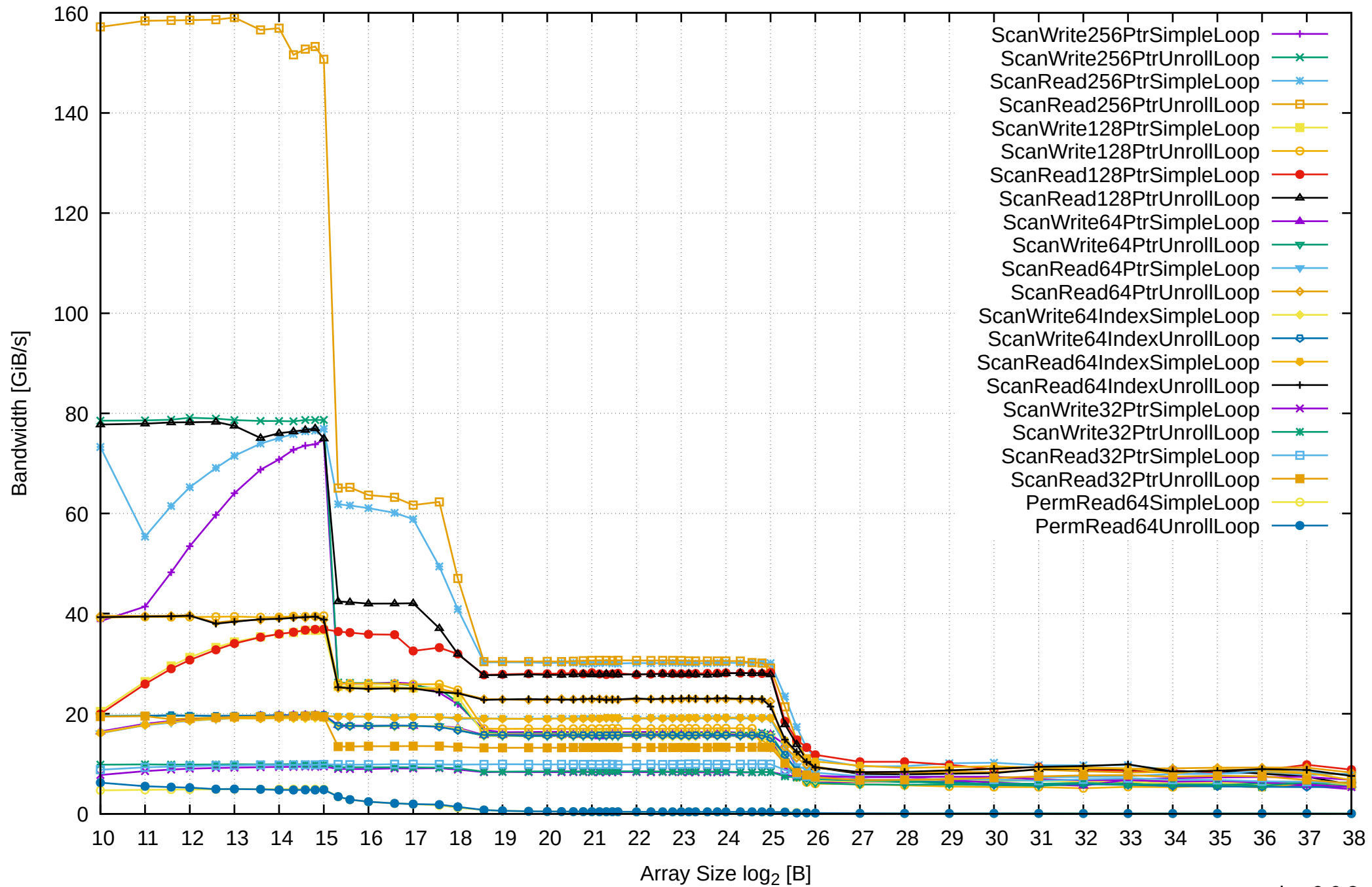
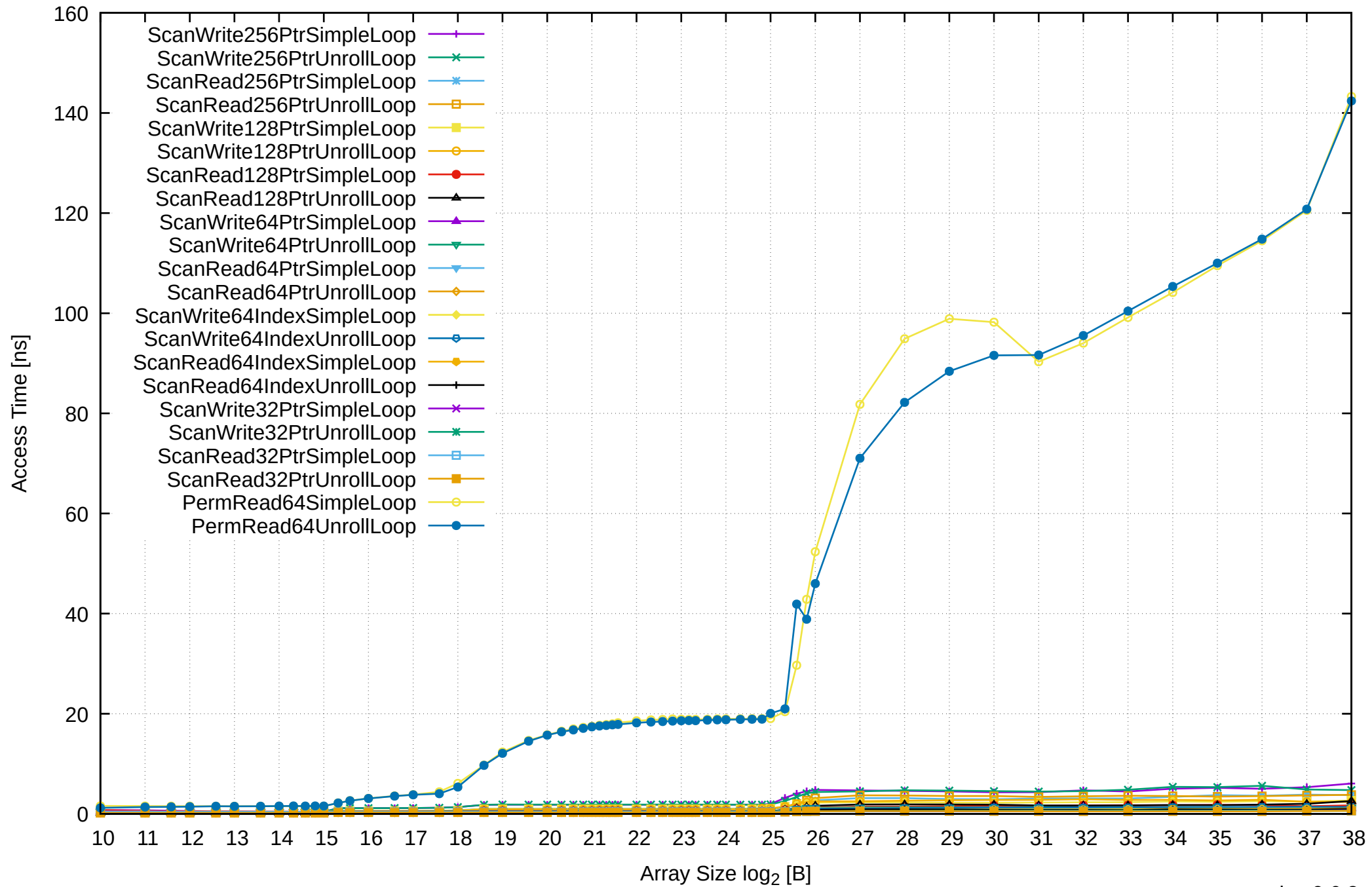


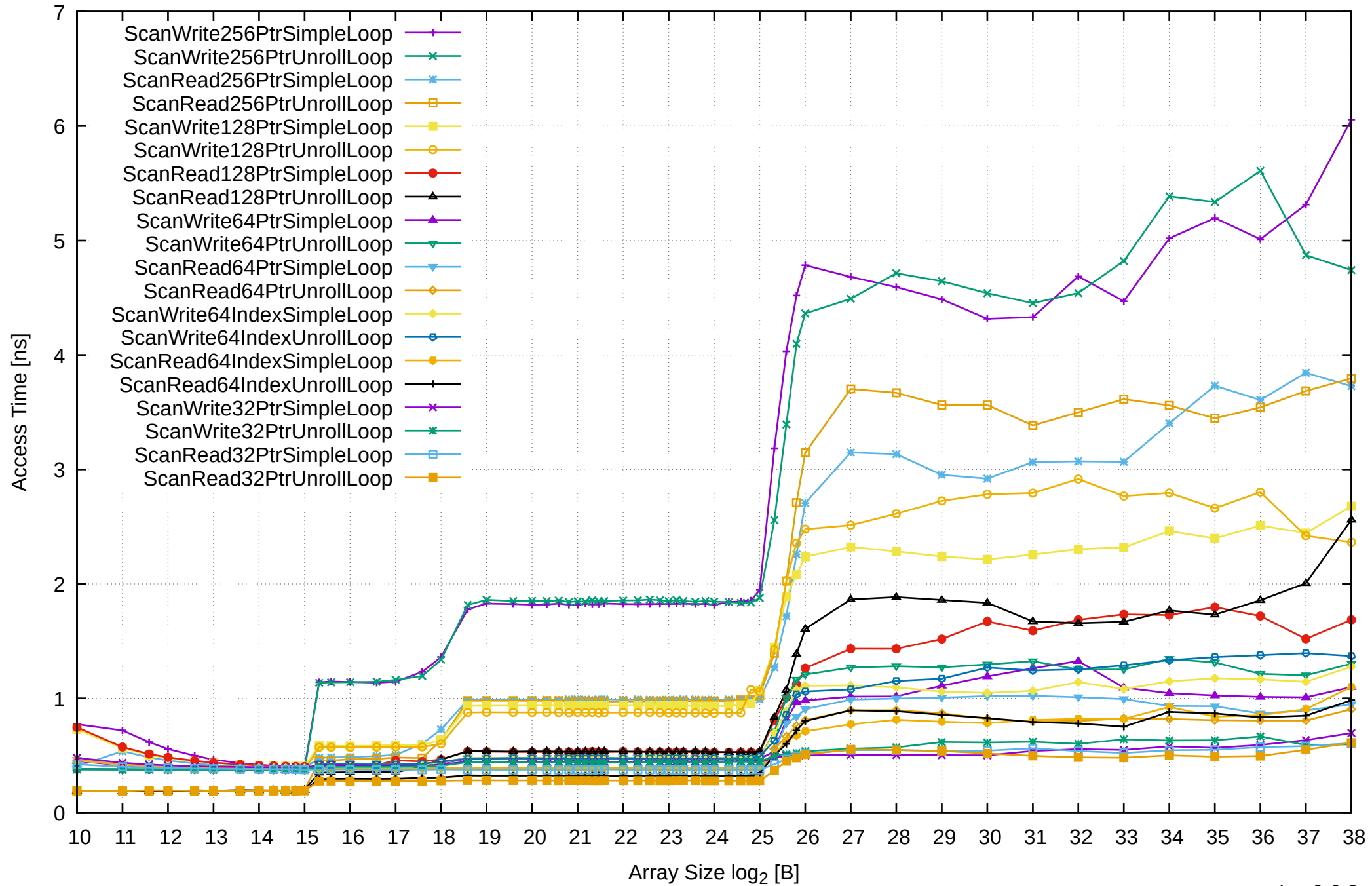
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - One Thread Memory Bandwidth



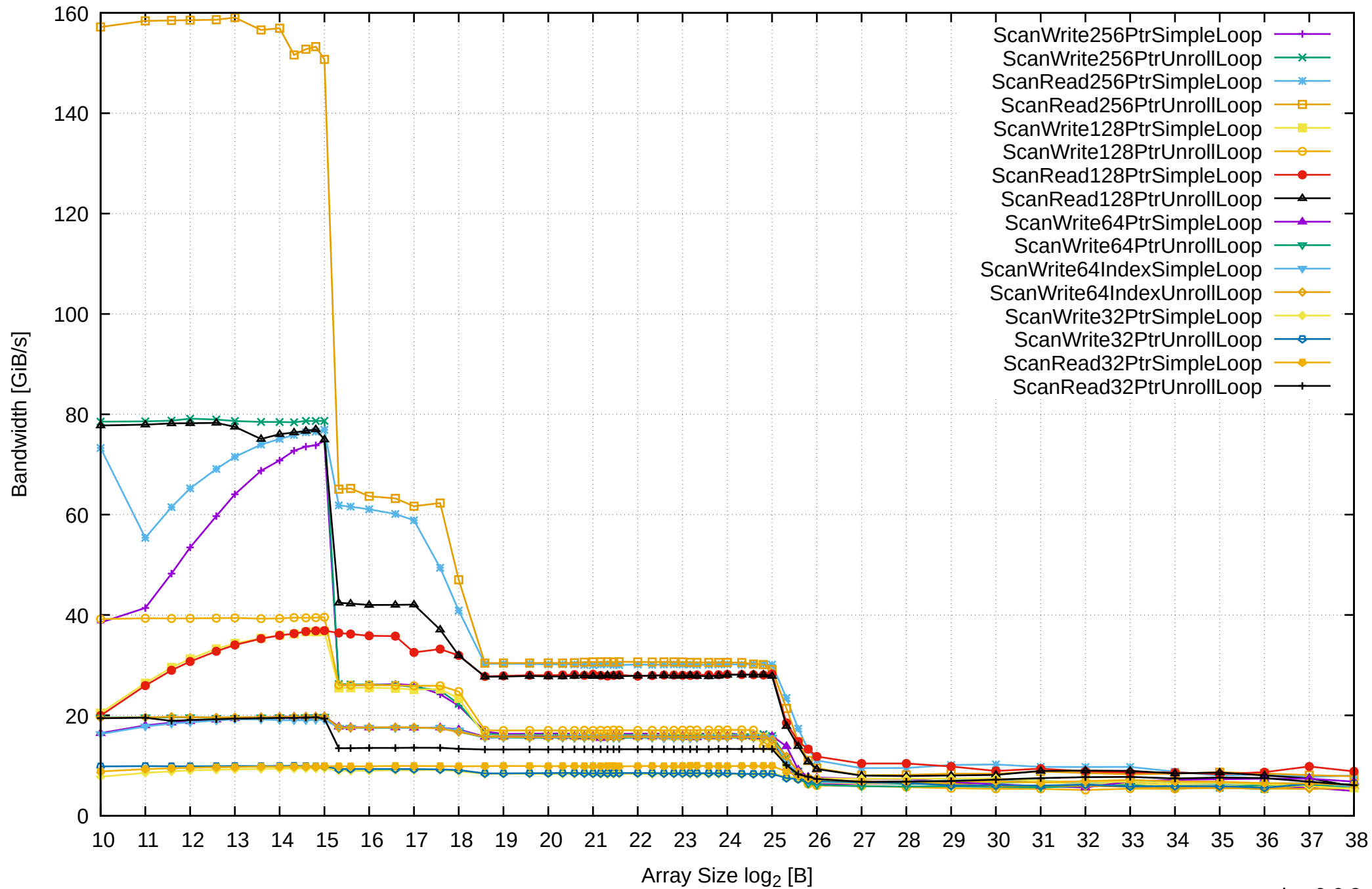
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - One Thread Memory Latency (Access Time)



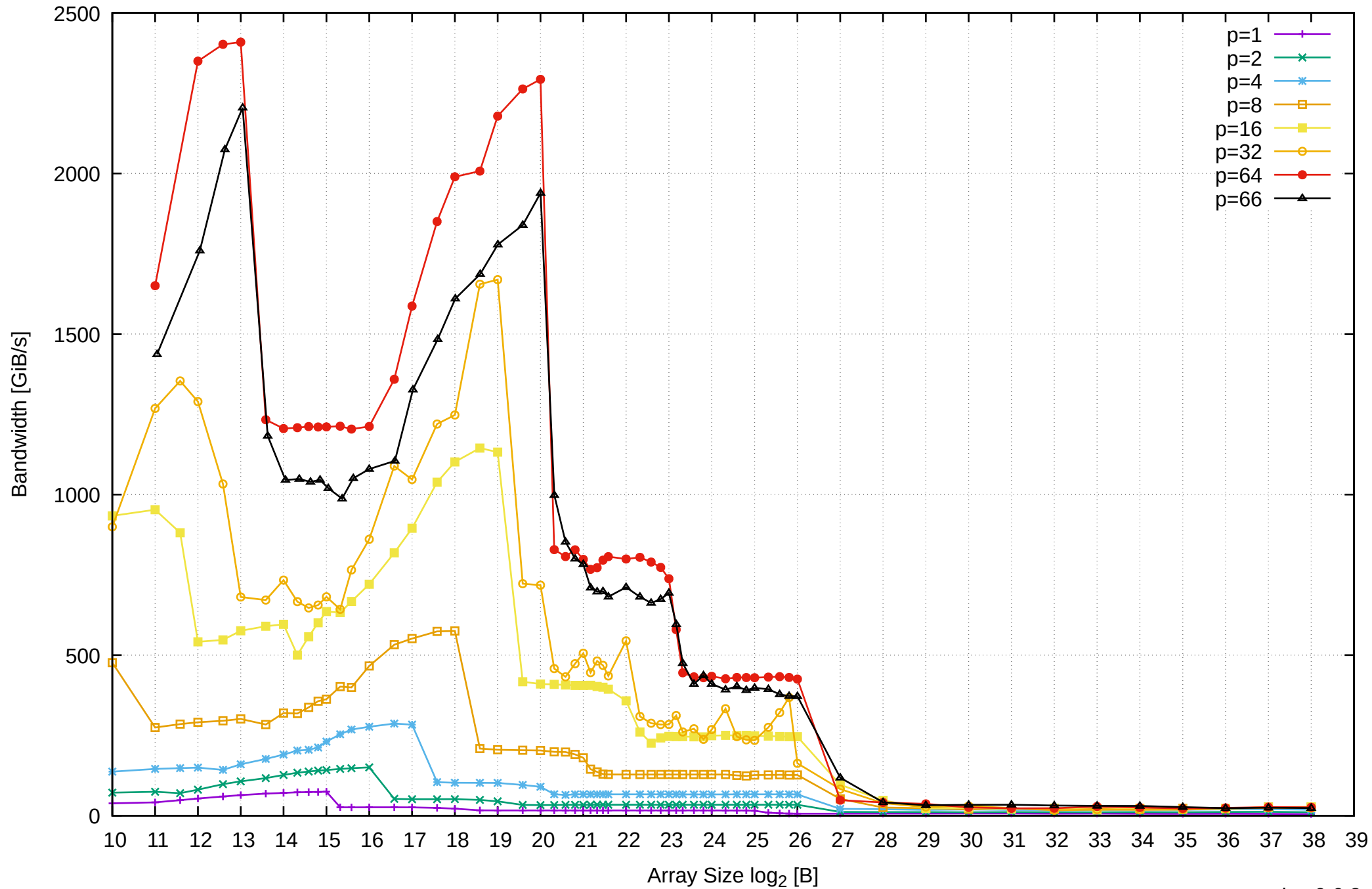
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - One Thread Memory Latency (excluding Permutation)



