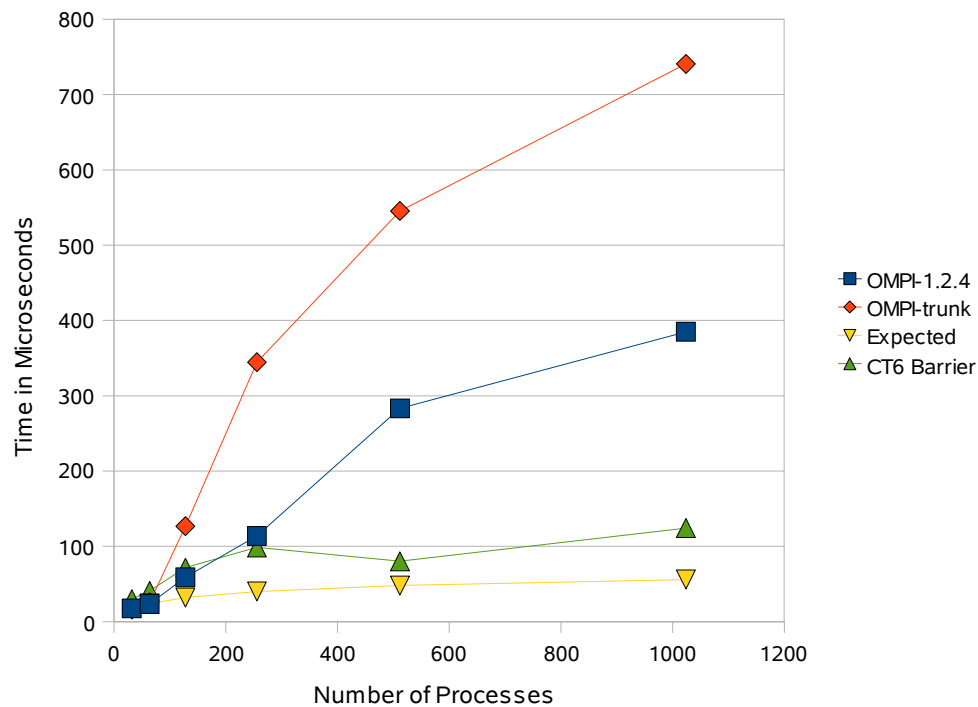


MPI_Barrier timings from IMB

NP	OMPI-1.2.4	OMPI-trunk	Expected	CT6 Barrier
32	17.57	16.58	16	29.85
64	23.52	25.61	24	40.85
128	58.93	126.76	32	71.72
256	113.94	344.73	40	98.60
512	283.26	545.37	48	80.23
1024	384.94	740.77	56	124.29

IMB MPI_Barrier



Cluster has 16 processors per node.

For expected values, I used 8 usec round

trip latency for openib and 2 usec round trip latency for sm.

Formual for expected barrier times:

$$[(\log_2(np) - \log_2(16)) * (\text{round trip openib latency})] + [\log_2(16) * (\text{round trip sm latency})]$$

OMPI 1.2.4 MCA Parameters

--mca btl_openib_ib_timeout 23

--mca btl_openib_use_srq 1

--mca btl_openib_use_rd_max 2048

OMPI Trunk Parameters (r17976)

--mca btl_openib_use_rd_max 2048

Portland Group Compilers