Performance Tuning MPI
by
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1. Exercise: Determining delivered memory performance

Use MPI_Wtime to benchmark the performance of the system memcpy routine on your system. Generate a table for 1, 2, 4, 8, ..., 524288 integers showing the number of bytes, time to send, and the rate in Megabytes per second.

You should perform enough memcpy operations to take a good fraction of a second; the sample solution does 100000/size iterations for size integers. It also repeats the test 10 times and reports the best time.

2. Exercise: Determining delivered memory performance with unaligned data

Use MPI_Wtime to benchmark the performance of the system memcpy routine on your system. Generate a table for 1, 2, 4, 8, ..., 524288 integers showing the number of bytes, time to send, and the rate in Megabytes per second. Use unaligned data items; that is, make sure that the low-order bits of the source and destination addresses are different. Also, ensure that the source and destination are "well separated" in memory.

You should perform enough memcpy operations to take a good fraction of a second; the sample solution does 100000/size iterations for size integers. It also repeats the test 10 times and reports the best time.