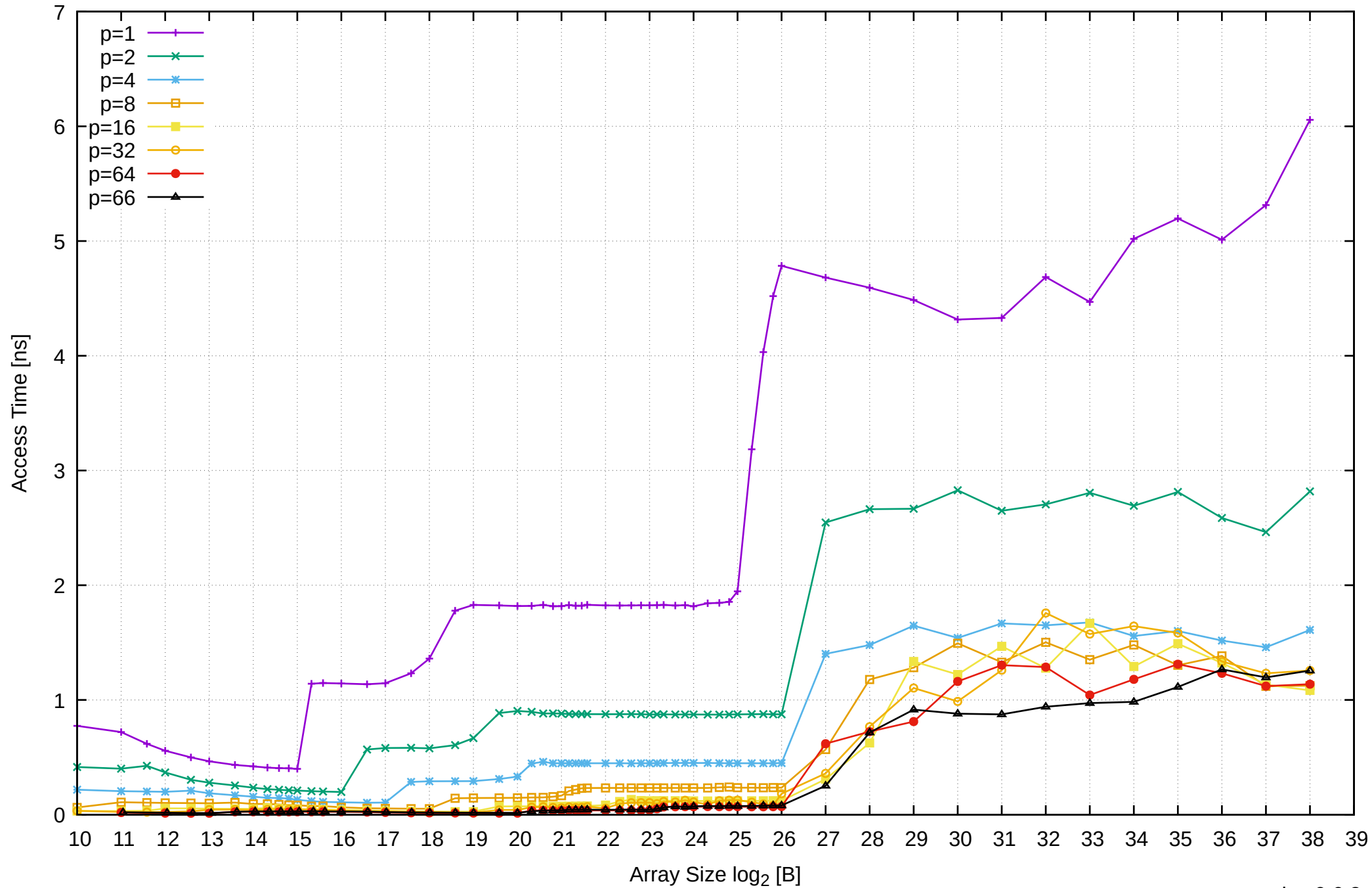
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - One Thread Memory Bandwidth (only 64-bit Reads)



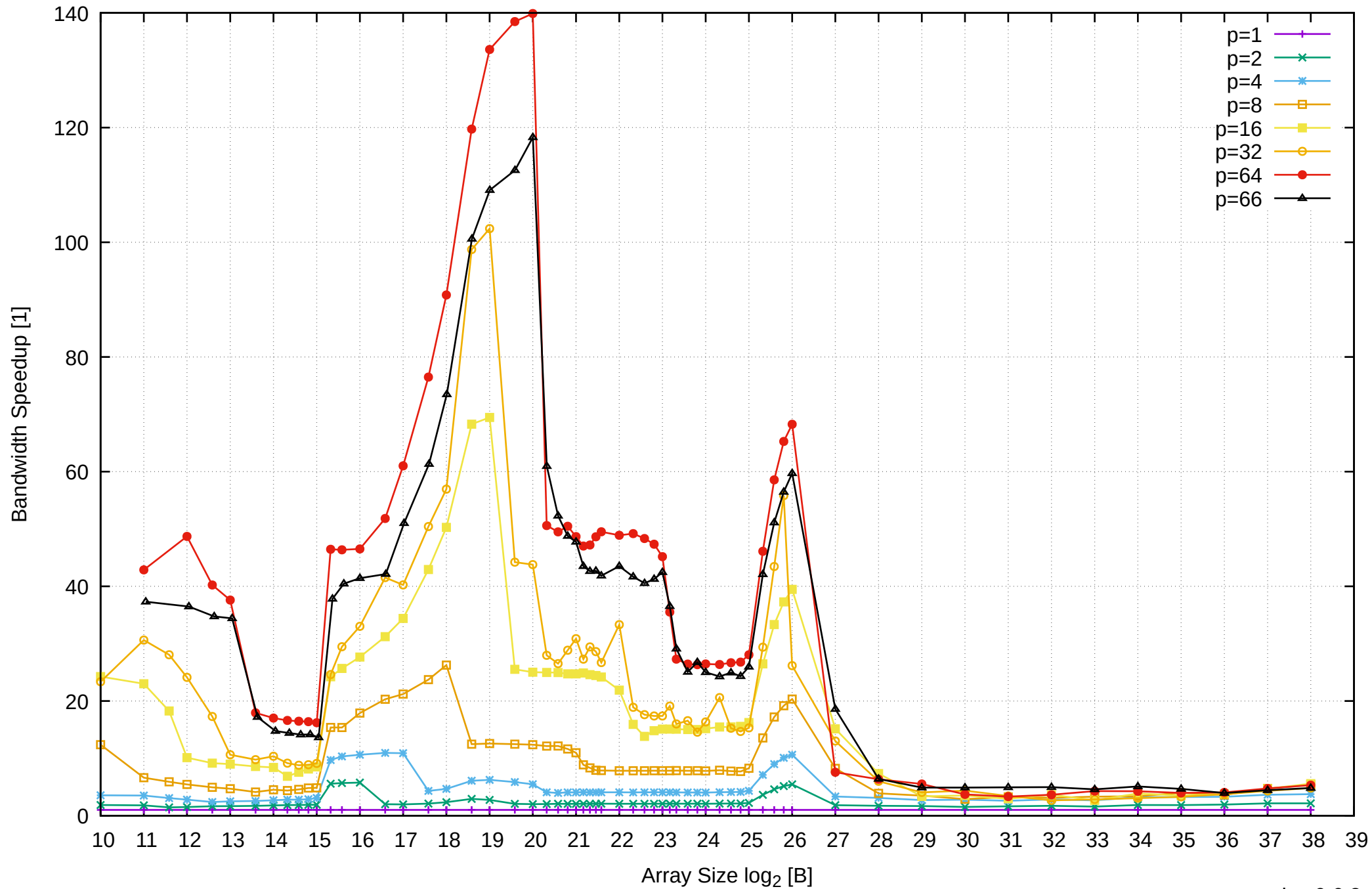
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite256PtrSimpleLoop

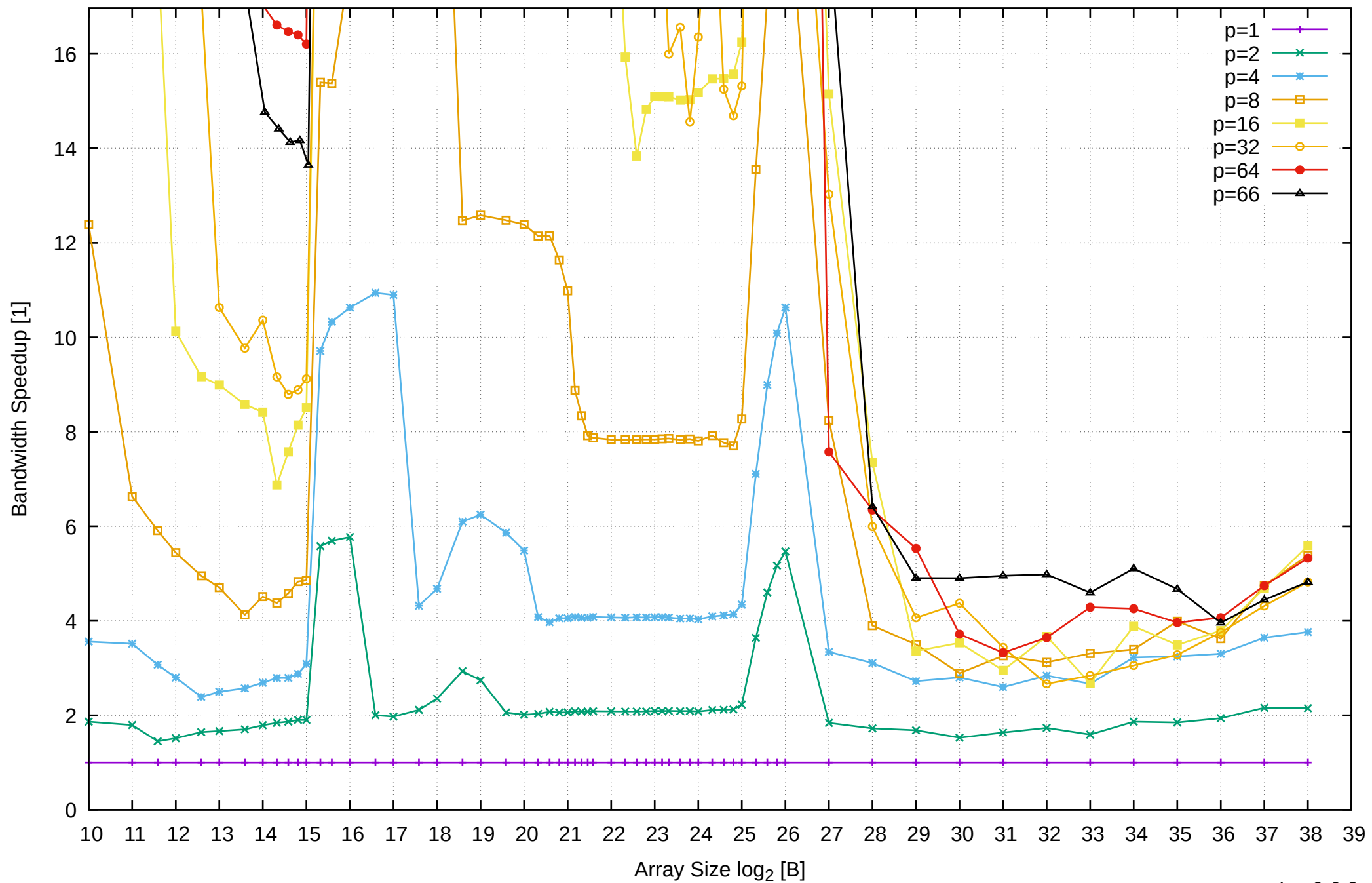


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite256PtrSimpleLoop



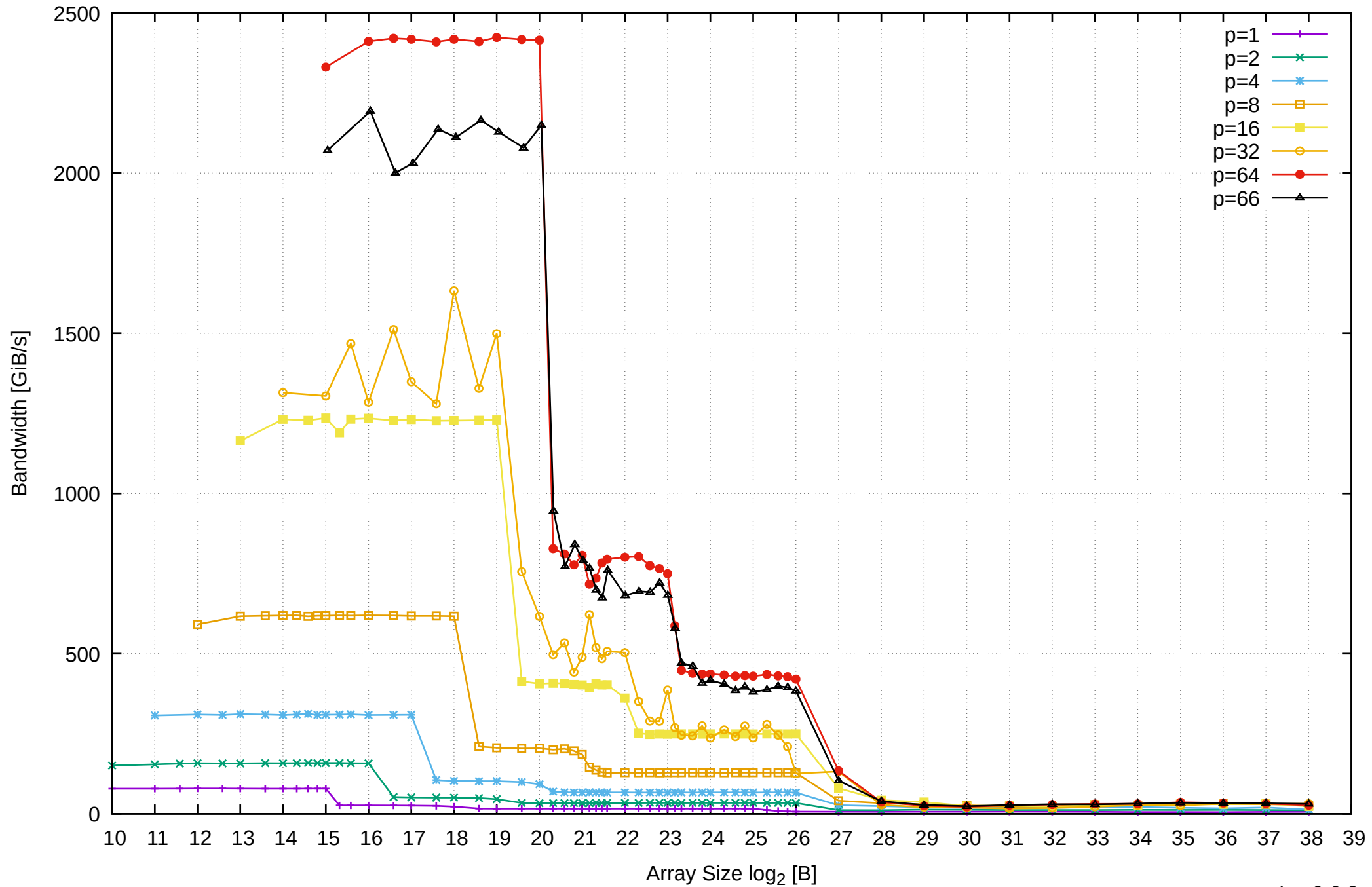
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite256PtrSimpleLoop



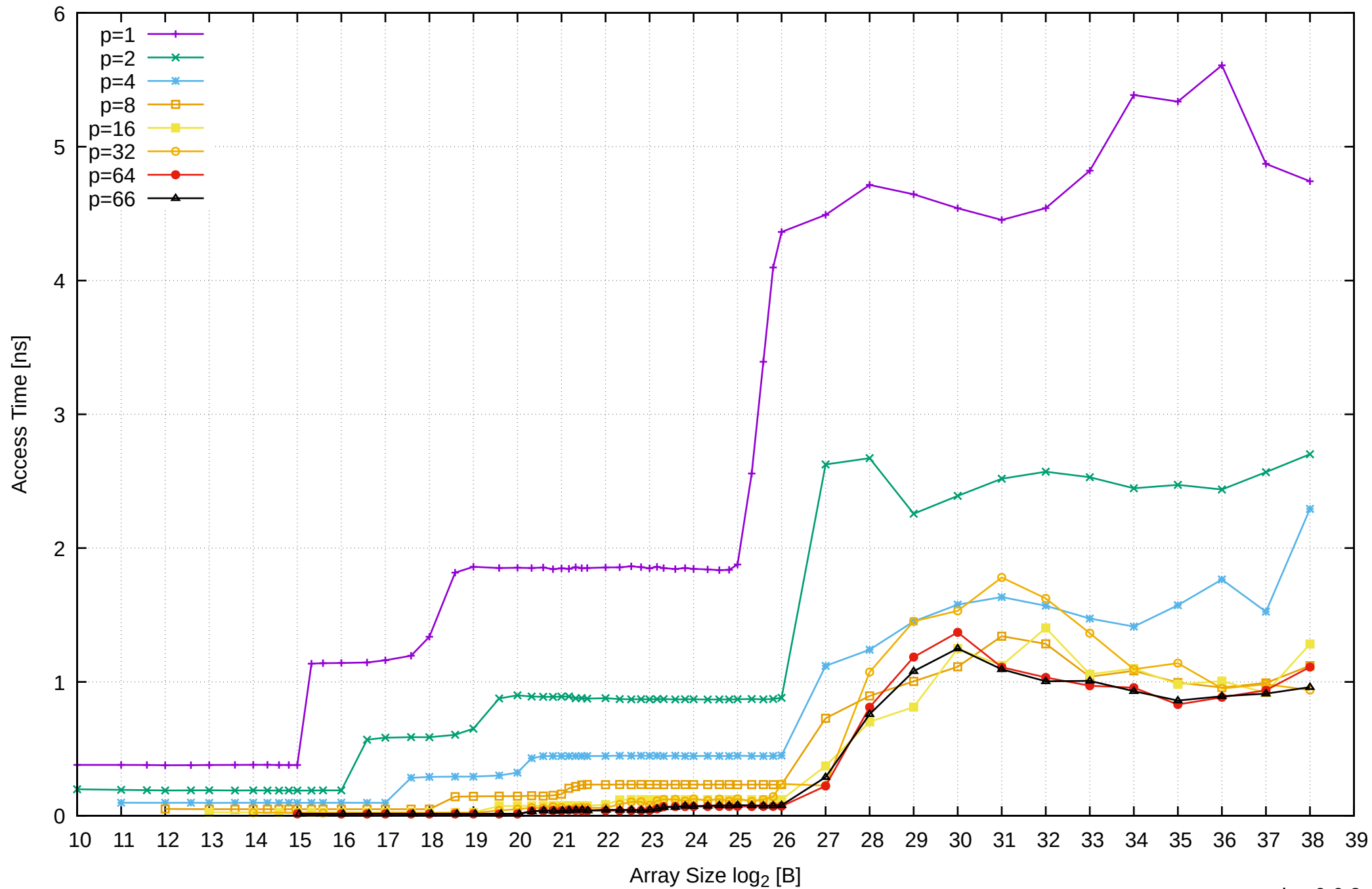




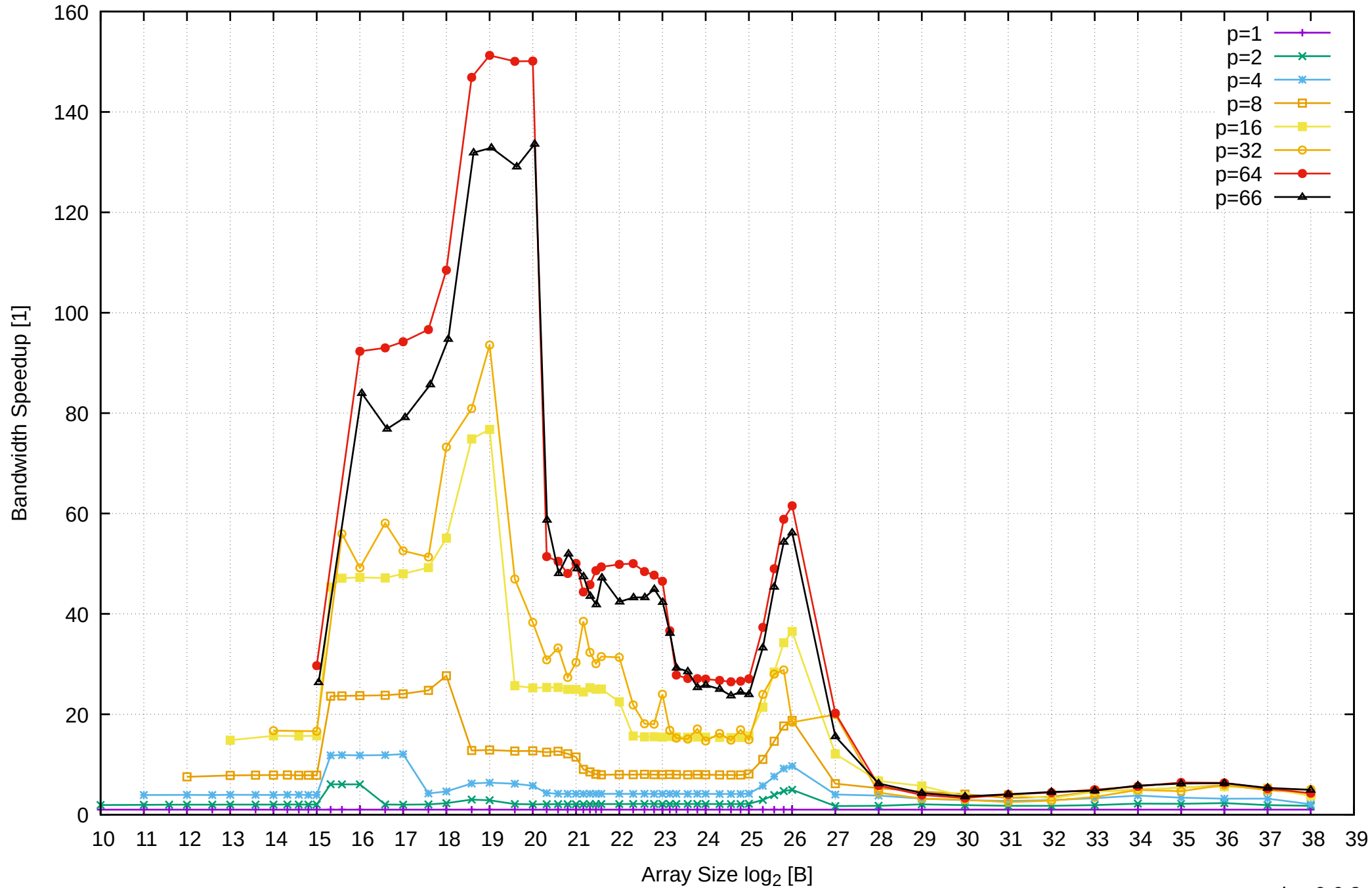
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite256PtrUnrollLoop

