NAG Library Function Document

nag_opt_sparse_nlp_option_set_string (e04vlc)

1 Purpose

nag_opt_sparse_nlp_option_set_string (e04vlc) may be used to supply individual optional arguments to
nag_opt_sparse_nlp_solve (e04vhc). The initialization function nag_opt_sparse_nlp_init (e04vgc) must
have been called before calling nag_opt_sparse_nlp_option_set_string (e04vlc).

2 Specification

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

void nag_opt_sparse_nlp_option_set_string (const char *string,
                                          Nag_E04State *state, NagError *fail)

3 Description

nag_opt_sparse_nlp_option_set_string (e04vlc) may be used to supply values for optional arguments to
nag_opt_sparse_nlp_solve (e04vhc). It is only necessary to call nag_opt_sparse_nlp_option_set_string
(e04vlc) for those arguments whose values are to be different from their default values. One call to
nag_opt_sparse_nlp_option_set_string (e04vlc) sets one argument value.

Each optional argument is defined by a single character string, consisting of one or more items. The
items associated with a given option must be separated by spaces, or equals signs [=]. Alphabetic
characters may be upper or lower case. The string

    Print Level = 1

is an example of a string used to set an optional argument. For each option the string contains one or
more of the following items:

– a mandatory keyword;
– a phrase that qualifies the keyword;
– a number that specifies an Integer or double value. Such numbers may be up to 16 contiguous
  characters which can be read using C’s d or g formats, terminated by a space if this is not the last
  item on the line.

For nag_opt_sparse_nlp_option_set_string (e04vlc), each user-specified option is not normally printed as
it is defined, but this printing may be turned on using the keyword List. Thus the statement

    e04vlc ("List", &state, &fail);

turns on printing of this and subsequent options. Printing may be turned off again using the keyword
Nolist.

Optional argument settings are preserved following a call to nag_opt_sparse_nlp_solve (e04vhc) and so
the keyword Defaults is provided to allow you to reset all the optional arguments to their default values
before a subsequent call to nag_opt_sparse_nlp_solve (e04vhc).

A complete list of optional arguments, their abbreviations, synonyms and default values is given in
Section 12 in nag_opt_sparse_nlp_solve (e04vhc).

4 References

None.
5 Arguments

1: string – const char *  
   Input
   On entry: a single valid option string (see Section 3 in nag_opt_sparse_nlp_option_set_string (e04vlc) and Section 12 in nag_opt_sparse_nlp_solve (e04vhc)).

2: state – Nag_E04State *  
   Communication Structure
   state contains internal information required for functions in this suite. It must not be modified in any way.

3: 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_E04_OPTION_INVALID
   The supplied option is invalid. Check that the keywords are neither ambiguous nor misspelt. The option string is ‘<value>’.

NE_E04VGC_NOT_INIT
   The 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 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

nag_opt_sparse_nlp_option_set_file (e04vkc), nag_opt_sparse_nlp_option_set_integer (e04vmc) or nag_opt_sparse_nlp_option_set_double (e04vnc) may also be used to supply optional arguments to nag_opt_sparse_nlp_solve (e04vhc).
10 Example

See Section 10 in nag_opt_sparse_nlp_option_set_file (e04vkc).