

## 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).

---