

## NAG C Library Function Document

### nag\_opt\_sparse\_nlp\_option\_get\_double (e04vsc)

#### 1 Purpose

nag\_opt\_sparse\_nlp\_option\_get\_double (e04vsc) is used to get the value of a double optional argument. nag\_opt\_sparse\_nlp\_option\_get\_double (e04vsc) can be used before or after calling nag\_opt\_sparse\_nlp\_solve (e04vhc).

#### 2 Specification

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

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

#### 3 Description

nag\_opt\_sparse\_nlp\_option\_get\_double (e04vsc) obtains the current value of a double option. For example

```
e04vsc ("Feasibility Tolerance", &feato1, &state, &fail);
```

will result in the value of the optional argument **Feasibility Tolerance** being output in feato1.

A complete list of optional arguments, their abbreviations, synonyms and default values is given in Section 11 of the document for 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 11 of the document for nag\_opt\_sparse\_nlp\_solve (e04vhc)).
- 2: **rvalue** – double \* *Output*  
*On exit:* the double 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 string is invalid. Check that the keywords are neither ambiguous nor misspelt. The option **string** is *<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 consult NAG for assistance.

**7 Accuracy**

Not applicable.

**8 Further Comments**

None.

**9 Example**

See Section 9 of the document for `nag_opt_sparse_nlp_option_set_file` (e04vkc).

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