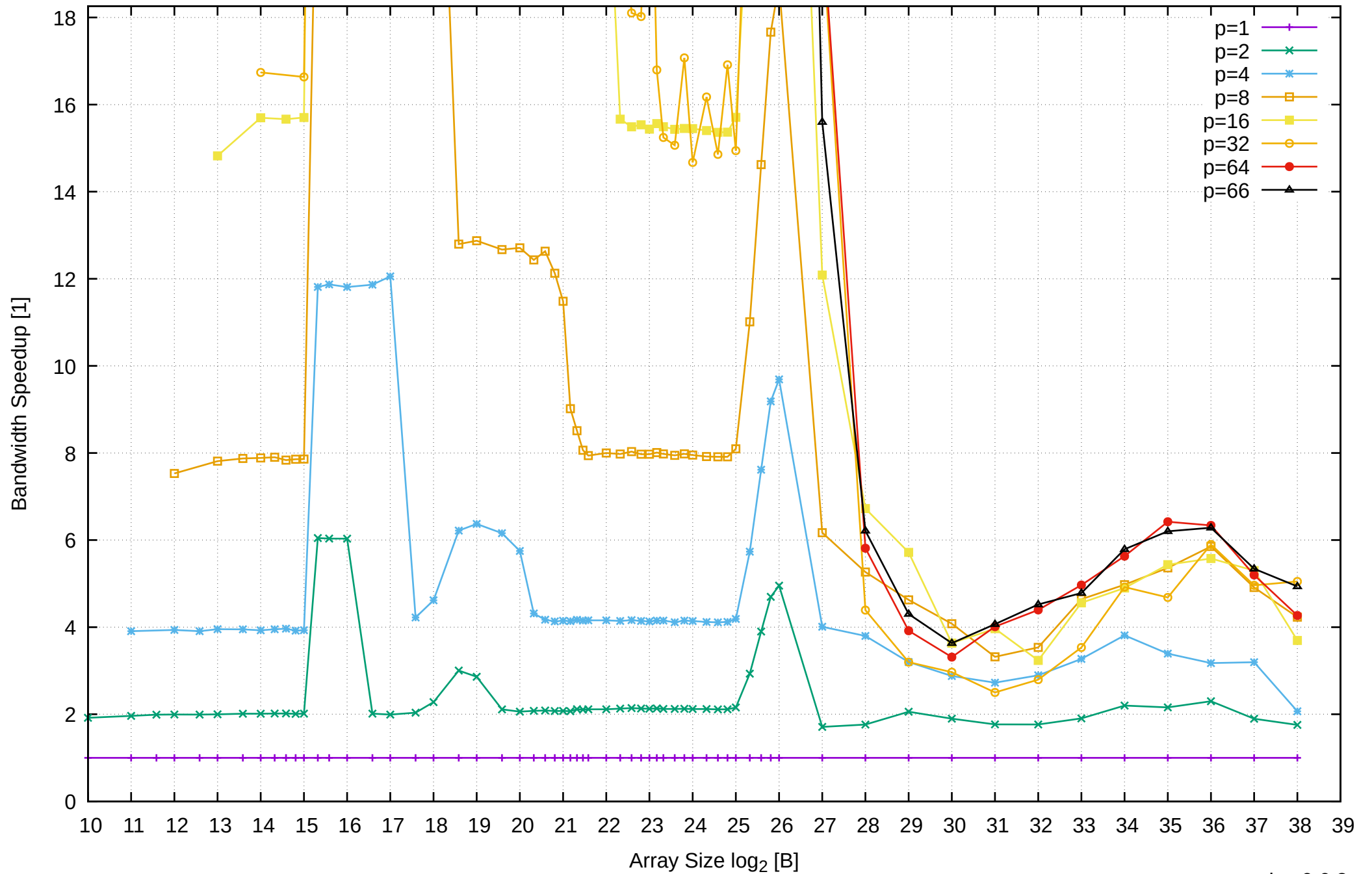


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite256PtrUnrollLoop

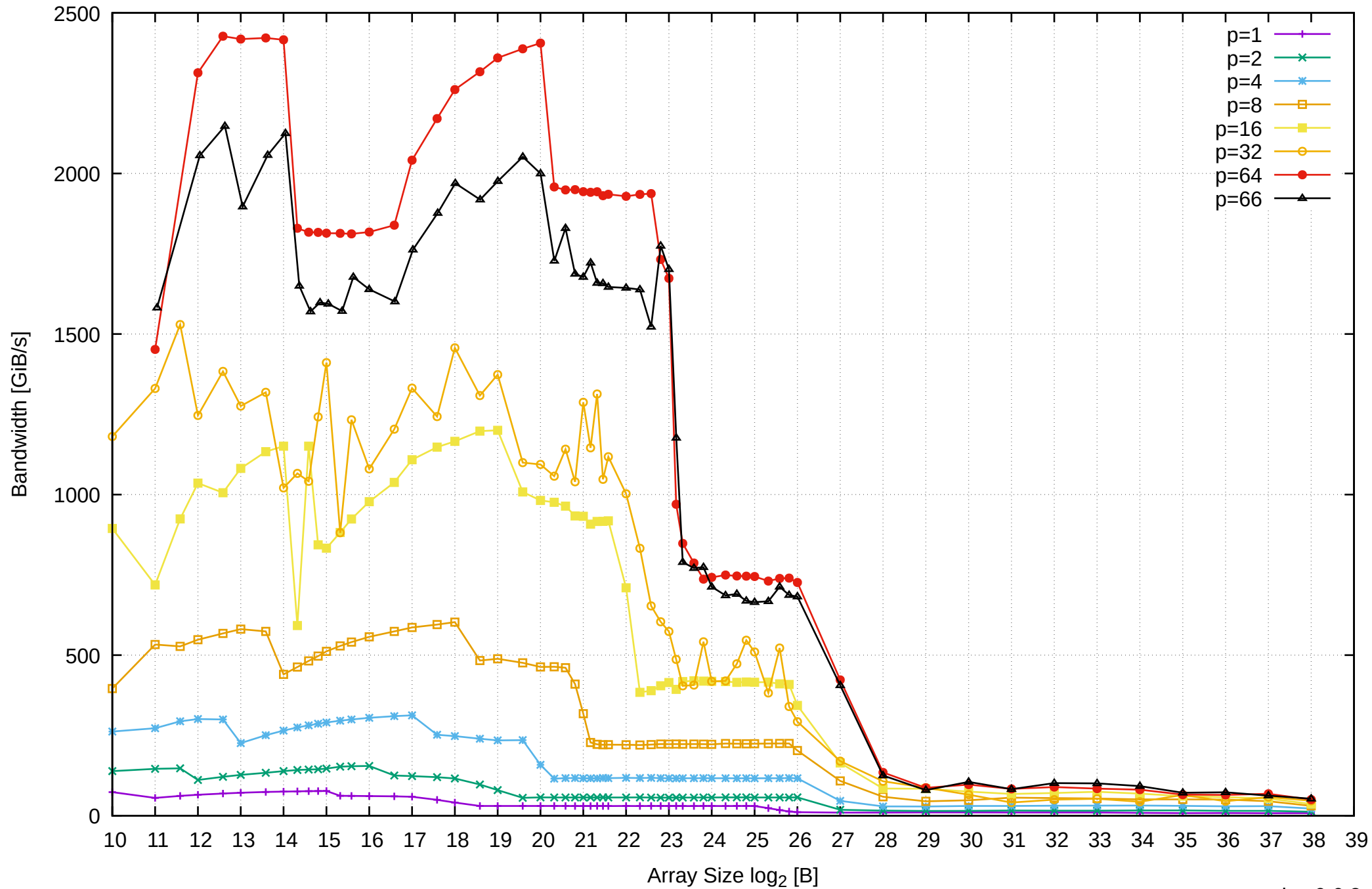


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite256PtrUnrollLoop

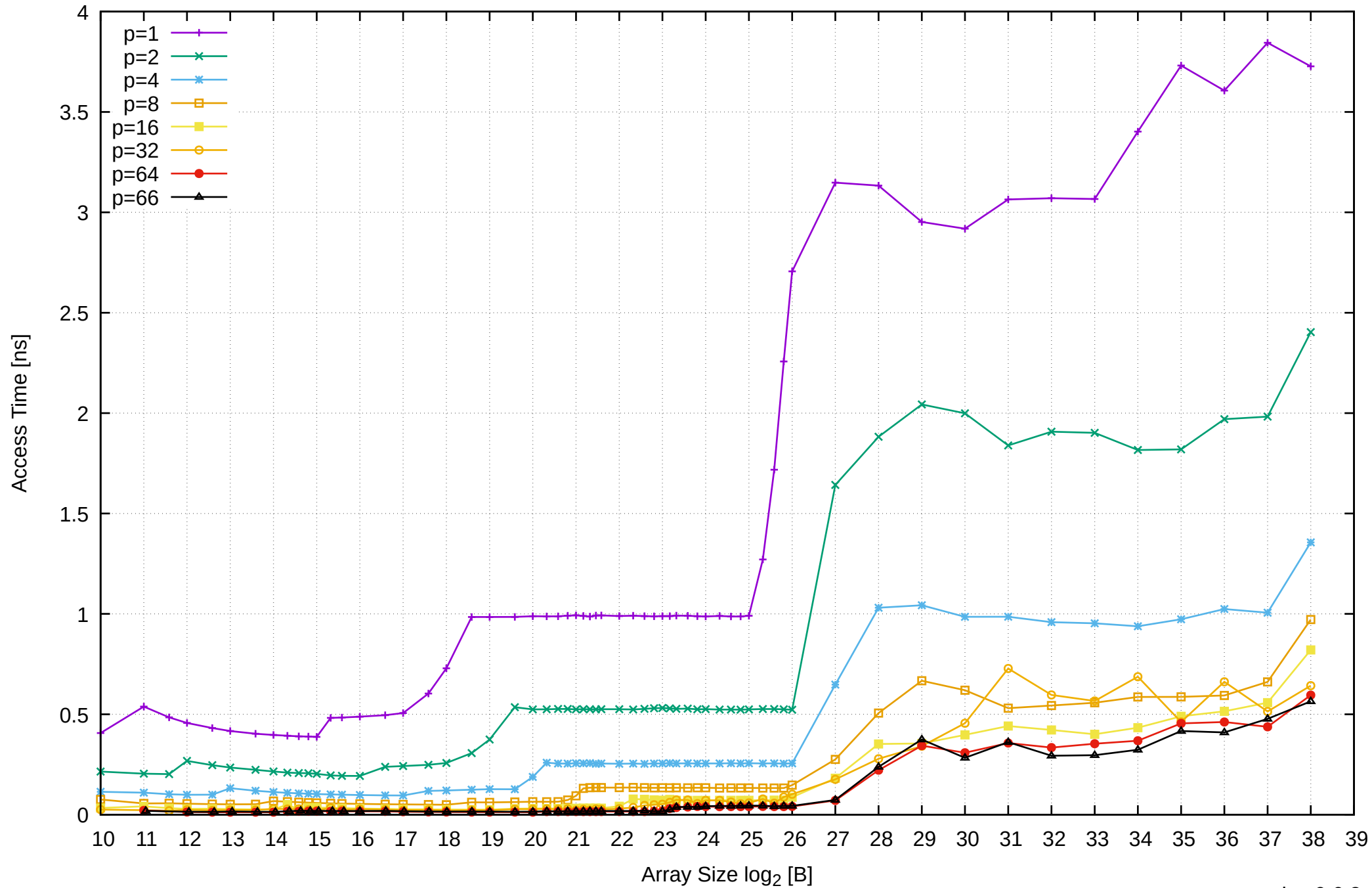




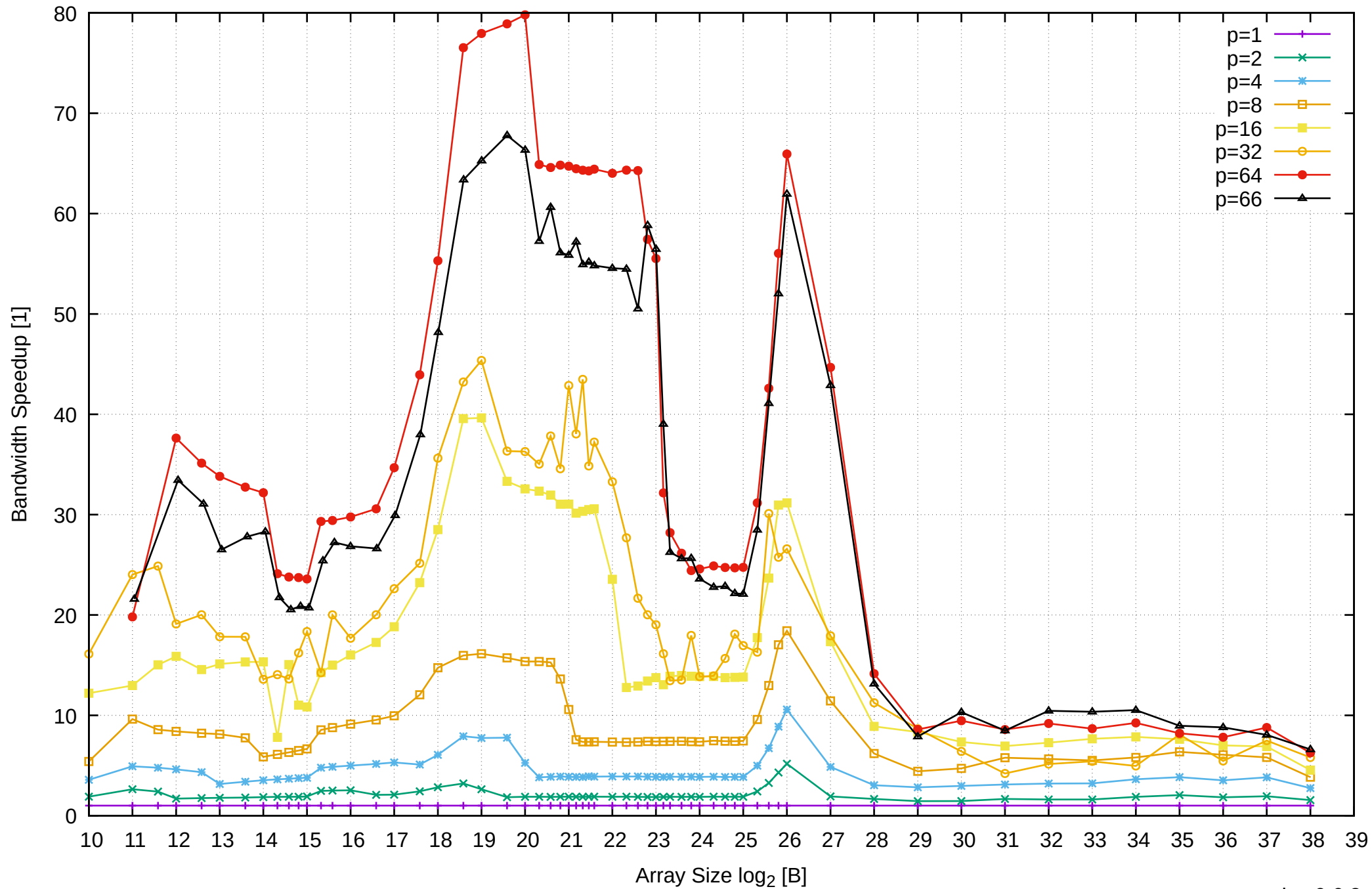
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead256PtrSimpleLoop

