Arguments   1

- d is the descriptor associated with the pointer to a global array to be allocated.   2

- size0, size1, ... are the sizes of the dimensions of the global array to be allocated.   3

7.6   Mapping Inquiry Functions   4

All mapping inquiry functions are specified as integer functions. These functions return zero   5
upon success and an implementation-defined negative integer value upon failure.   6

7.6.1   xmp_nodes_ndims   7

Format   8

```
[F]   integer function   xmp_nodes_ndims(d, ndims)
      type(xmp_desc)     d
      integer            ndims
[C]   int                xmp_nodes_ndims(xmp_desc_t d, int *ndims)
```
9

Synopsis   10

The xmp_nodes_ndims function provides the rank of the target node array.   11

Input Arguments   12

- d is a descriptor of a node array.   13

Output Arguments   14

- ndims is the rank of the node array specified by d.   15

7.6.2   xmp_nodes_index   16

Format   17

```
[F]   integer function   xmp_nodes_index(d, dim, index)
      type(xmp_desc)     d
      integer            dim
      integer            index
[C]   int                xmp_nodes_index(xmp_desc_t d, int dim, int *index)
```
18

Synopsis   19

The xmp_nodes_index function provides the indices of the executing node in the target node   20
array.   21

Input Arguments   22

- d is a descriptor of a node array.   23

- dim is the target dimension of the node array.   24

Output Arguments

- `index` is an index of the target dimension of the node array specified by `d`.

7.6.3 `xmpc_nodes_index`

Format

`[C]  int  xmpc_nodes_index(xmp_desc_t d, int dim, int *index)`

Synopsis

The `xmpc_nodes_index` function provides the indices - 1 of the executing node in the target node array.

Input Arguments

- `d` is a descriptor of a node array.

- `dim` is the target dimension of the node array.

Output Arguments

- `index` is an index - 1 of the target dimension of the node array specified by `d`.

7.6.4 `xmp_nodes_size`

Format

```
[F]   integer function  xmp_nodes_size(d, dim, size)
      type(xmp_desc)     d
      integer            dim
      integer            size
[C]   int                xmp_nodes_size(xmp_desc_t d, int dim, int *size)
```

Synopsis

The `xmp_nodes_size` function provides the size of each dimension of the target node array.

Input Arguments

- `d` is a descriptor of a node array.

- `dim` is the target dimension of the node array.

Output Arguments

- `size` is the extent of the target dimension of the node array specified by
  t d.