

## NAG Library Function Document

### nag\_opt\_sparse\_nlp\_init (e04vgc)

#### 1 Purpose

nag\_opt\_sparse\_nlp\_init (e04vgc) is used to initialize the function nag\_opt\_sparse\_nlp\_solve (e04vhc).

#### 2 Specification

```
#include <nag.h>
#include <nage04.h>
void nag_opt_sparse_nlp_init (Nag_E04State *state, NagError *fail)
```

#### 3 Description

nag\_opt\_sparse\_nlp\_init (e04vgc) initializes the structure **state** for the function nag\_opt\_sparse\_nlp\_solve (e04vhc).

#### 4 References

None.

#### 5 Arguments

- 1: **state** – Nag\_E04State \* *Communication Structure*  
**state** contains internal information required for functions in this suite. It must not be modified in any way.
- 2: **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 *<value>* had an illegal value.

##### 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

The time taken by `nag_opt_sparse_nlp_init` (e04vgc) is negligible.

## 10 Example

See Section 10 in `nag_opt_sparse_nlp_solve` (e04vhc) and `nag_opt_sparse_nlp_option_set_file` (e04vkc).

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