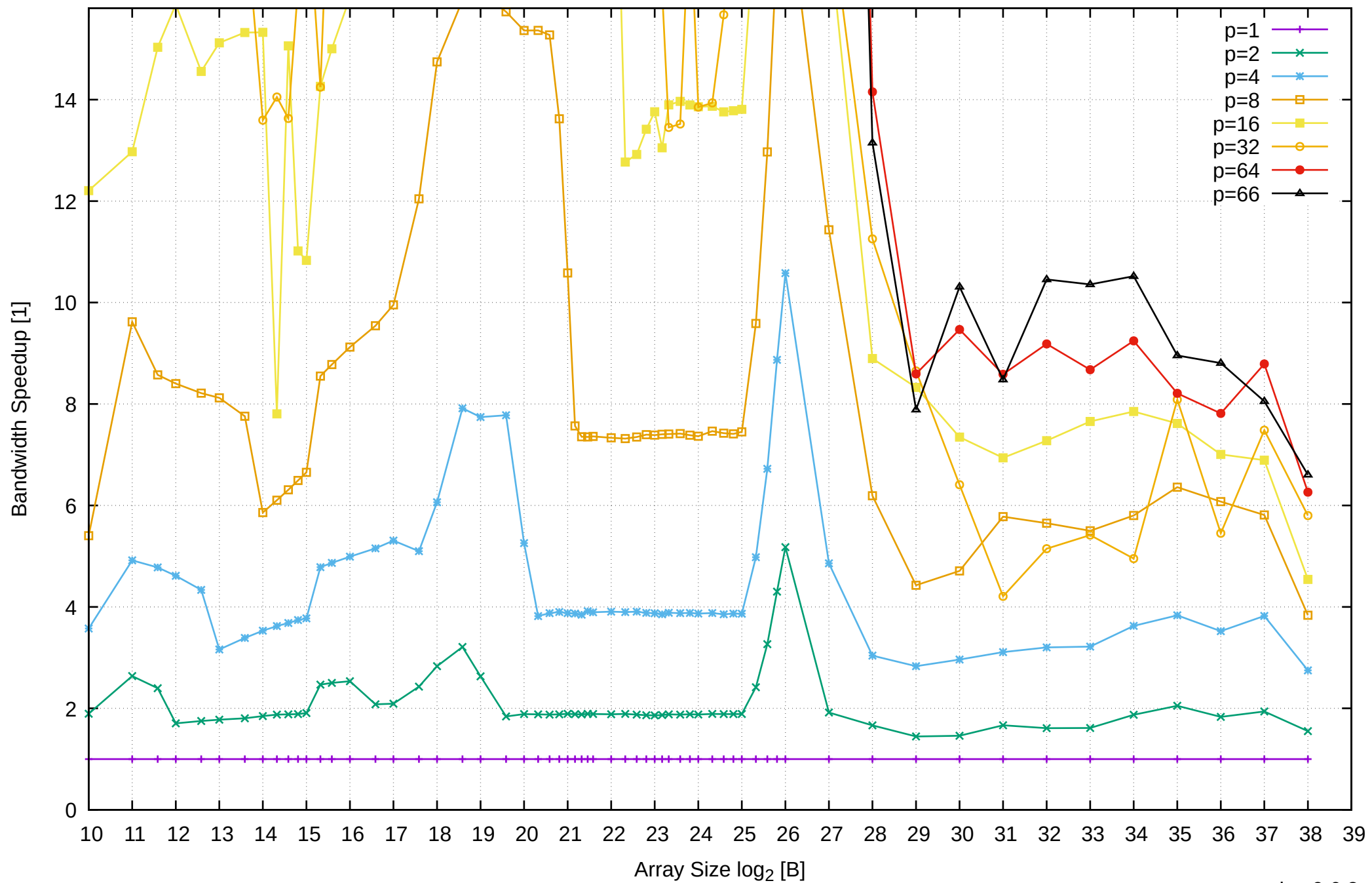


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead256PtrSimpleLoop



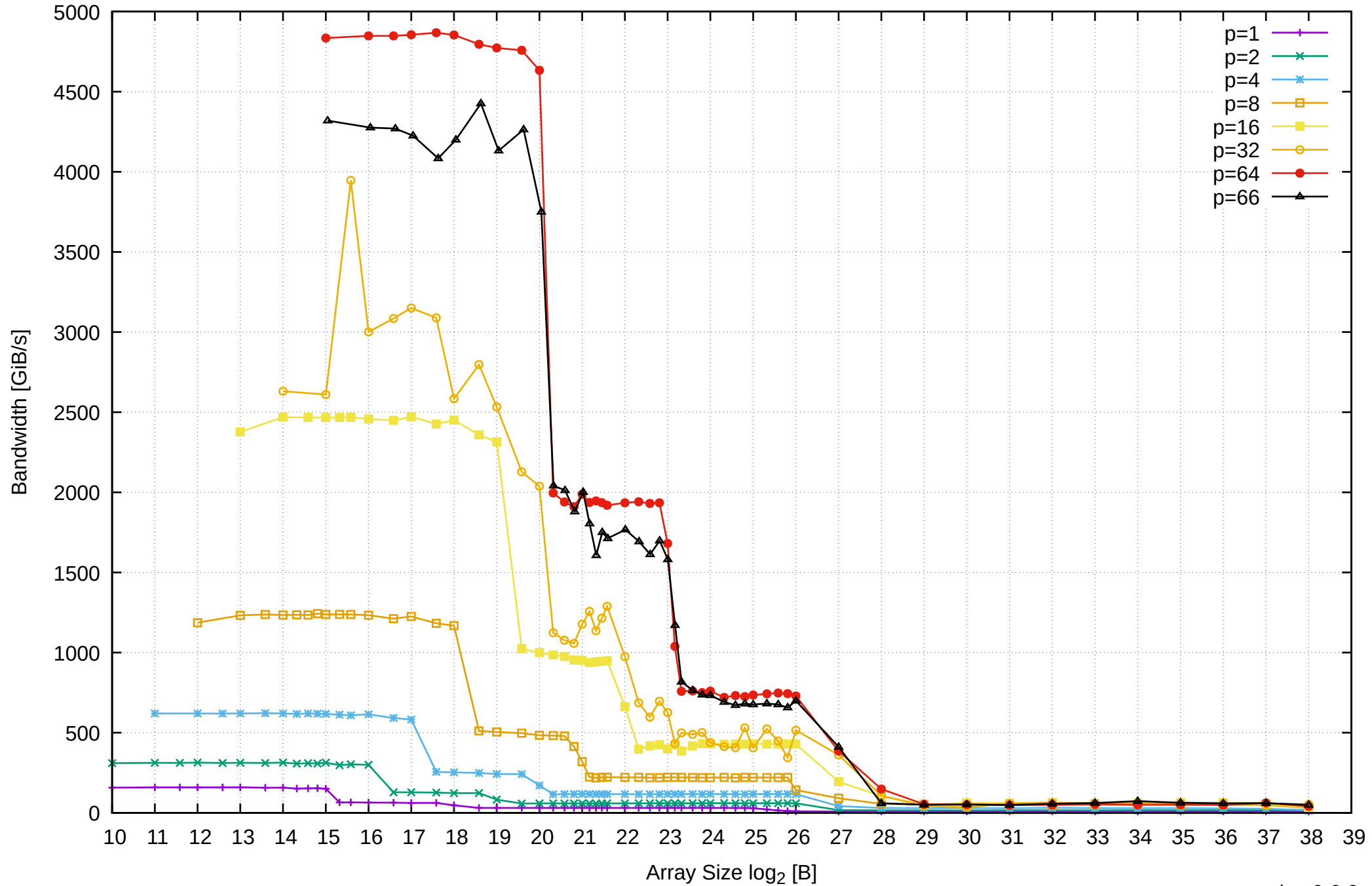
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead256PtrSimpleLoop



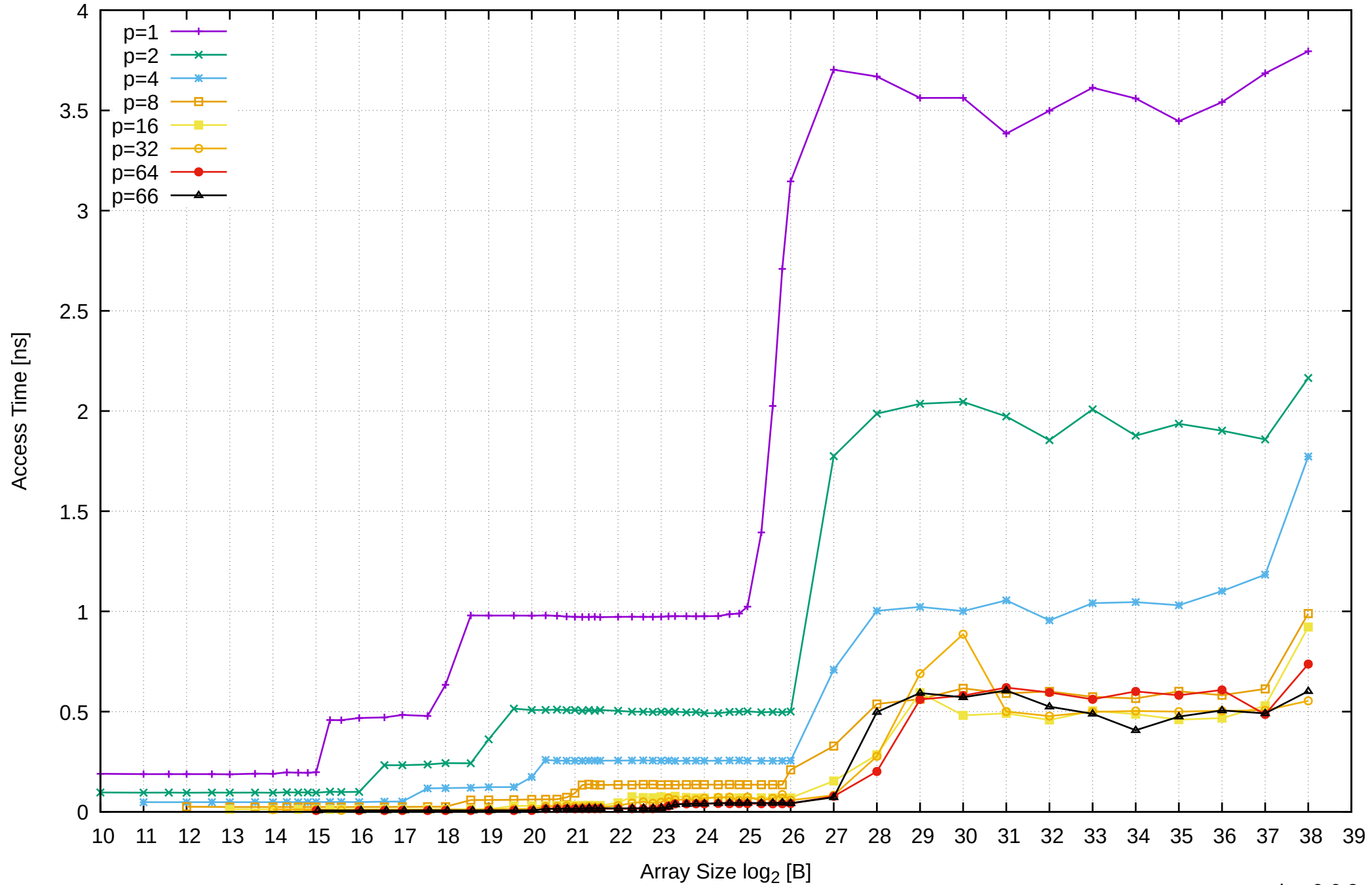




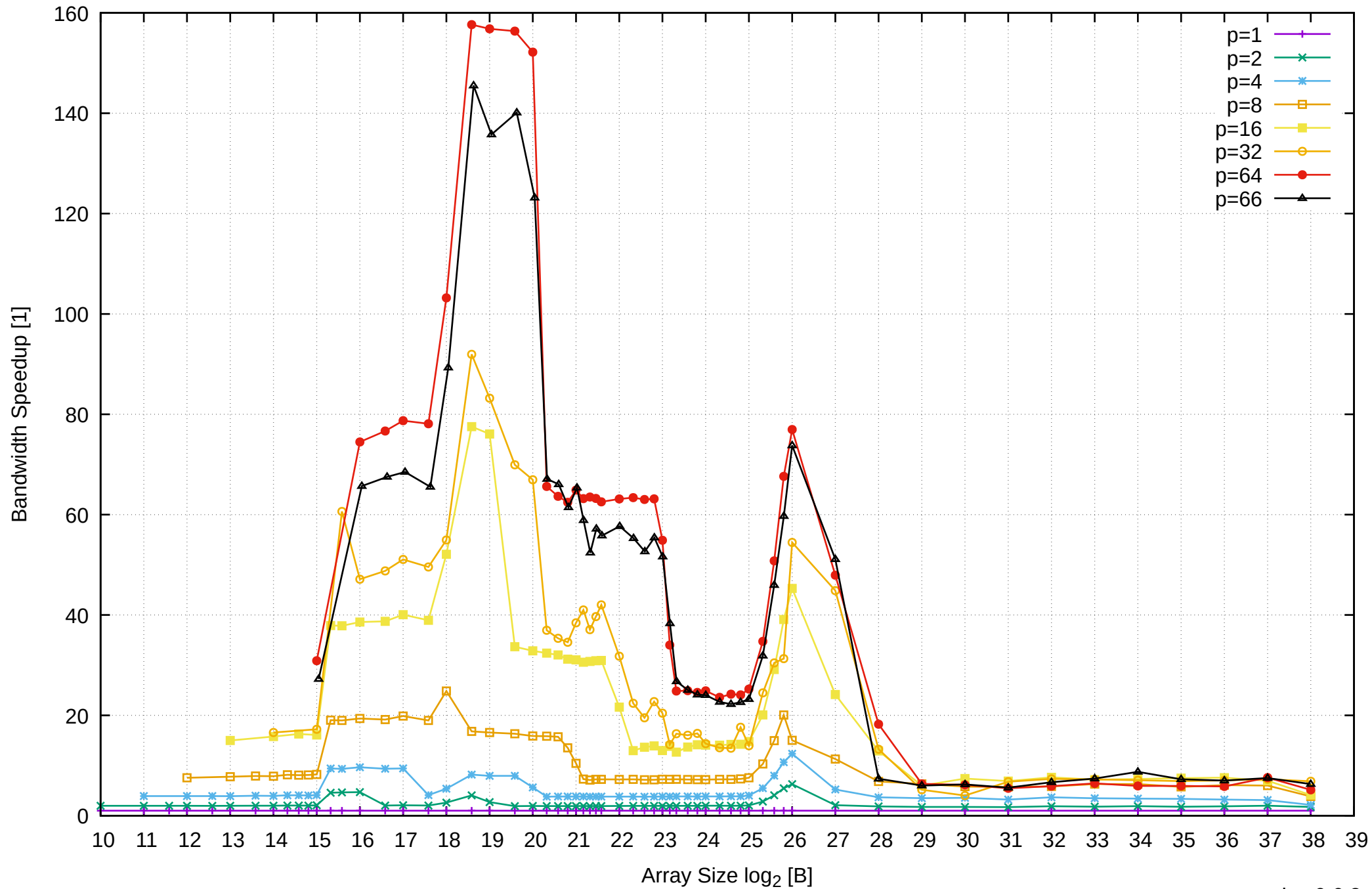
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead256PtrUnrollLoop

