

## 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\_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 '*value*'.

**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**

None.

**10 Example**

See Section 10 in nag\_opt\_nlp\_option\_set\_file (e04wec).

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