

NAG Library Function Document

nag_glopt_bnd_mcs_optset_char (e05jec)

1 Purpose

nag_glopt_bnd_mcs_optset_char (e05jec) may be used to supply individual ‘ON’/‘OFF’-valued character optional parameters to nag_glopt_bnd_mcs_solve (e05jbc). The initialization function nag_glopt_bnd_mcs_init (e05jac) **must** have been called before calling nag_glopt_bnd_mcs_optset_char (e05jec).

2 Specification

```
#include <nag.h>
#include <nage05.h>

void nag_glopt_bnd_mcs_optset_char (const char *optstr, const char *cvalue,
    Nag_E05State *state, NagError *fail)
```

3 Description

nag_glopt_bnd_mcs_optset_char (e05jec) may be used to supply values for ‘ON’/‘OFF’-valued character optional parameters to nag_glopt_bnd_mcs_solve (e05jbc). It is only necessary to call nag_glopt_bnd_mcs_optset_char (e05jec) for those arguments whose values are to be different from their default values. One call to nag_glopt_bnd_mcs_optset_char (e05jec) sets one argument value.

Each ‘ON’/‘OFF’-valued character optional parameter is defined by a single character string in **optstr** and the corresponding value in **cvalue**. For example, the following allows local searches to be turned off:

```
strcpy(&lcsrch[0], "Off");
e05jec ('Local Searches', lcsrch, &state, &fail);
```

A complete list of optional parameters, their symbolic names and default values is given in Section 12 in nag_glopt_bnd_mcs_solve (e05jbc).

4 References

None.

5 Arguments

- 1: **optstr** – const char * *Input*
On entry: a string defining a single ‘ON’/‘OFF’-valued character optional parameter (as described in Section 12 in nag_glopt_bnd_mcs_solve (e05jbc)).
- 2: **cvalue** – const char * *Input*
On entry: the ‘ON’/‘OFF’ value associated with the keyword in **optstr**.
- 3: **state** – Nag_E05State * *Communication Structure*
state contains information required by other functions in this suite. You must not modify it directly in any way.

- 4: **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.
 See Section 2.3.1.2 in How to Use the NAG Library and its Documentation for further information.

NE_BAD_PARAM

On entry, argument $\langle value \rangle$ 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 2.7.6 in How to Use the NAG Library and its Documentation for further information.

NE_NO_LICENCE

Your licence key may have expired or may not have been installed correctly.
 See Section 2.7.5 in How to Use the NAG Library and its Documentation for further information.

NE_NOT_INIT

Initialization function nag_glopt_bnd_mcs_init (e05jac) has not been called.

NE_OPT_NOT_READ

The supplied optional parameter is invalid. A keyword or keyword combination was not recognized.

NE_OUT_OF_RANGE

Attempt to assign an illegal value of **Local Searches** (*lscrch*): *lscrch* = $\langle value \rangle$.

Attempt to assign an illegal value of **Repeatability** (*repeat*): *repeat* = $\langle value \rangle$.

7 Accuracy

Not applicable.

8 Parallelism and Performance

nag_glopt_bnd_mcs_optset_char (e05jec) is threaded by NAG for parallel execution in multithreaded implementations of the NAG Library.

Please consult the x06 Chapter Introduction for information on how to control and interrogate the OpenMP environment used within this function. Please also consult the Users' Note for your implementation for any additional implementation-specific information.

9 Further Comments

nag_glopt_bnd_mcs_optset_file (e05jcc) or nag_glopt_bnd_mcs_optset_string (e05jdc) may also be used to supply 'ON'/'OFF'-valued character optional parameters to nag_glopt_bnd_mcs_solve (e05jbc).

10 Example

See Section 10 in `nag_glopt_bnd_mcs_optset_file` (e05jcc).
