from their default values. One call to nag_opt_nlp_option_set_integer (e04wgc) sets one argument value.

Each Integer optional argument is defined by a single character string in **string** and the corresponding value in **ivalue**. For example, the following allows the iteration limit to be defined:

```
itnlim = 1000;
if (m > 500) itnlim = 500;
e04wgc ("Iterations", itnlim, &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 prior to 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 11 of the document for nag_opt_nlp_solve (e04wdc).

4 References

None.

5 Arguments

- 1: **string** – const char * *Input*
On entry: a single valid keyword of an Integer optional argument (as described in Section 11 of the document for nag_opt_nlp_solve (e04wdc)).
- 2: **ivalue** – Integer *Input*
On entry: an Integer 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 $\langle value \rangle$ 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 **ivalue** = $\langle value \rangle$.

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 consult NAG for assistance.

7 Accuracy

Not applicable.

8 Further Comments

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

9 Example

See Section 9 of the documents for `nag_opt_nlp_solve (e04wdc)` and `nag_opt_nlp_option_set_file (e04wec)`.
