4.8.1 MRAPI_BARRIER_INIT (ABB Extension)

NAME

mrapi_barrier_init

SYNOPSIS

```
void  mrapi_barrier_init(
   MRAPI_OUT mrapi_atomic_barrier_t* axb,
  MRAPI_IN pid_t dest, MRAPI_OUT mrapi_msg_t*
  buffer, MRAPI_IN unsigned elems, MRAPI_IN
  size_t size, MRAPI_OUT unsigned* counter,
  MRAPI_IN mca_timeout_t timeout, MRAPI_OUT
  mrapi_status_t* status
);
```

DESCRIPTION

`mrapi_barrier_init()` initializes the structure used to synchronize atomic operations across processes, supporting spinning on non-Windows platforms. Barrier spinning work between writers and readers and is only necessary if the writer and reader are in different processes. The `dest` PID specifies the remote process ID or can be zero to ensure the barrier is always processed on non-Windows platforms. The `buffer` member references application shared memory that is organized as an array of entries (possibly only one), where each entry has `mrapi_msg_t` as the first element of its structure. The array size is `elems`, and the element size is `size`. The `counter` is a reference to an atomic counter that controls which of a finite set of buffers is used for the next read or write. The `timeout` determines how long spinning should wait before failing. These structures form the basis for lock-free data exchange in the MCAPI layer.

RETURN VALUE

None.

ERRORS

`MRAPI_ERR_NODE_NOTINIT`	The calling node is not initialized

NOTE

SEE ALSO