Type and Op Registration for one-sided communication

To enable easier/more efficient implementation of datatypes in one sided communication and provide for use of user-defined operations.

MPI_Type_register(datatype,comm)

> Establishes correspondence between datatype on all processes in comm

MPI_Type_register_some(datatype,group,comm)

> Collective over groups of processes, if process j is in group of process i, then i must be in group of process j

MPI_Type_deregister(datatype,comm)

> Deregisters datatype

All processes must provide (structurally) same datatype.

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For user-defined operations – establish equivalence between handles on different processes

MPI_Op_register(op,comm)

MPI_Op_register_some(op,group,comm)

MPI_Op_deregister(op,comm)

All processes must provide same op (user code implementing same function)

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