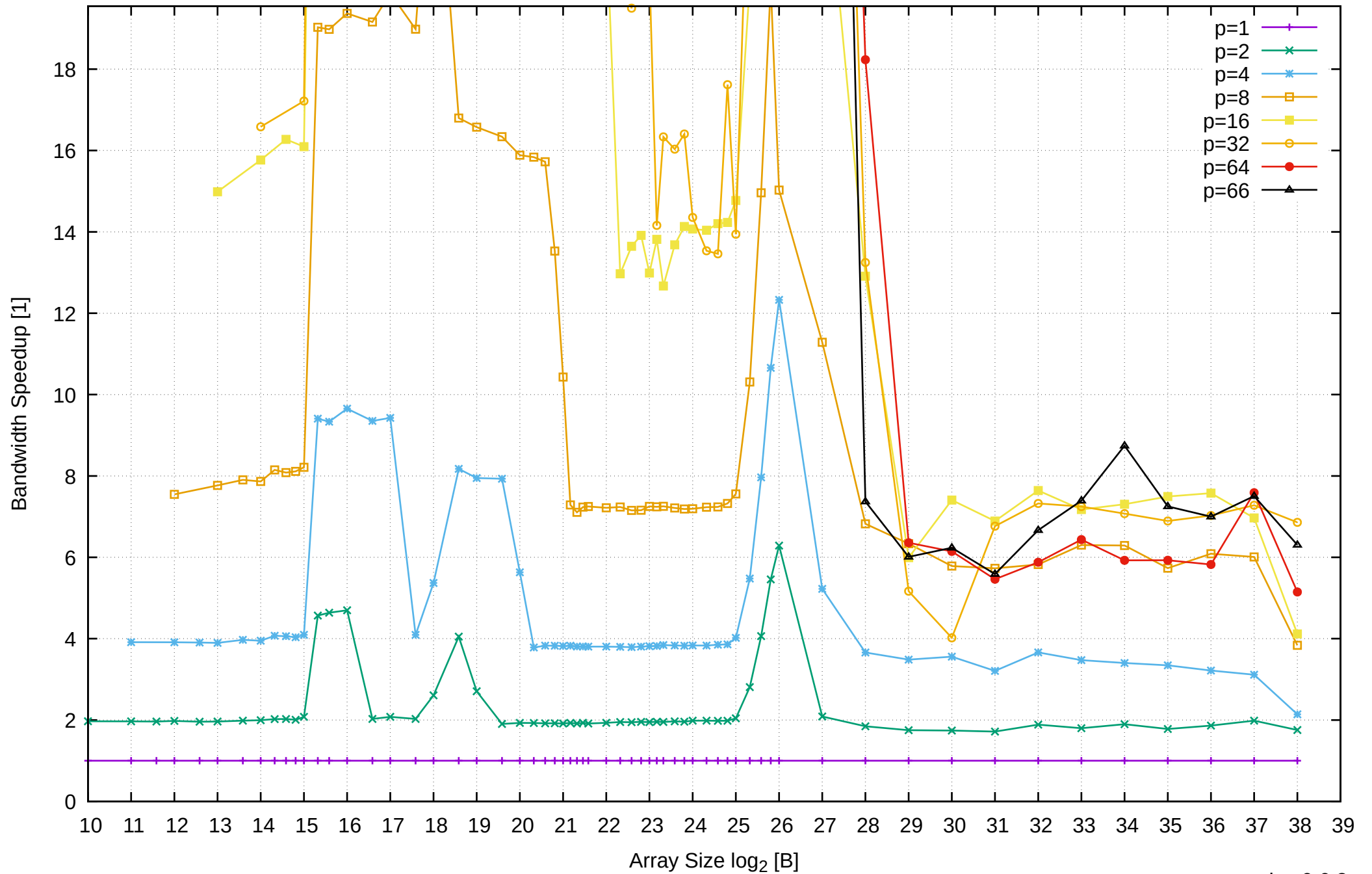


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead256PtrUnrollLoop

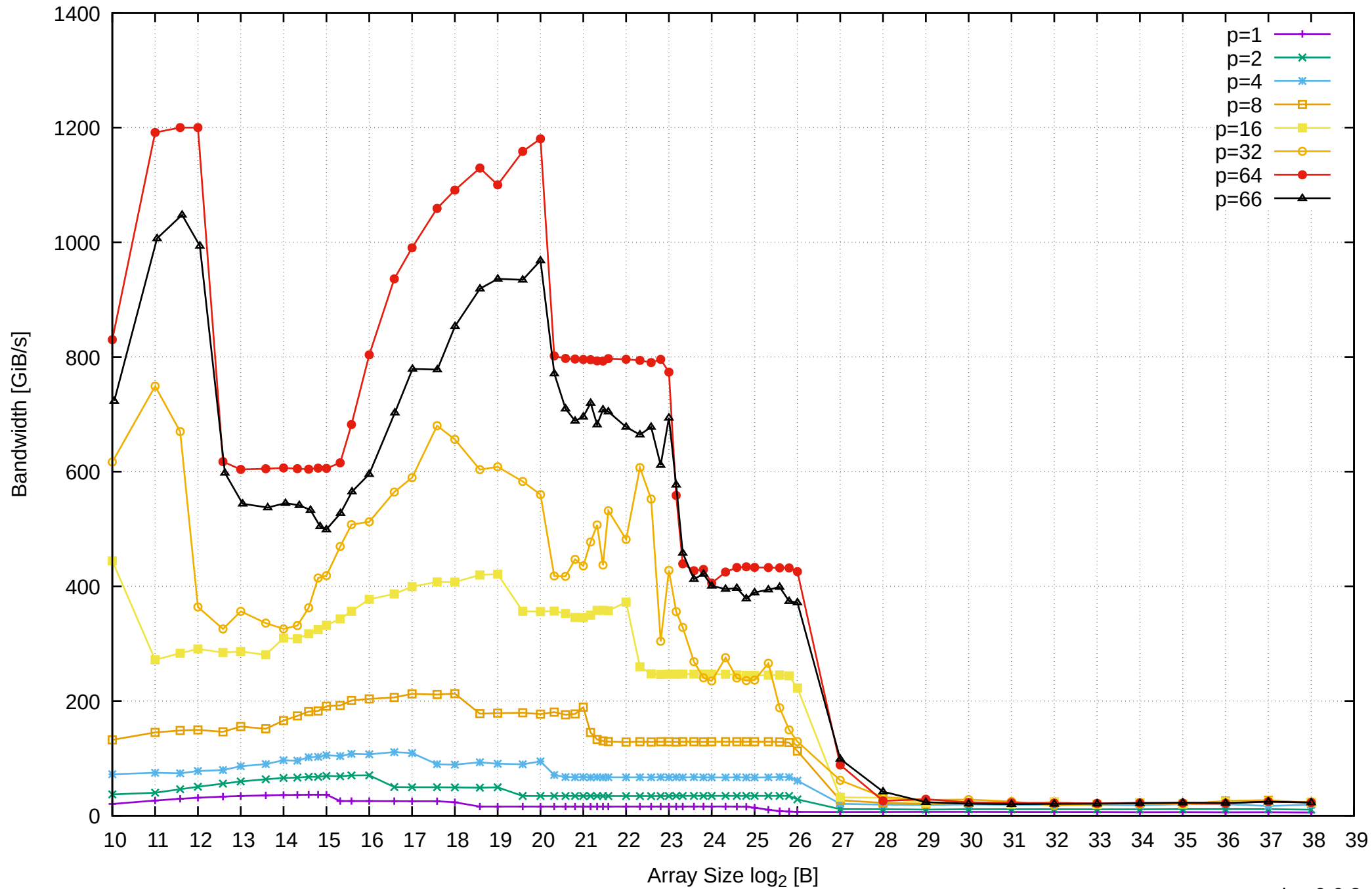


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead256PtrUnrollLoop

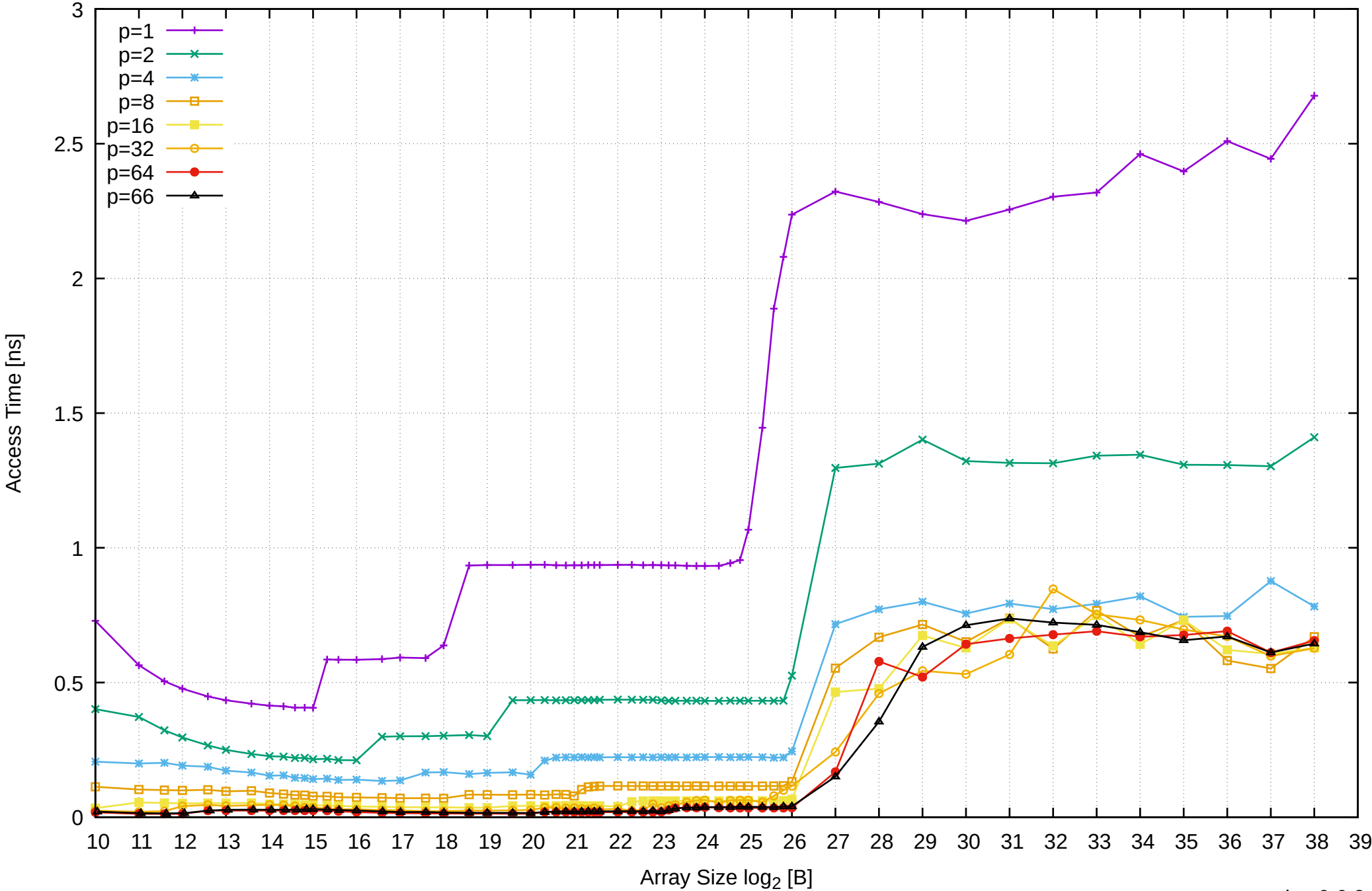




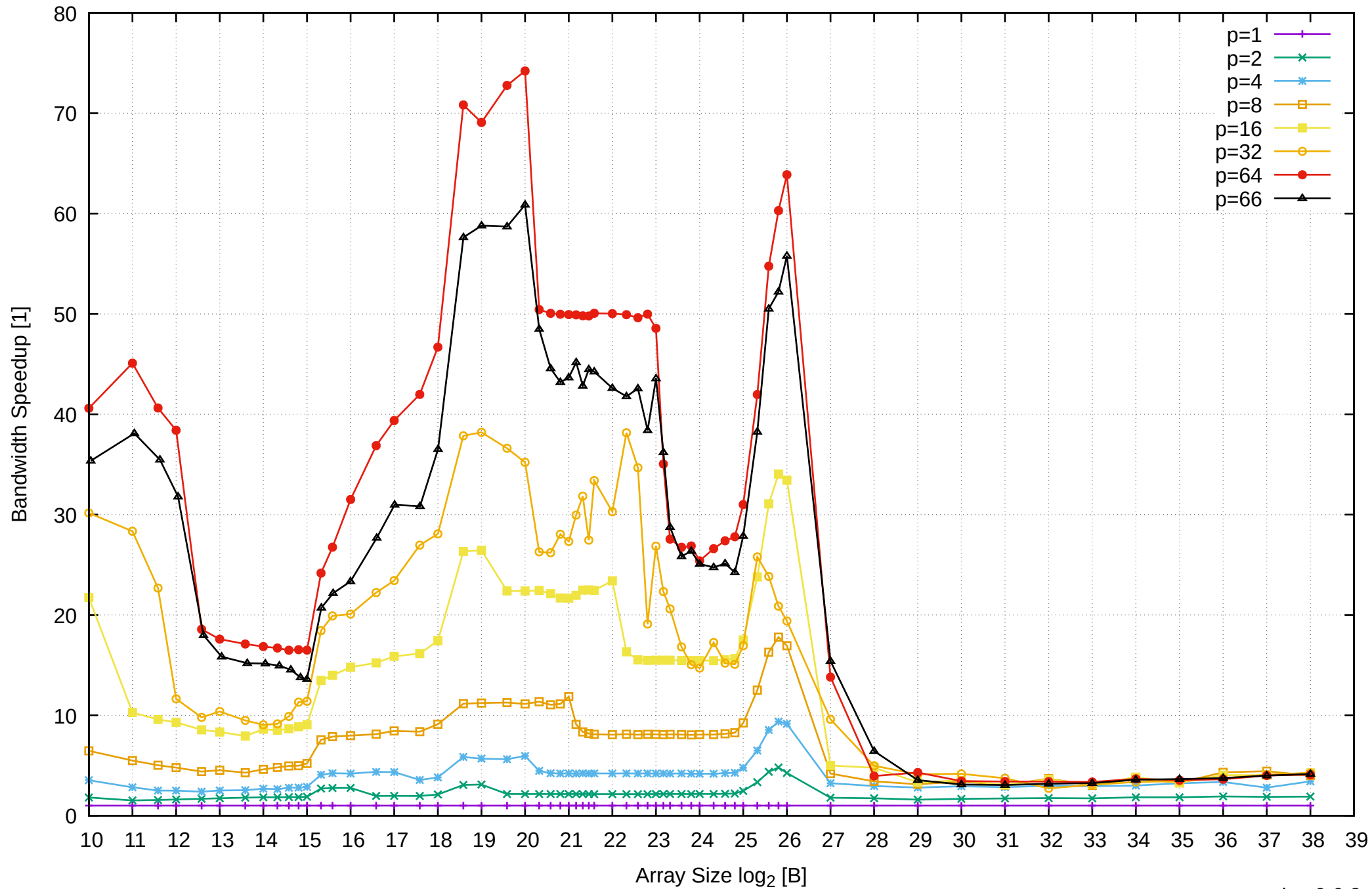
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite128PtrSimpleLoop

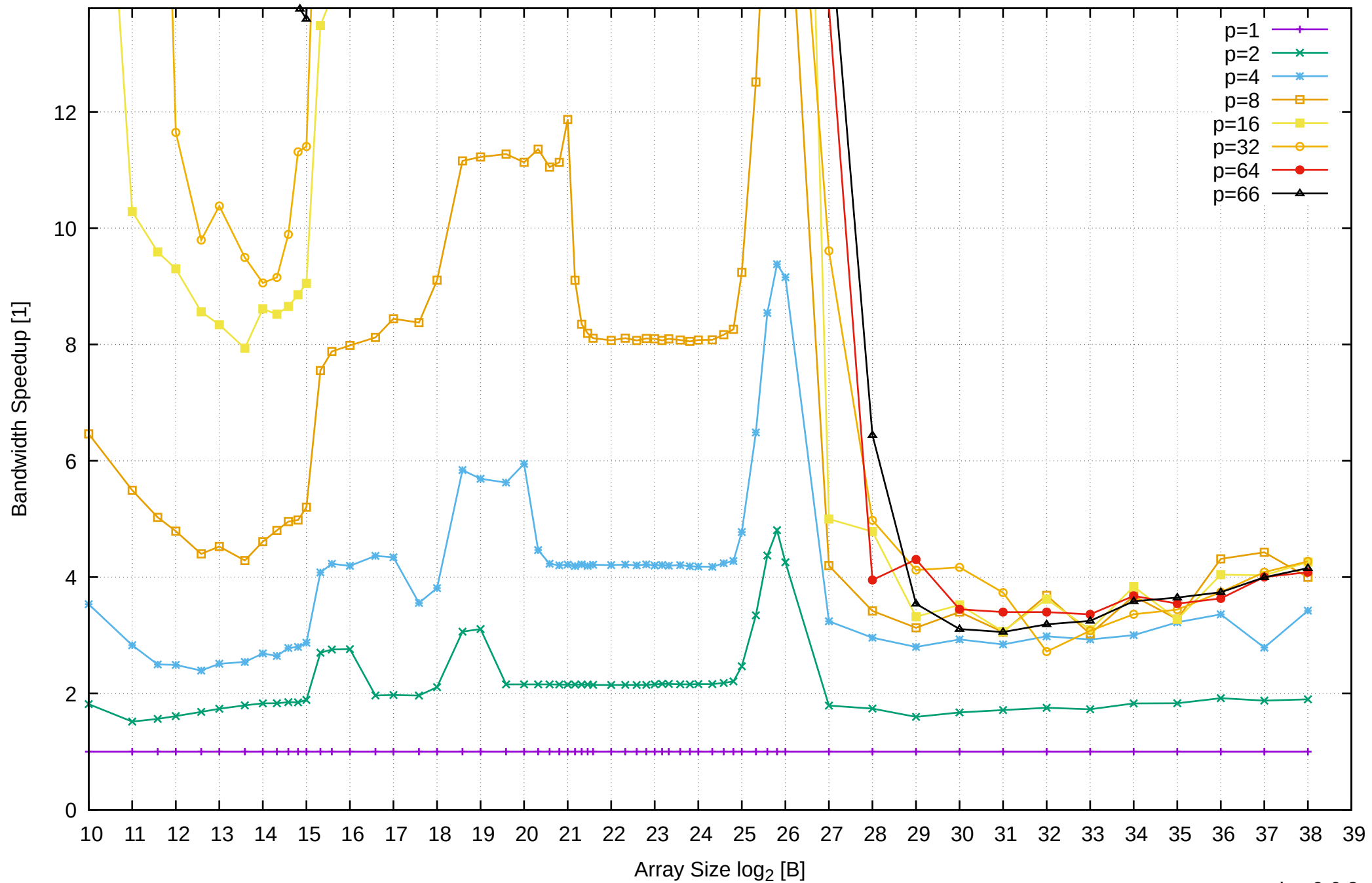


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite128PtrSimpleLoop



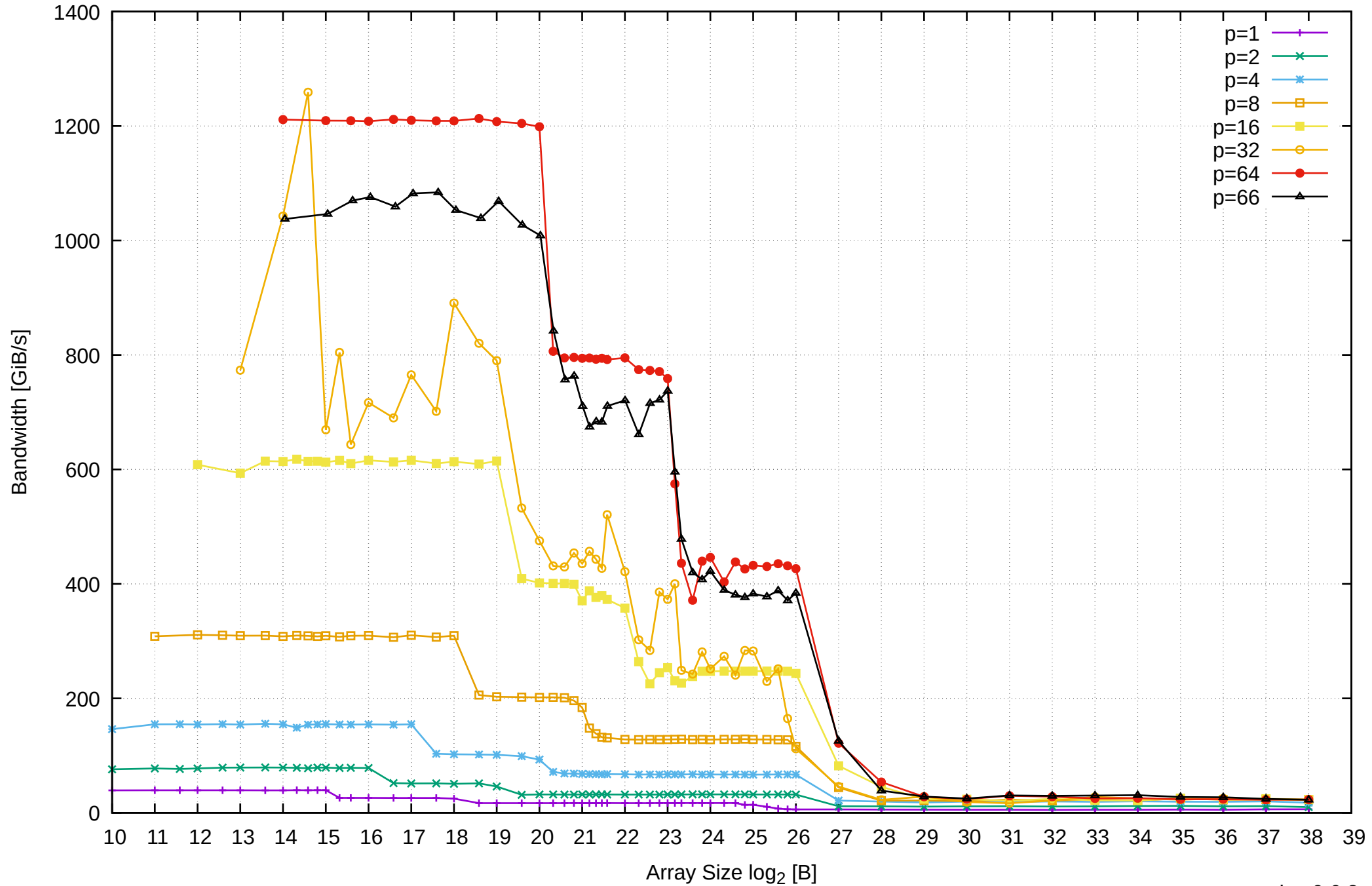
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite128PtrSimpleLoop



