

#### 4.3.1.8 MRAPI\_MUTEX\_TRYLOCK

##### NAME

mrapi\_mutex\_trylock

##### SYNOPSIS

```
mrapi_boolean_t mrapi_mutex_trylock(  
    MRAPI_IN mrapi_mutex_hdl_t mutex,  
    MRAPI_OUT mrapi_key_t* lock_key,  
    MRAPI_OUT mrapi_status_t* status  
);
```

##### DESCRIPTION

This function attempts to obtain a lock on the mutex. If the lock can't be obtained because it is already locked by another node then the function will immediately return `MRAPI_FALSE` and status will be set to `MRAPI_SUCCESS`. If the request can't be satisfied for any other reason, then this function will immediately return `MRAPI_FALSE` and status will be set to the appropriate error code below. If it is successful in obtaining the lock, it sets up a unique key for that lock and that key is to be passed back on the call to unlock. The `lock_key` is only valid if status indicates success and the function returns `MRAPI_TRUE`. This key allows us to support recursive locking. Whether or not a mutex can be locked recursively is controlled via the `MRAPI_MUTEX_RECURSIVE` attribute, and the default is `MRAPI_FALSE`.

##### RETURN VALUE

Returns `MRAPI_TRUE` if the lock was acquired, returns `MRAPI_FALSE` otherwise. If there was an error then `*status` will be set to indicate the error from the table below, otherwise `*status` will indicate `MRAPI_SUCCESS`. If the lock could not be obtained then `*status` will be either `MRAPI_ELOCKED` or one of the error conditions in the table below. When extended error checking is enabled, if lock is called on a mutex that no longer exists, an `MRAPI_ERR_MUTEX_DELETED` error code will be returned. When extended error checking is disabled, the `MRAPI_ERR_MUTEX_INVALID` error will be returned and the lock will fail.

##### ERRORS

<code>MRAPI_ERR_MUTEX_INVALID</code>	Argument is not a valid mutex handle.
<code>MRAPI_ERR_MUTEX_DELETED</code>	If the mutex has been deleted then if <code>MRAPI_ERROR_EXT</code> attribute is set, MRAPI will return <code>MRAPI_ERR_MUTEX_DELETED</code> otherwise MRAPI will just return <code>MRAPI_ERR_MUTEX_INVALID</code> .
<code>MRAPI_ERR_MUTEX_LOCKED</code>	Mutex is already locked by another node or mutex is already locked by this node and is not a recursive mutex.
<code>MRAPI_ERR_PARAMETER</code>	Invalid <code>lock_key</code> parameter.
<code>MRAPI_ERR_NODE_NOTINIT</code>	The calling node is not initialized.

##### NOTE

##### SEE ALSO