

4.8.17 MRAPI_ATOMIC_LOCK (ABB Extension)

NAME

mrapi_atomic_lock

SYNOPSIS

```
void mrapi_atomic_lock(  
    MRAPI_OUT void* sync, MRAPI_IN void* dest,  
    MRAPI_OUT void* previous, MRAPI_IN size_t  
    size, MRAPI_OUT mrapi_status_t* status  
);
```

DESCRIPTION

mrapi_atomic_lock() performs integer exchange for the purposes of implementing an atomic lock. Atomic release is provided by mrapi_atomic_release(). The operation is only valid for memory locations within shared memory, where the synchronization can be across real-time processes. The integer value at destination address is written with constant 1 and the previous value returned if that argument is non-NULL. This is an acquire barrier that does not modify the destination until the integer value is 0. Different integer widths are supported based on the platform. The desired size is passed as input and returned status indicates if the operation succeeded.

RETURN VALUE

None.

ERRORS

MRAPI_ERR_NODE_NOTINIT	The calling node is not initialized
MRAPI_ERR_ATOM_OP_FAILED	The local atomic operation failed

NOTE

Supported integer types:

Windows – uint32_t
Unix - uint8_t, uint16_t, uint32_t, uint64_t

SEE ALSO