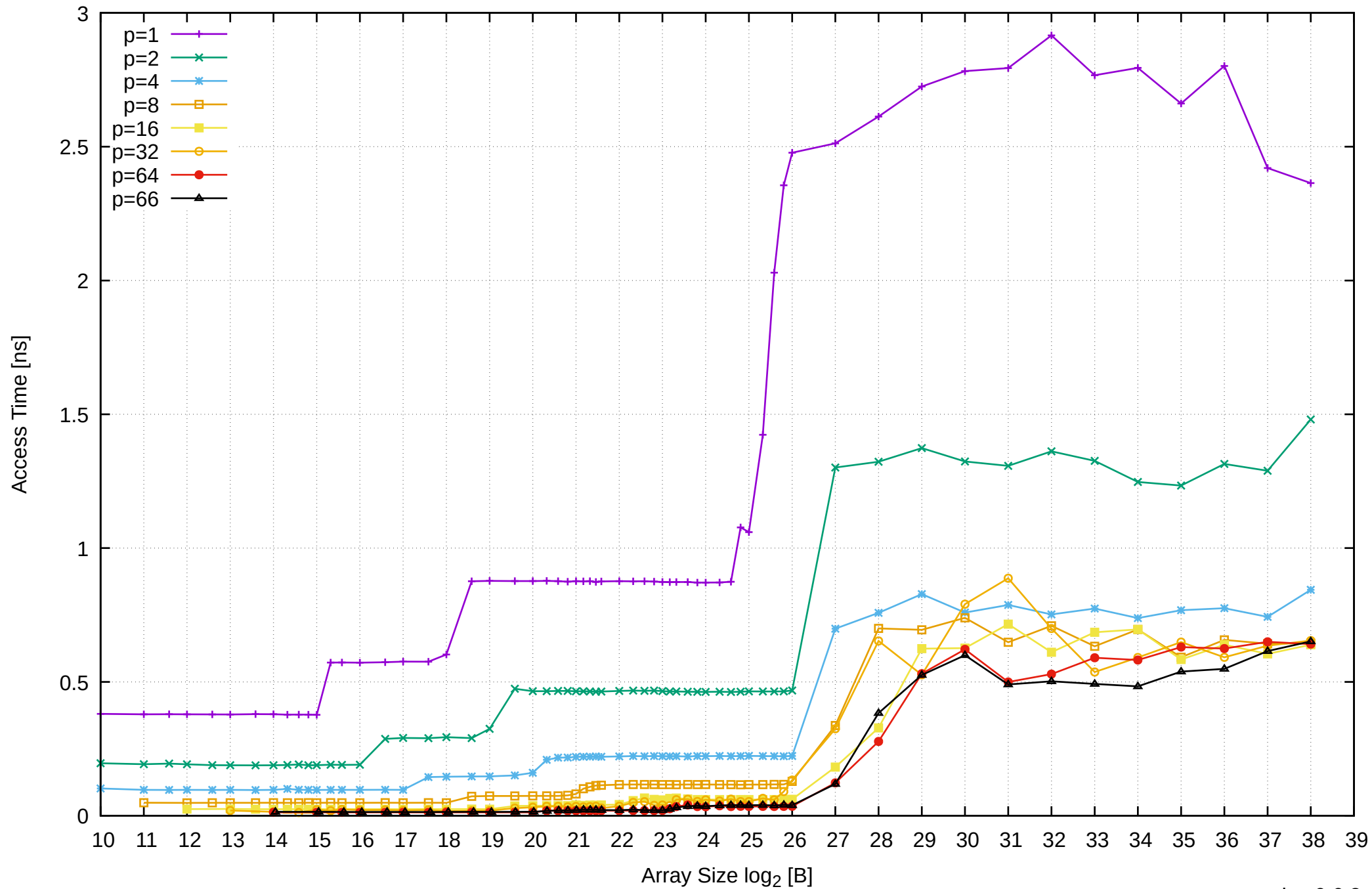




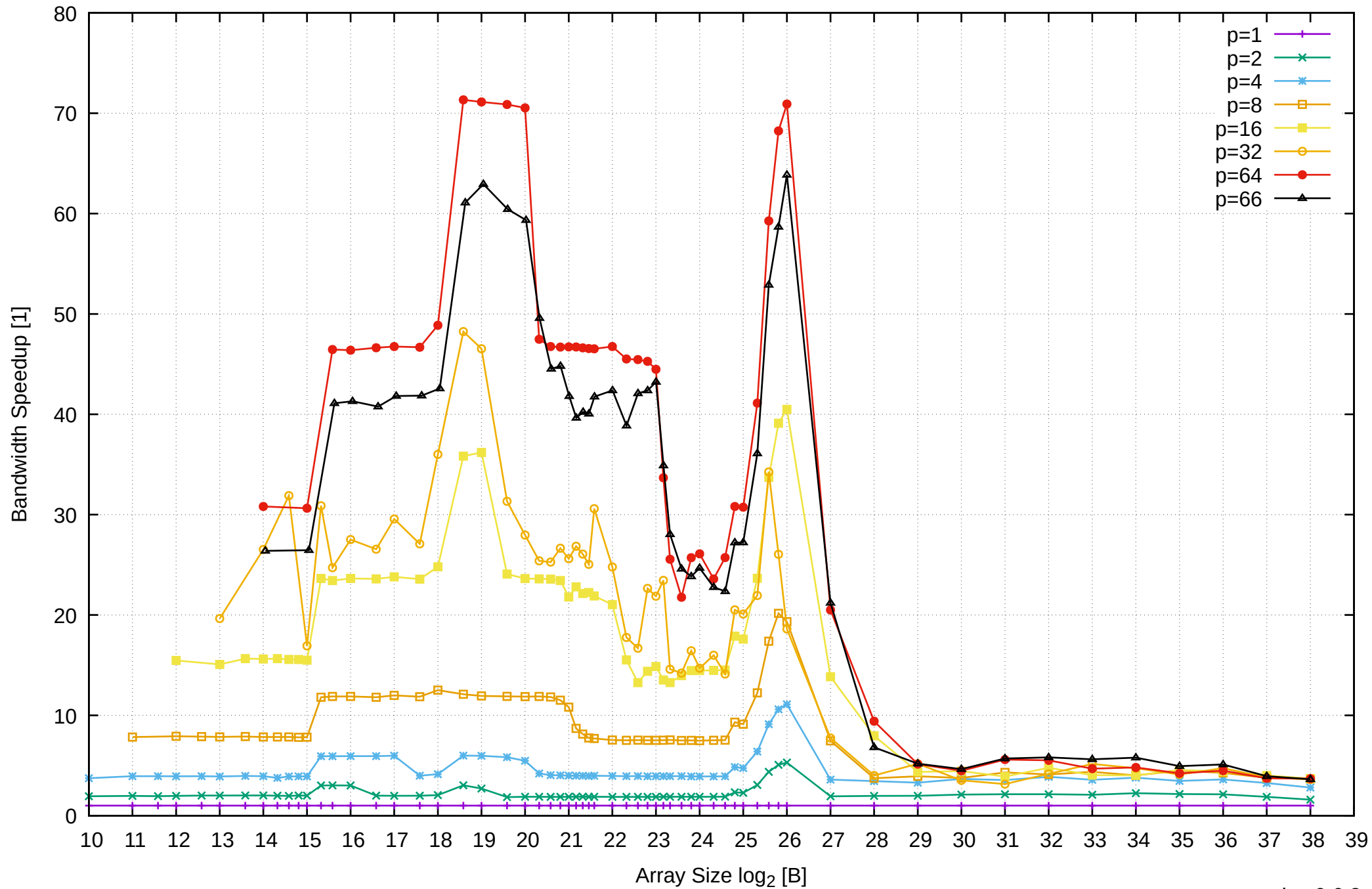
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite128PtrUnrollLoop

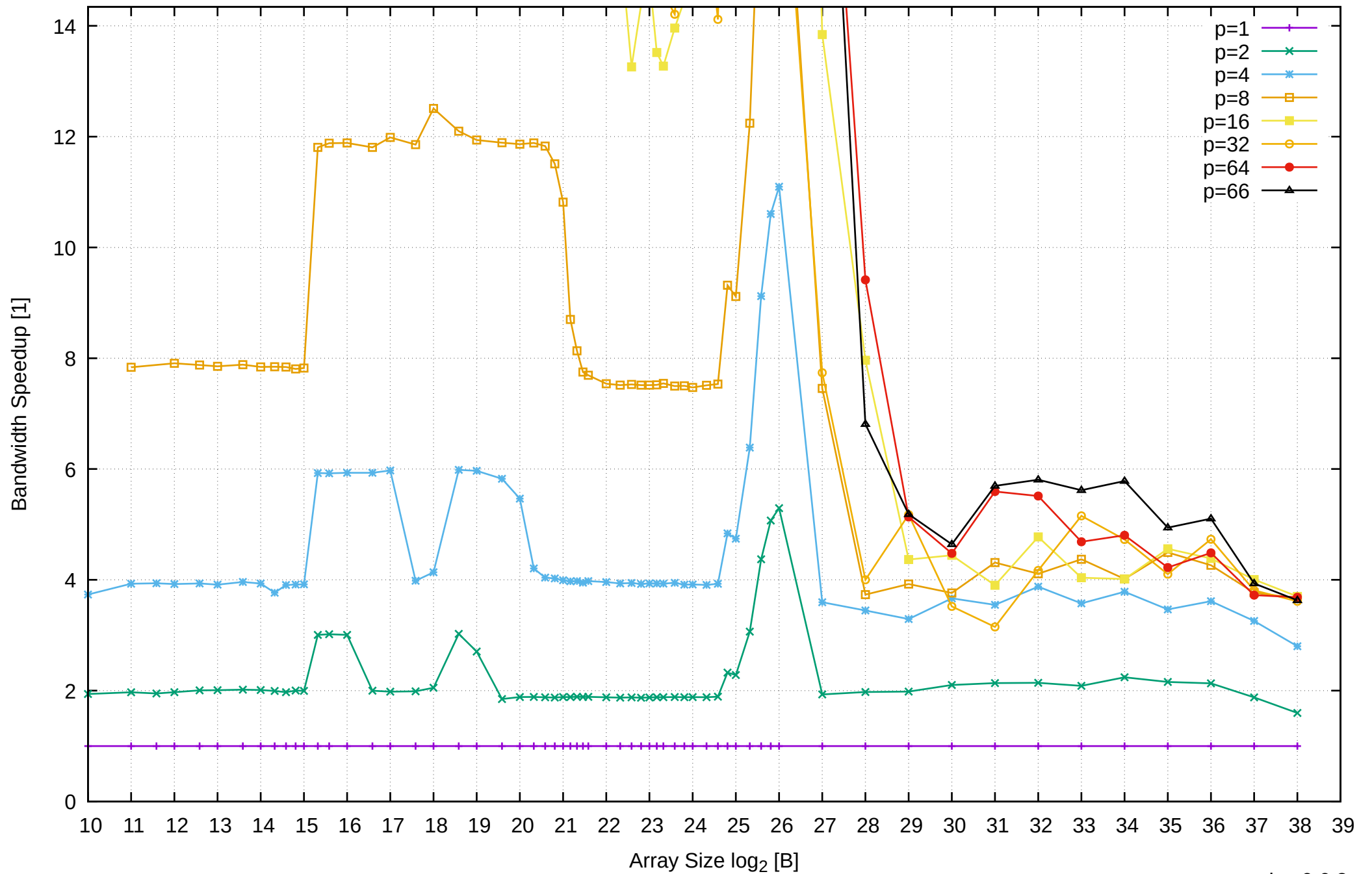


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite128PtrUnrollLoop

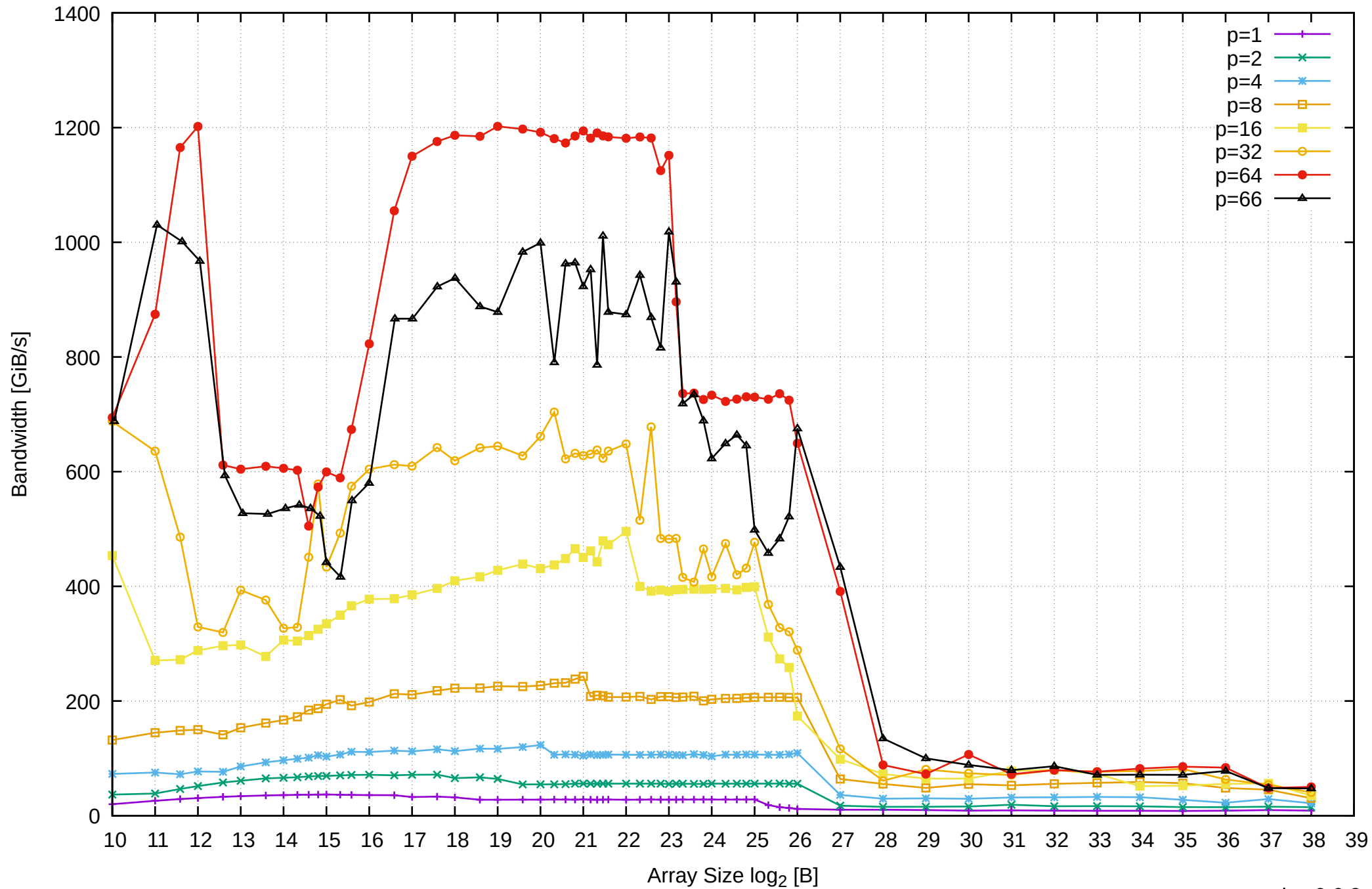


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite128PtrUnrollLoop

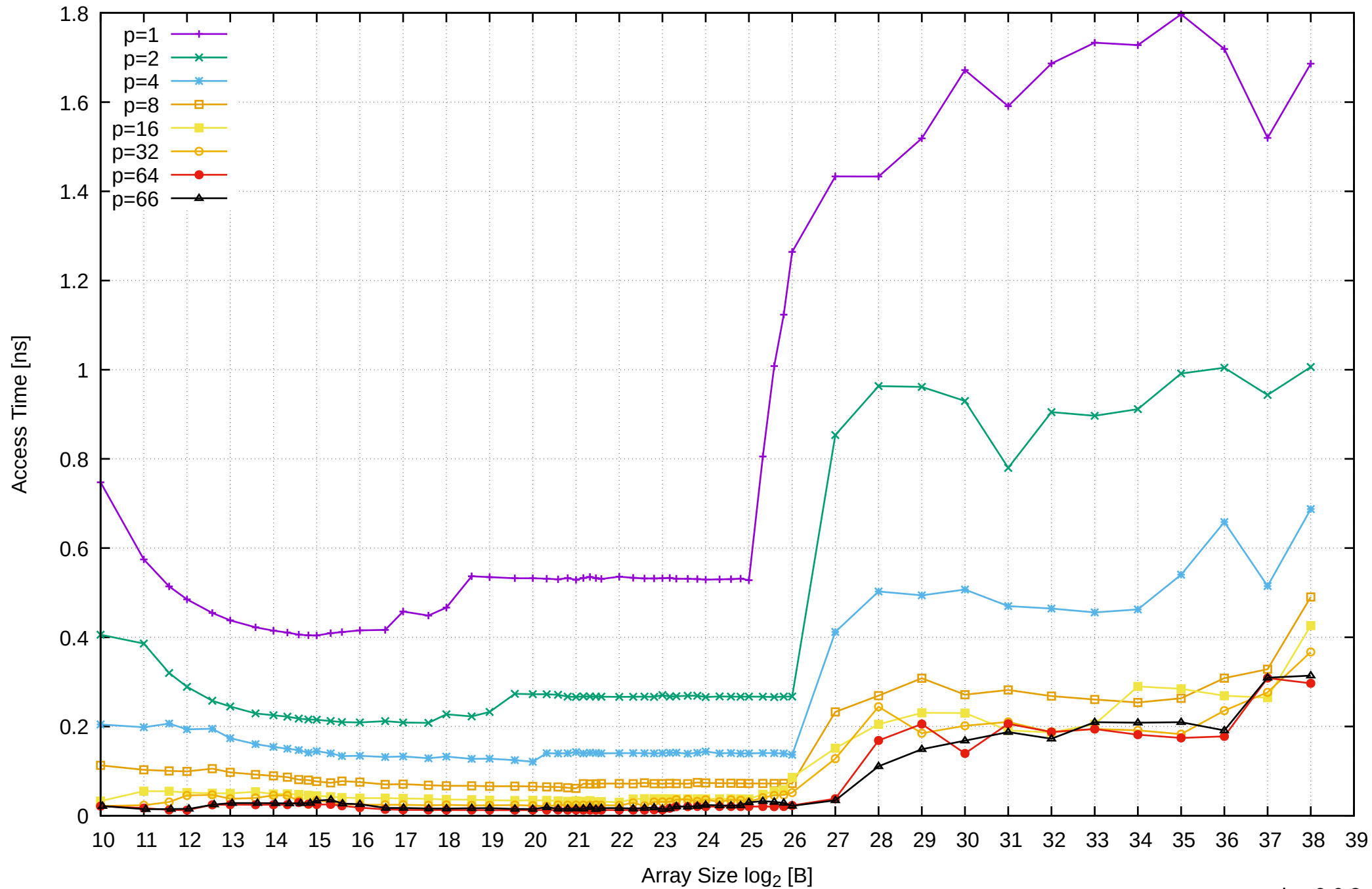




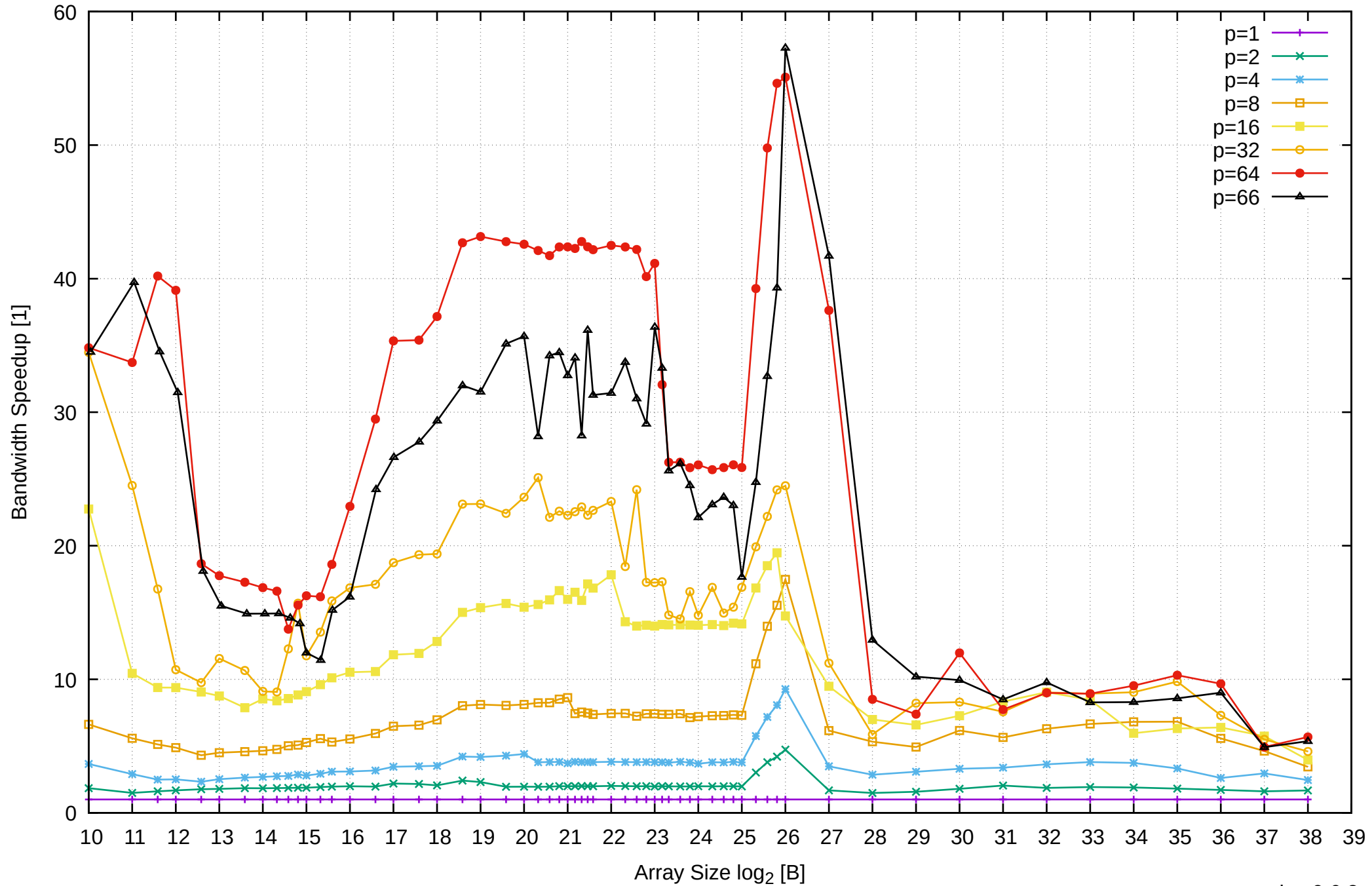
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead128PtrSimpleLoop

