4.4.1 Shared Memory

MRAPI shared memory provides functionality to create and get shared memory segments, attach them to the application's private memory space, query the memory attributes and detach and delete the memory segments. For a detailed description of MRAPI memory semantics refer to Section 3.5. The minimum MRAPI shared memory is considered application/user-level; implementations could defined additional attributes which specify various privilege levels but this should be used with caution as it can seriously inhibit application portability.

For shared memory, MRAPI allows the creator of the memory handle to specify which nodes are allowed to access the shared memory region. In some cases this will cause MRAPI to return an error code if the request cannot be satisfied. An example of this would be the IBM Cell processor in which the main core and the dedicated processing engines do not have access to physically shared memory.