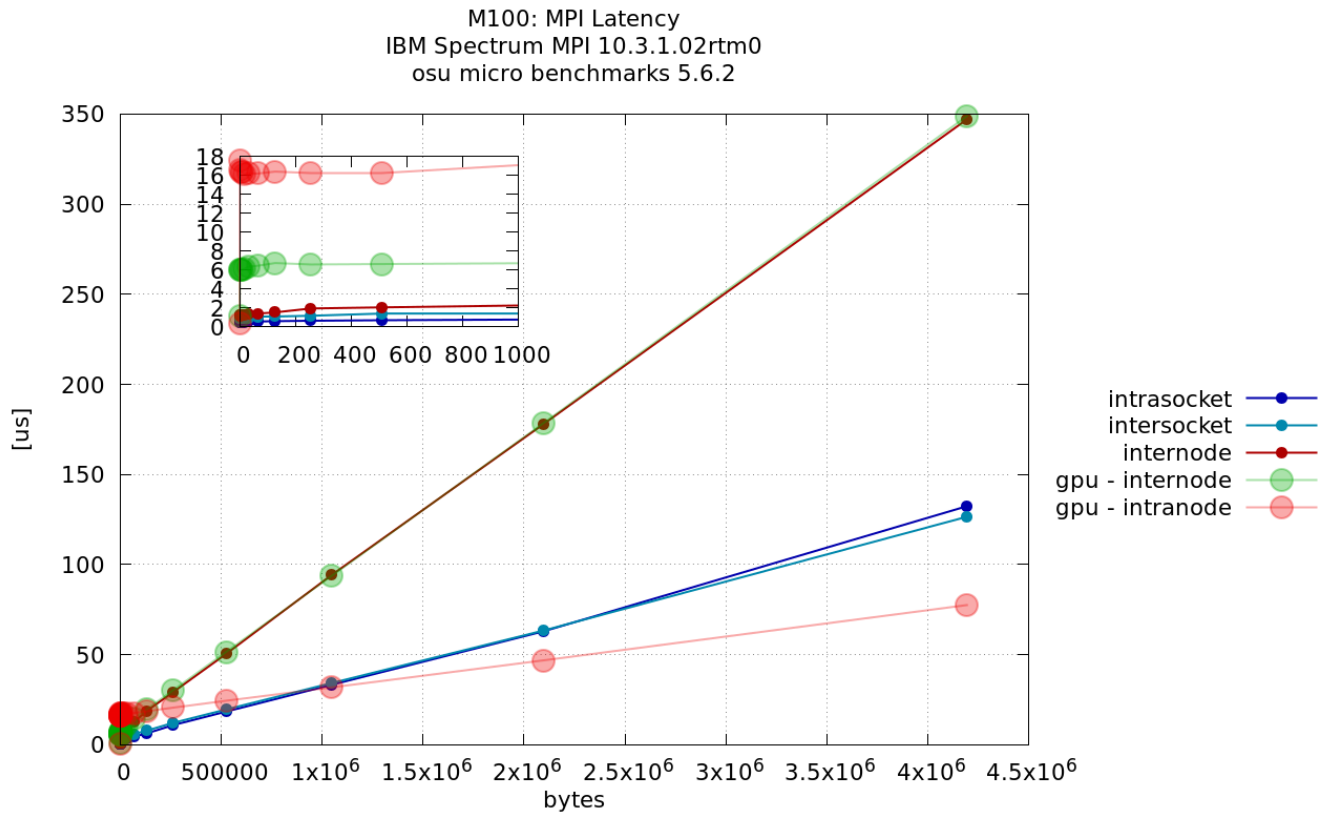


OSU Benchmarks

Latency test

The latency tests are carried out in a ping-pong fashion. The sender sends a message with a certain data size to the receiver and waits for a reply from the receiver. The receiver receives the message from the sender and sends back a reply with the same data size. Many iterations of this ping-pong test are carried out and average one-way latency numbers are obtained. The blocking version of MPI functions (MPI_Send and MPI_Recv) is used in the tests. This test was performed inter/intra socket, internode and GPU-inter/intra node.



Bidirectional Bandwidth Test

The bidirectional bandwidth is the bandwidth test with both the nodes involved sending out a fixed number of back-to-back messages (equal to the window size) and waiting for the reply. This process is repeated for several iterations and the bandwidth is calculated based on the elapsed time (from the time sender sends the first message until the time it receives the reply back from the receiver) and the number of bytes sent by the sender. This test measures the maximum sustainable aggregate bandwidth by two nodes. It was performed inter/intra socket, inter node and GPU-inter/intra node.

MPI Bidirectional Bandwidth M100
IBM Spectrum MPI 10.3.1.02rtm0
osu micro benchmarks 5.6.2
CPU-CPU
GPU-GPU

