NAME

ibv_alloc_null_mr – allocate a null memory region (MR)

SYNOPSIS

```
#include <infiniband/verbs.h>

struct ibv_mr *ibv_alloc_null_mr(struct ibv_pd *pd);
```

DESCRIPTION

ibv_alloc_null_mr() allocates a null memory region (MR) that is associated with the protection domain *pd*.

A null MR discards all data written to it, and always returns 0 on read. It has the maximum length and only the lkey is valid, the MR is not exposed as an rkey.

A device should implement the null MR in a way that bypasses PCI transfers, internally discarding or sourcing 0 data. This provides a way to avoid PCI bus transfers by using a scatter/gather list in commands if applications do not intend to access the data, or need data to be 0 filled.

Specifically upon **ibv_post_send()** the device skips PCI read cycles and upon **ibv_post_recv()** the device skips PCI write cycles which finally improves performance.

ibv_dereg_mr() deregisters the MR. The use of ibv_rereg_mr() or ibv_bind_mw() with this MR is invalid.

RETURN VALUE

ibv_alloc_null_mr() returns a pointer to the allocated MR, or NULL if the request fails.

SEE ALSO

ibv_reg_mr(3), **ibv_dereg_mr**(3),

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