

## NAG Library Function Document

### nag\_opt\_nlp\_option\_get\_double (e04wlc)

#### 1 Purpose

nag\_opt\_nlp\_option\_get\_double (e04wlc) is used to get the value of a double optional argument. nag\_opt\_nlp\_option\_get\_double (e04wlc) can be used before or after calling nag\_opt\_nlp\_solve (e04wdc).

#### 2 Specification

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

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

#### 3 Description

nag\_opt\_nlp\_option\_get\_double (e04wlc) obtains the current value of a double option. For example

```
e04wlc ("LU Factor Tolerance", &factol, &state, &fail);
```

will result in the value of the optional argument **LU Factor Tolerance** being output in `factol`.

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 \* *Output*  
*On exit:* the double 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\_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 string is invalid. Check that the keywords are neither ambiguous nor misspelt. The option string is ' $\langle value \rangle$ '.

**NE\_E04WCC\_NOT\_INIT**

The 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.

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.

**7 Accuracy**

Not applicable.

**8 Parallelism and Performance**

Not applicable.

**9 Further Comments**

None.

**10 Example**

See Section 10 in `nag_opt_nlp_option_set_file (e04wec)`.

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