

# NAG Library Function Document

## nag\_opt\_nlp\_revcomm\_init (e04wbc)

### 1 Purpose

nag\_opt\_nlp\_revcomm\_init (e04wbc) is used to initialize the function nag\_opt\_nlp\_revcomm (e04ufc).

### 2 Specification

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

void nag_opt_nlp_revcomm_init (const char *rname, char cwsav[],
    Integer lcwsav, Nag_Boolean lwsav[], Integer llwsav, Integer iwsav[],
    Integer liwsav, double rwsav[], Integer lrwsav, NagError *fail)
```

### 3 Description

nag\_opt\_nlp\_revcomm\_init (e04wbc) initializes some or all of the arrays **cwsav**, **lwsav**, **iwsav** and **rwsav** for the function nag\_opt\_nlp\_revcomm (e04ufc), and any associated option setting functions.

### 4 References

None.

### 5 Arguments

- |    |  |                            |
|----|--|----------------------------|
| 1: | <b>rname</b> – const char *  | <i>Input</i>               |
|    | <i>On entry:</i> the name of the function to be initialized.                 |                            |
|    | <i>Constraint:</i> <b>rname</b> must be called with <b>rname</b> = 'e04ufc'. |                            |
| 2: | <b>cwsav</b> [ <b>lcwsav</b> × 80] – char                                    | <i>Communication Array</i> |
| 3: | <b>lcwsav</b> – Integer  | <i>Input</i>               |
|    | <i>On entry:</i> the dimension of the array <b>cwsav</b> .                   |                            |
|    | <i>Constraint:</i> <b>lcwsav</b> ≥ 5.  |                            |
| 4: | <b>lwsav</b> [ <b>llwsav</b> ] – Nag_Boolean                                 | <i>Communication Array</i> |
| 5: | <b>llwsav</b> – Integer  | <i>Input</i>               |
|    | <i>On entry:</i> the dimension of the array <b>lwsav</b> .                   |                            |
|    | <i>Constraint:</i> <b>llwsav</b> ≥ 120.                                      |                            |
| 6: | <b>iwsav</b> [ <b>liwsav</b> ] – Integer                                     | <i>Communication Array</i> |
| 7: | <b>liwsav</b> – Integer  | <i>Input</i>               |
|    | <i>On entry:</i> the dimension of the array <b>iwsav</b> .                   |                            |
|    | <i>Constraint:</i> <b>liwsav</b> ≥ 610.                                      |                            |

8: **rwsav**[**lrwsav**] – double

*Communication Array*

9: **lrwsav** – Integer

*Input*

*On entry:* the dimension of the array **rwsav**.

*Constraint:* **lrwsav**  $\geq$  475.

10: **fail** – NagError \*

*Input/Output*

The NAG error argument (see Section 2.7 in How to Use the NAG Library and its Documentation).

## 6 Error Indicators and Warnings

### NE\_ALLOC\_FAIL

Dynamic memory allocation failed.

### NE\_BAD\_PARAM

On entry, argument value had an illegal value.

### NE\_CHARACTER

On entry, **rname** =  $\langle value \rangle$ .

Constraint: **rname** must be called with **rname** = 'e04ufc'.

### 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.

### NE\_TOO\_SMALL

One or more of the save array lengths is too small. Supplied values are: **lcwsav** =  $\langle value \rangle$ , **llwsav** =  $\langle value \rangle$ , **liwsav** =  $\langle value \rangle$  and **lrwsav** =  $\langle value \rangle$ .

## 7 Accuracy

Not applicable.

## 8 Parallelism and Performance

nag\_opt\_nlp\_revcomm\_init (e04wbc) is not threaded in any implementation.

## 9 Further Comments

The time taken by nag\_opt\_nlp\_revcomm\_init (e04wbc) is negligible.

## 10 Example

The use of nag\_opt\_nlp\_revcomm\_init (e04wbc) is illustrated by the example in Section 10 in nag\_opt\_nlp\_revcomm (e04ufc).

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