

## 4.1.1 MCAPI\_INITIALIZE

### NAME

`mcapi_initialize` – Initializes an MCAPI node.

**Comment [S6]:** I suggest we ask the tech writer for advice on this.

### SYNOPSIS

```
#include <mcapi.h>

void mcapi_initialize(
    MCAPI_IN mcapi_domain_t domain_id,
    MCAPI_IN mcapi_node_t node_id,
    MCAPI_IN mcapi_node_attributes_t* mcapi_node_attributes,
    MCAPI_IN mcapi_param_t* mcapi_parameters,
    MCAPI_OUT mcapi_info_t* mcapi_info,
    MCAPI_OUT mcapi_status_t* mcapi_status
);
```

**Comment [ML7]:** Do you want to keep this brief description? Note difference to MRAPI doc.

### DESCRIPTION

`mcapi_initialize()` initializes the MCAPI environment on a given MCAPI node in a given MCAPI domain. It has to be called by each node using MCAPI. `mcapi_node_attributes` is used to pass MCAPI defined initialization parameters. `mcapi_parameters` is used to pass implementation specific initialization parameters. `mcapi_info` is used to obtain information from the MCAPI implementation, including MCAPI standardized information, see below and the header files and vendor specific implementation information. A node is a process, a thread, or a processor (or core) with an independent program counter running a piece of code. In other words, an MCAPI node is an independent thread of control. An MCAPI node can call `mcapi_initialize()` once per node, and it is an error to call `mcapi_initialize()` multiple times from a given node, unless `mcapi_finalize()` is called in between. A given MCAPI implementation will specify what is a node (i.e., what thread of control – process, thread, or other -- is a node) in that implementation. A thread and process are just two examples of threads of control, and there could be others.

Initialization parameters will vary by implementation, and may include specifications of the amount of resources to be used for a specific implementation, such as the maximum number of outstanding requests, etc. An `mcapi_node_attributes` structure is passed in by reference with the `mcapi_parameters`. A NULL value for the `mcapi_node_attributes` pointer indicates that default values should be set.

MCAPI defined node attributes:

`MCAPI_NODE_ATTR_TYPE_REGULAR` The node is regular. Default

The informational parameters include MCAPI specified information as outlined below, as well as implementation specific information. Implementation specific information shall be documented by the implementer.

MCAPI defined initialization information:

`mcapi_version` MCAPI version, the three last (rightmost) hex digits are the minor number and those left of minor the major number.