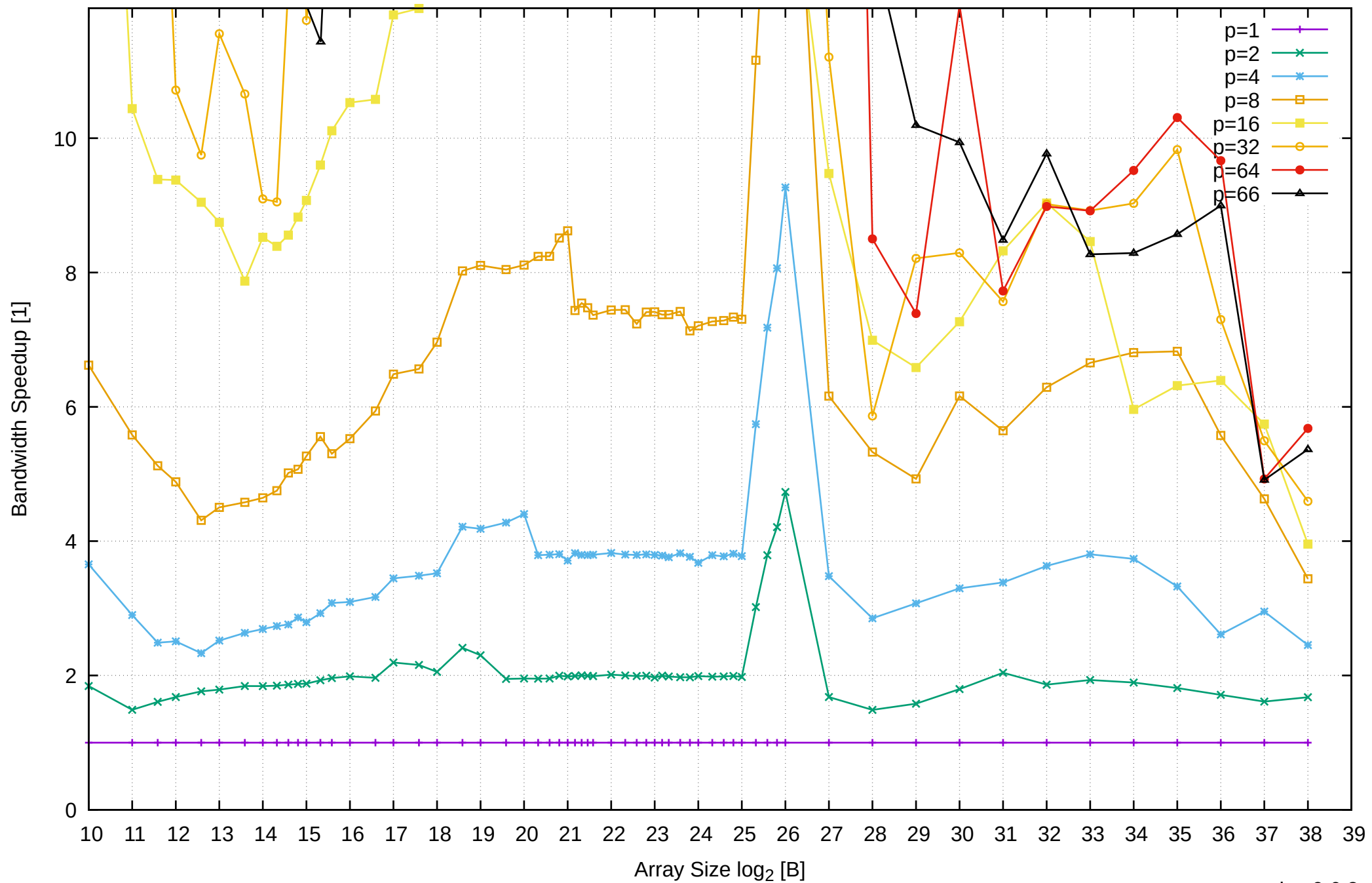


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead128PtrSimpleLoop



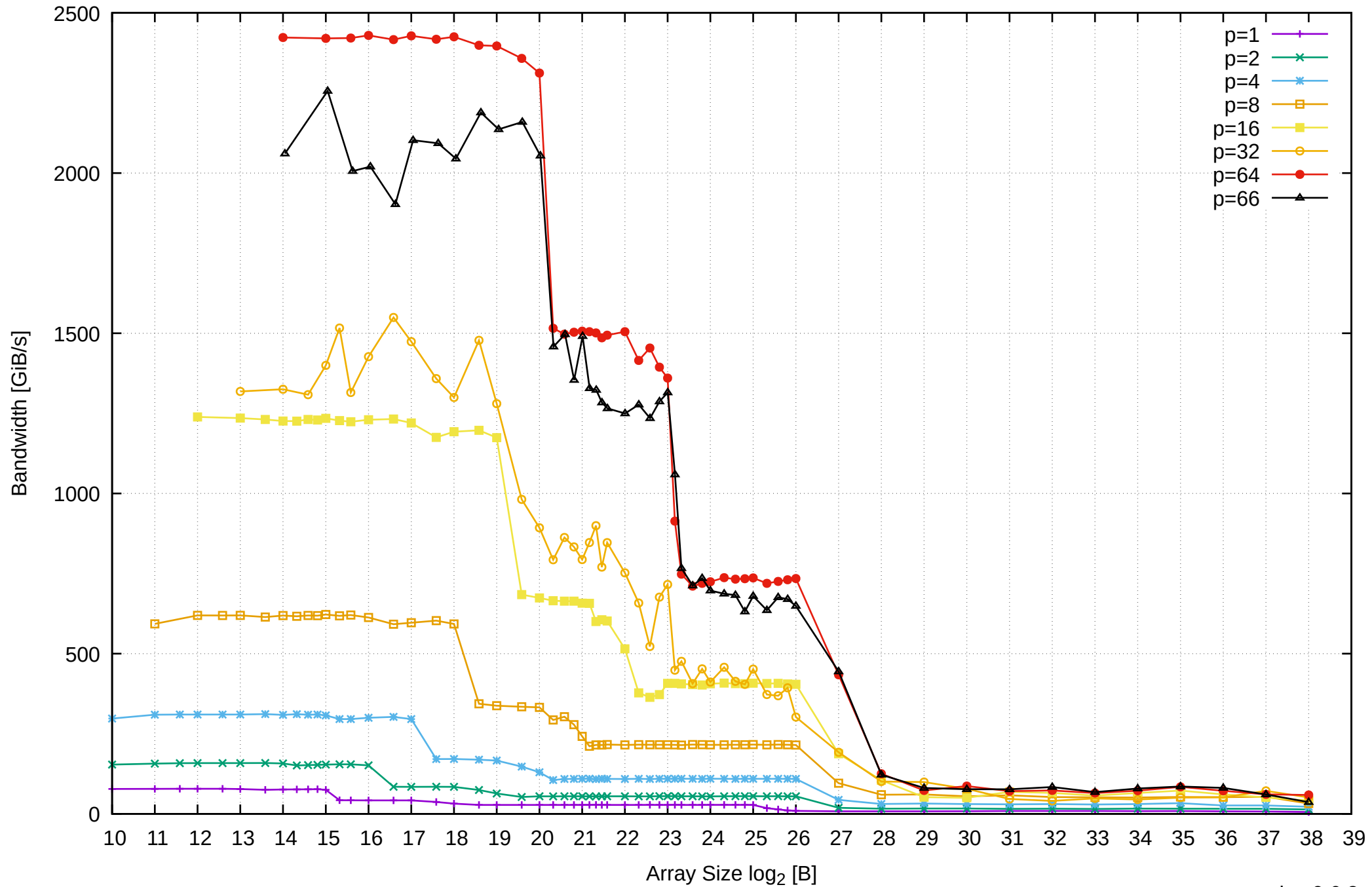
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead128PtrSimpleLoop



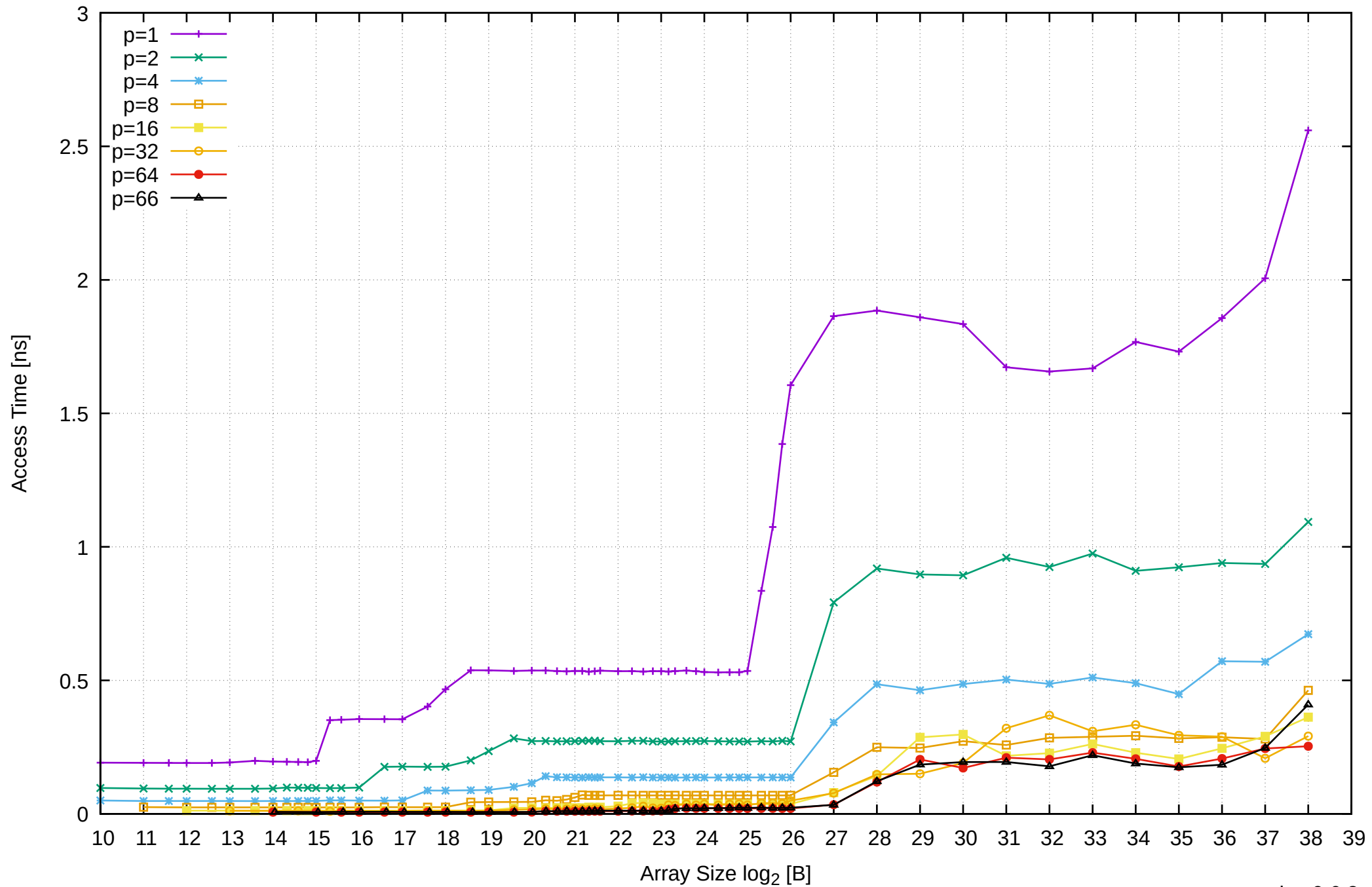




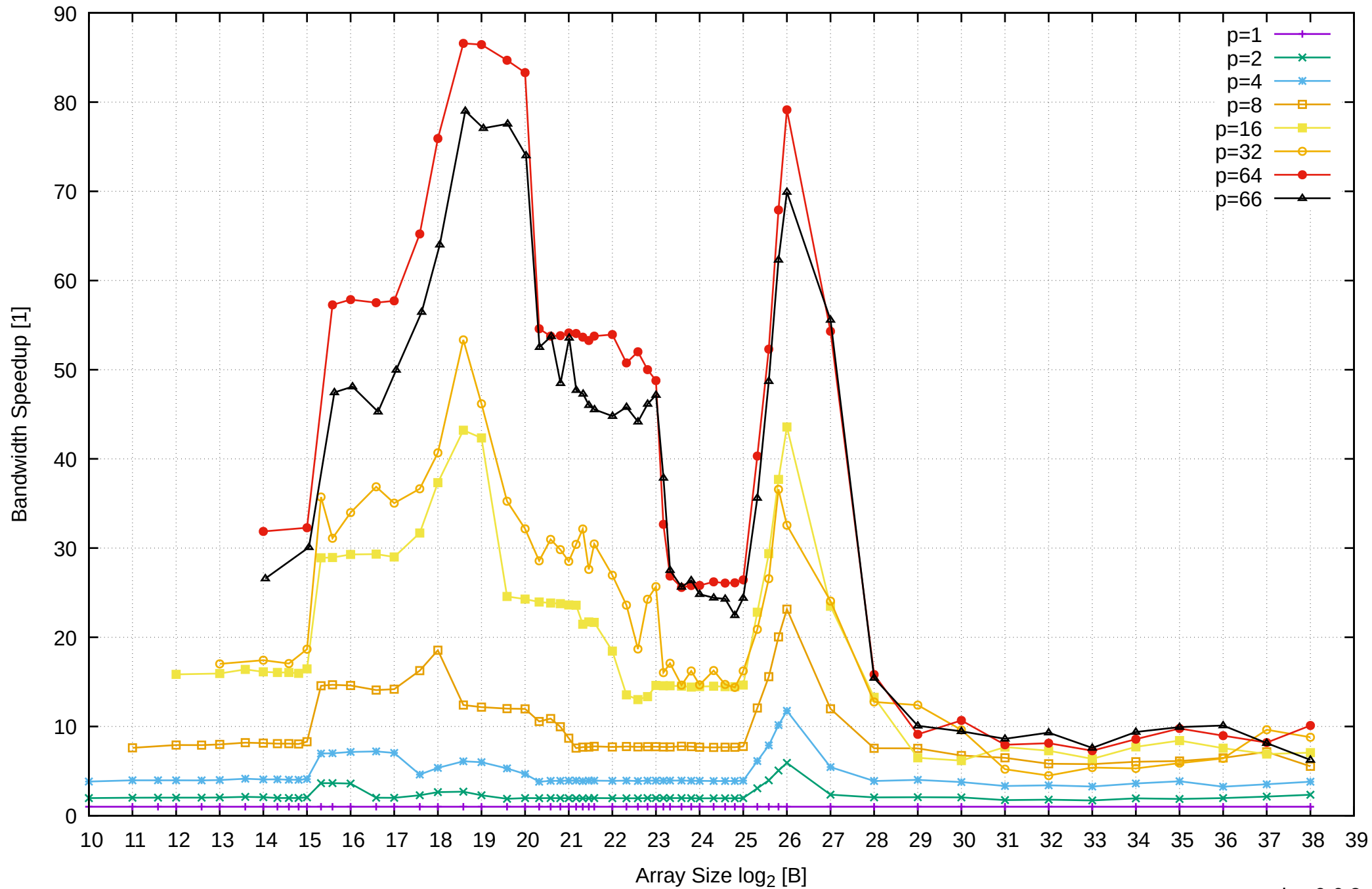
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead128PtrUnrollLoop

