NAG Library Function Document

nag_omp_get_num_threads (x06abc)

1 Purpose

nag_omp_get_num_threads (x06abc) returns the number of OpenMP threads in the current team.

2 Specification

```
#include <nag.h>
#include <nagx06.h>
Integer nag_omp_get_num_threads ()
```

3 Description

nag_omp_get_num_threads (x06abc), for multi-threaded implementations, returns the number of OpenMP threads in the current team. If the number of threads is deemed critical then you are advised to use nag_omp_get_num_threads (x06abc) to retrieve this value as it may be less than that requested with either a call to nag_omp_set_num_threads (x06aac), your OMP_NUM_THREADS environment variable value or by using a `num_threads` clause on an OpenMP `parallel` directive.

The number of threads actually in use in a parallel region is dependent on several factors. Please refer to Section 4 for a full description of how the number of threads is chosen for a particular parallel region.

If this function is called from a sequential part of a multi-threaded program then it will return the value 1.

In serial implementations of the NAG C Library this function will always return 1. See the x06 Chapter Introduction for a discussion of the behaviour of these functions when called in serial.

4 References

OpenMP Specifications http://openmp.org/wp/OpenMP-Specifications

Chapman B, Jost G and van der Pas R (2008) *Using OpenMP Portable Shared Memory Parallel Programming* The MIT Press

5 Arguments

None.

6 Error Indicators and Warnings

None.

7 Accuracy

Not applicable.

8 Parallelism and Performance

nag_omp_get_num_threads (x06abc) is not threaded in any implementation.

9 Further Comments

None.

10 Example

See Section 10 in nag_omp_set_num_threads (x06aac) for a demonstration of how to use nag_omp_get_num_threads (x06abc).