NAG Library Function Document

nag_blgm_optset (g22zmc)

Note: please be advised that this function is classed as 'experimental' and its interface may be developed further in the future. Please see Section 3.1.1 in How to Use the NAG Library and its Documentation for further information.

1   Purpose

nag_blgm_optset (g22zmc) is a general option setting function for functions in Chapter g22. It can set a single optional parameter or reset all of them to their default.

2   Specification

```
#include <nag.h>
#include <nagg22.h>
void nag_blgm_optset (void *handle, const char *optstr, NagError *fail)
```

3   Description

nag_blgm_optset (g22zmc) can only be called on G22 handles. Its purpose is to reset all optional parameters to their default values or set a single optional parameter to a user-supplied value.

Optional parameters and their values are, in general, presented as a character string of the form '*option* = *optval*'; alphabetic characters can be supplied in either upper or lower case. *optval* will normally be either an integer, real or character value as defined in the description of the specific optional parameter. In addition, all optional parameters can take an *optval* DEFAULT which resets the optional parameter to its default value.

In cases where an optional parameter may have multiple instances an *instance identifier* can be specified. This is presented using the form '*option* : *instance identifier* = *optval*'. In such cases, if the instance identifier is omitted, the value of all instances are changed.

Information relating to available option names, their corresponding valid values, whether the use of an instance identifier may be appropriate and what form it can take is given in the individual function documents.

4   References

None.

5   Arguments

1:    **handle** – void *   *Input*

On entry: the G22 handle which **must** have been initialized by one of Chapter g22s initialization functions.

2:    **optstr** – const char *   *Input*

On entry: a string identifying the option, its value and, where required, the instance identifier.

Defaults
      Resets all options to their default values.

option = *optval*
      Sets (all instances) of *option* to *optval*.

option : *instance identifier* = *optval*
      Sets a single instance of *option* to *optval*.

$option = $ **default**
> Resets (all instances) of *option* to their default value.

$option : instance\ identifier = $ **default**
> Resets a single instance of *option* to its default value.

optstr is case insensitive and *option*, *instance identifier* and *optval* may consist of one or more tokens separated by white space.

See the documentation of the individual functions in the g22 Chapter Introduction for details of valid values for *option*, *instance identifier* and *optval*.

3:     **fail** – NagError *   *Input/Output*

> The NAG error argument (see Section 3.7 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 ⟨*value*⟩ had an illegal value.

NE_HANDLE

> **handle** has not been initialized or is corrupt.

> **handle** is not a G22 handle.

NE_INSTANCE

> Invalid *instance identifier* for *option*.
> On entry, **optstr** = ⟨*value*⟩.

> Numeric *instance identifier* is out of range
> On entry, *instance identifier* = ⟨*value*⟩.
> Constraint: ⟨*value*⟩ ≤ *instance identifier* and *instance identifier* ≤ ⟨*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.
> See Section 2.7.6 in How to Use the NAG Library and its Documentation for further information.

NE_INVALID_FORMAT

> On entry, could not convert *optval* to an integer.
> **optstr** = ⟨*value*⟩.

> On entry, could not convert *optval* to a real.
> **optstr** = ⟨*value*⟩.

> On entry, the expected delimiter '=' was not found.
> **optstr** = ⟨*value*⟩.

NE_INVALID_OPTION

> On entry, *option* was not recognized.
> **optstr** = ⟨*value*⟩.

NE_INVALID_VALUE

On entry, *optval* is not a valid value for *option*.
optstr = ⟨*value*⟩.

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_WRITE_ERROR

On entry, *option* is read only.
optstr = ⟨*value*⟩.

NW_INSTANCE

On entry, *option* cannot have an associated *instance identifier*. The supplied *instance identifier* was ignored.
optstr = ⟨*value*⟩.

7 Accuracy

Not applicable.

8 Parallelism and Performance

nag_blgm_optset (g22zmc) is not threaded in any implementation.

9 Further Comments

None.

10 Example

See the example for **nag_blgm_lm_formula (g22yac)**.