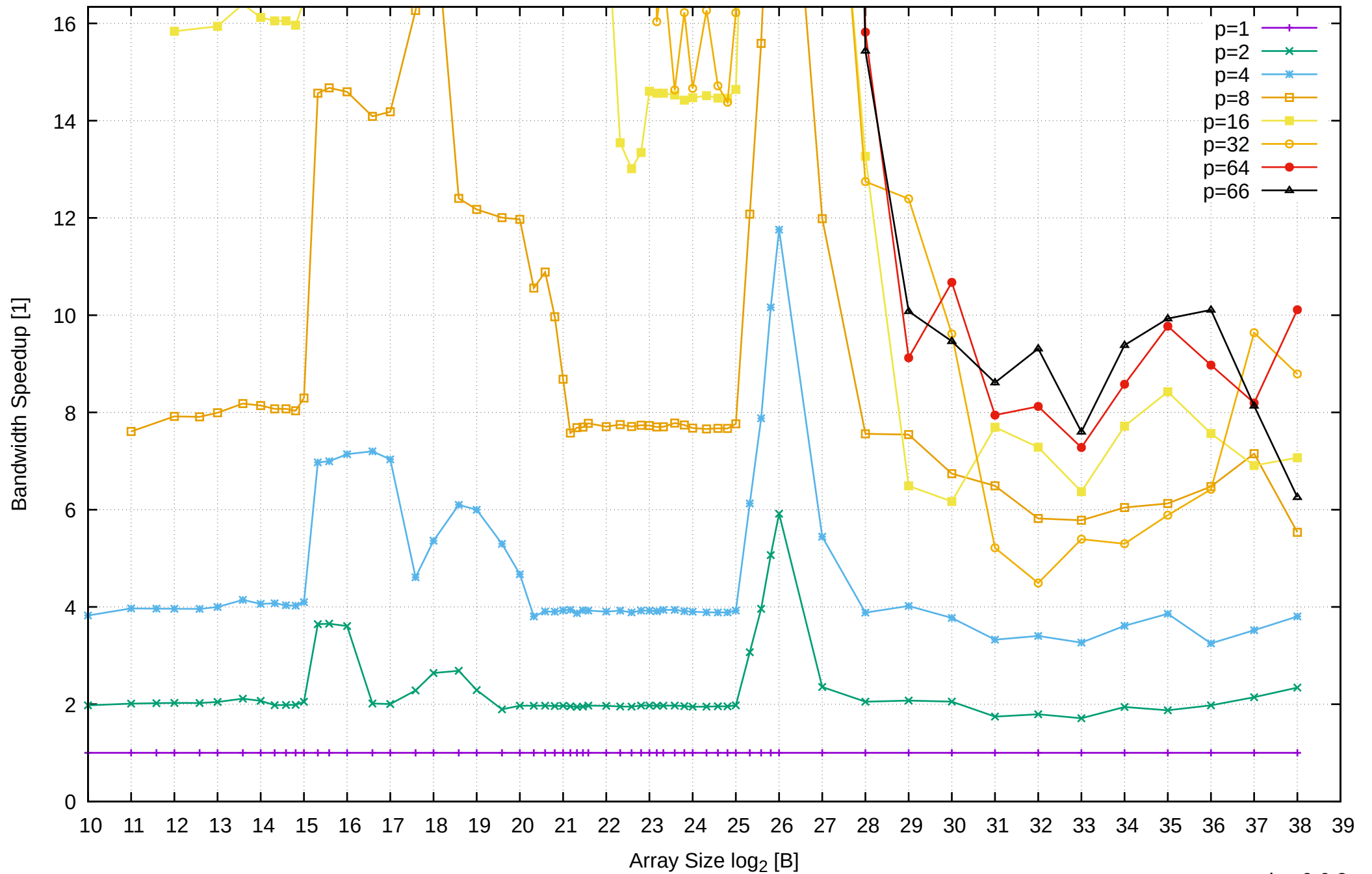


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead128PtrUnrollLoop

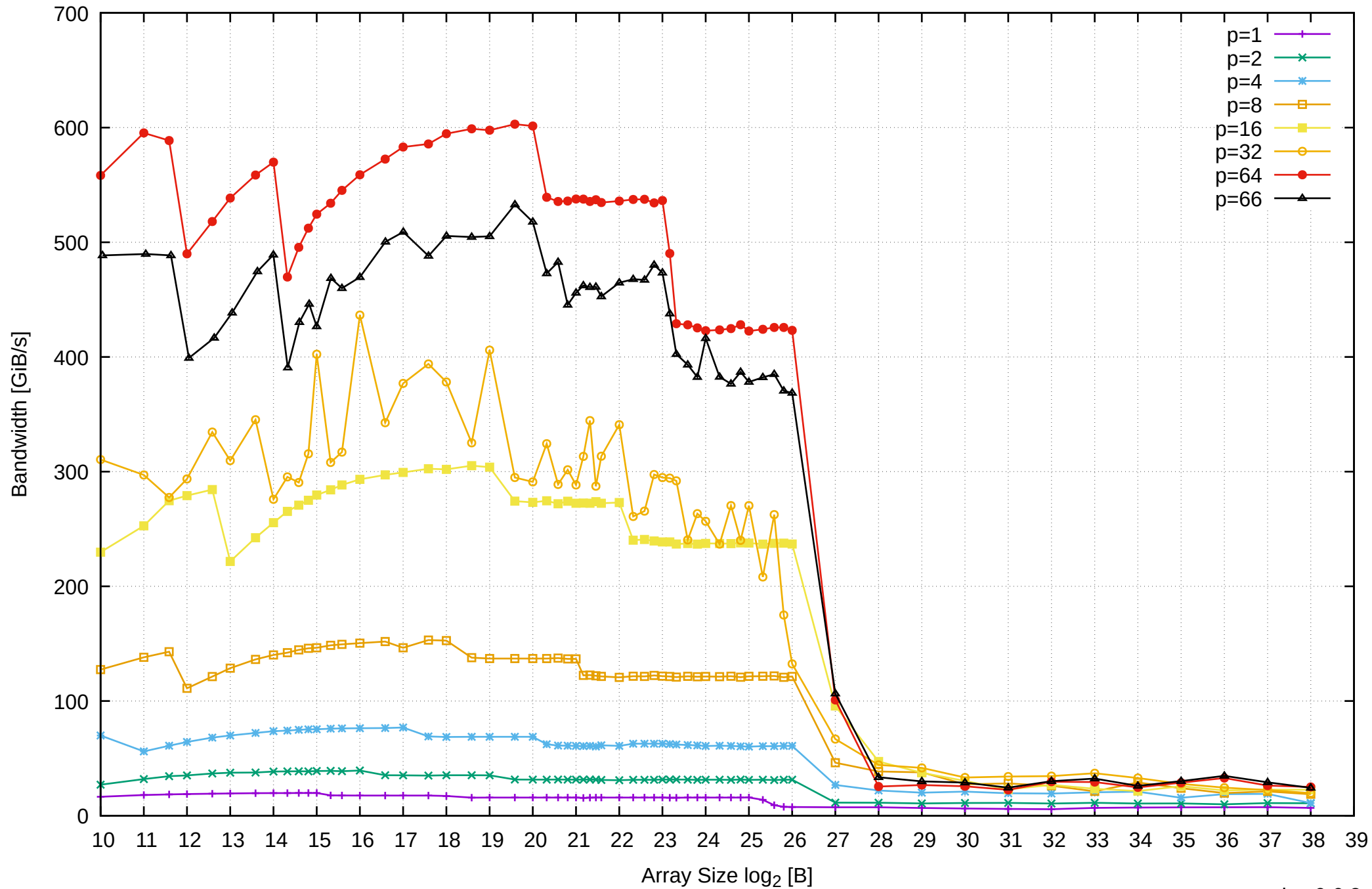


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead128PtrUnrollLoop

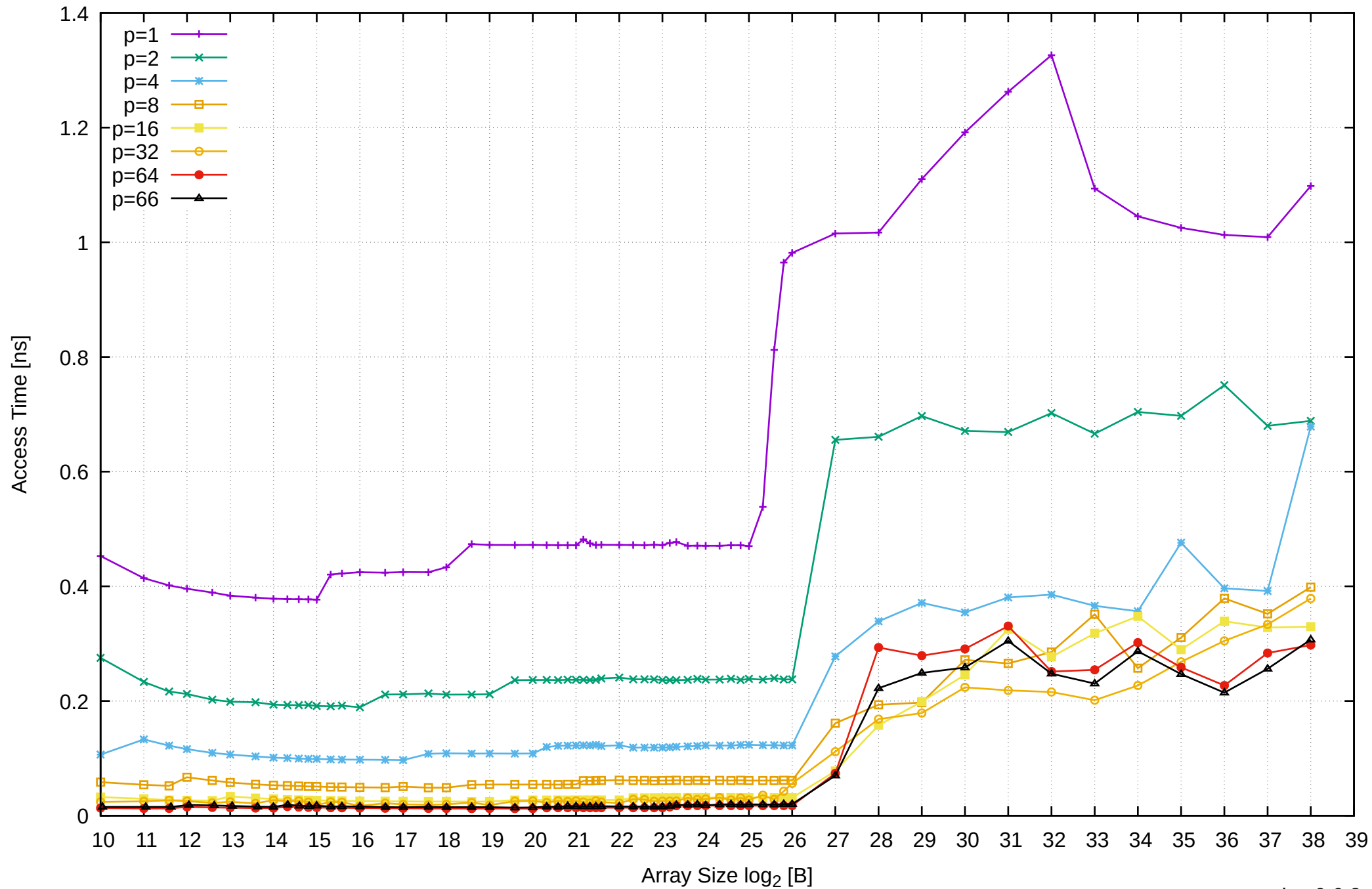




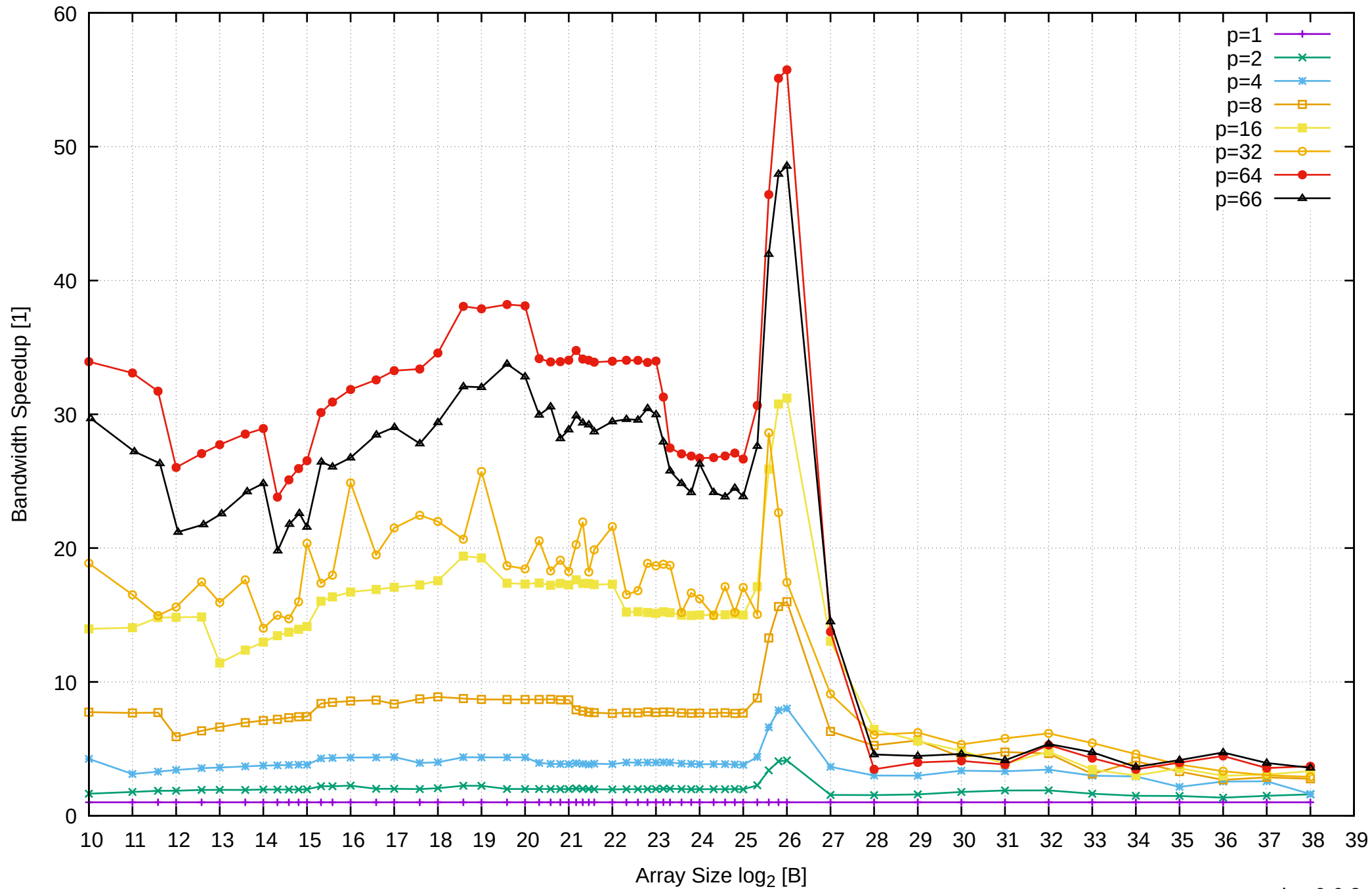
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite64PtrSimpleLoop

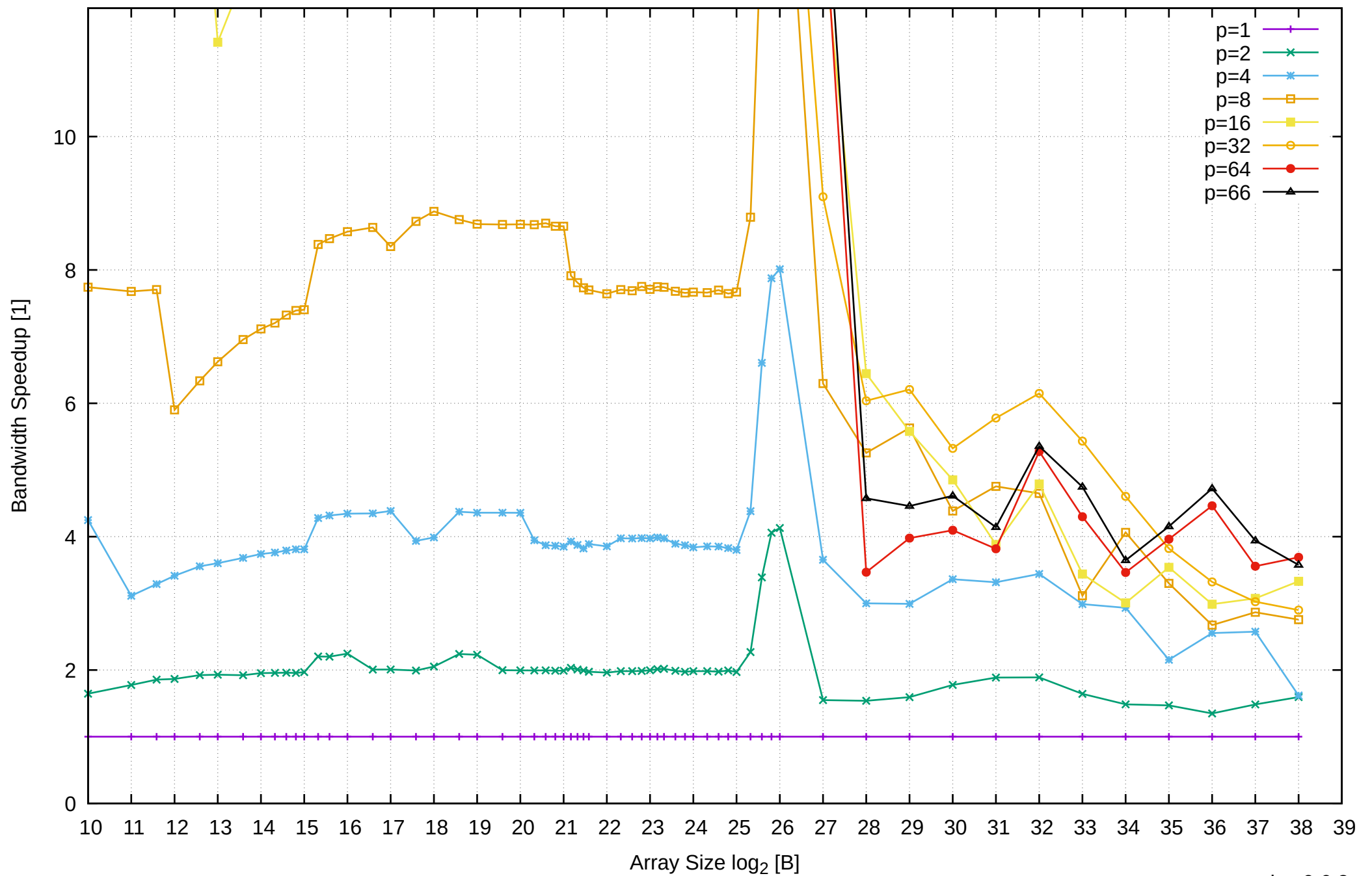


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite64PtrSimpleLoop



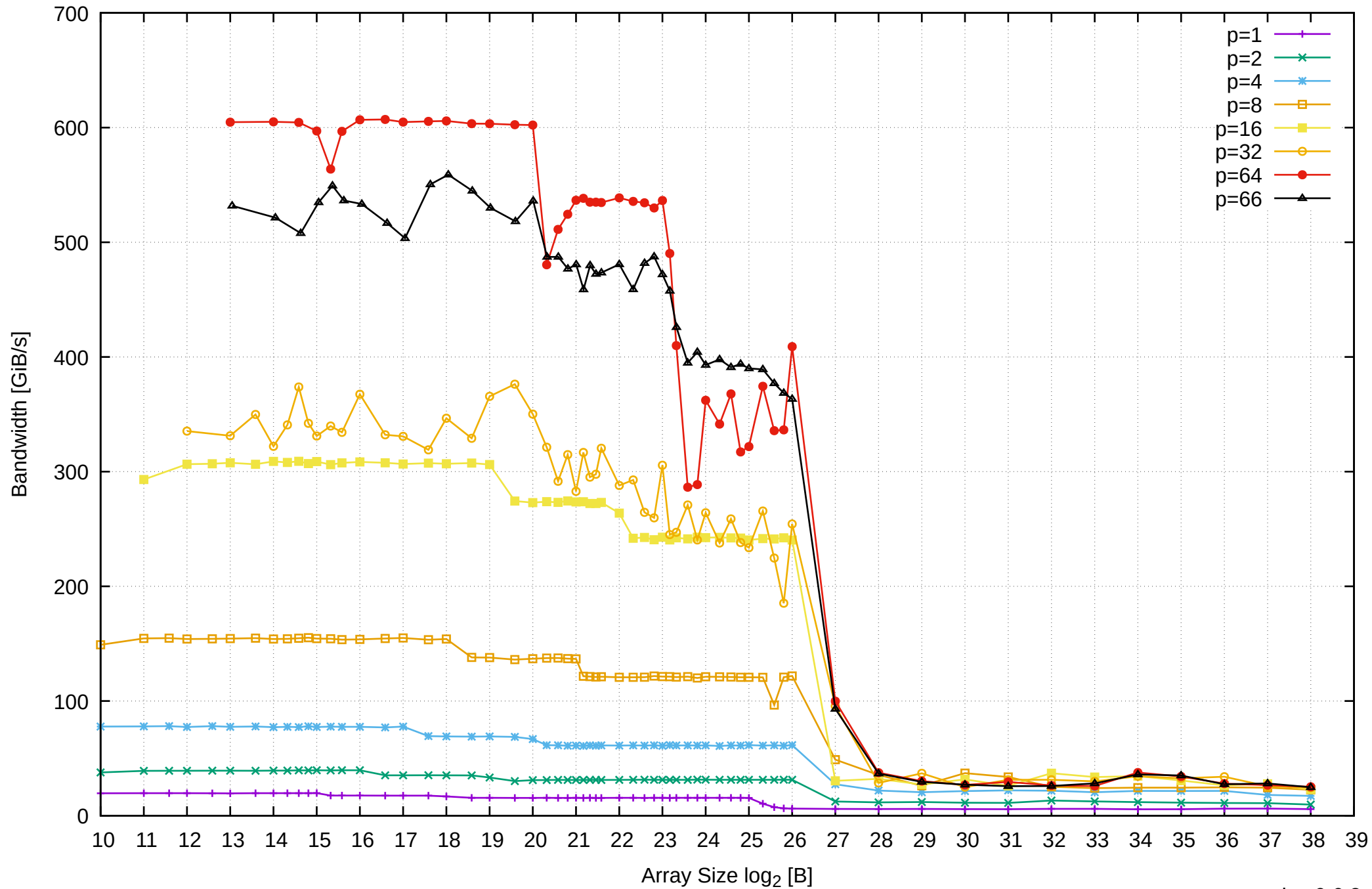
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite64PtrSimpleLoop



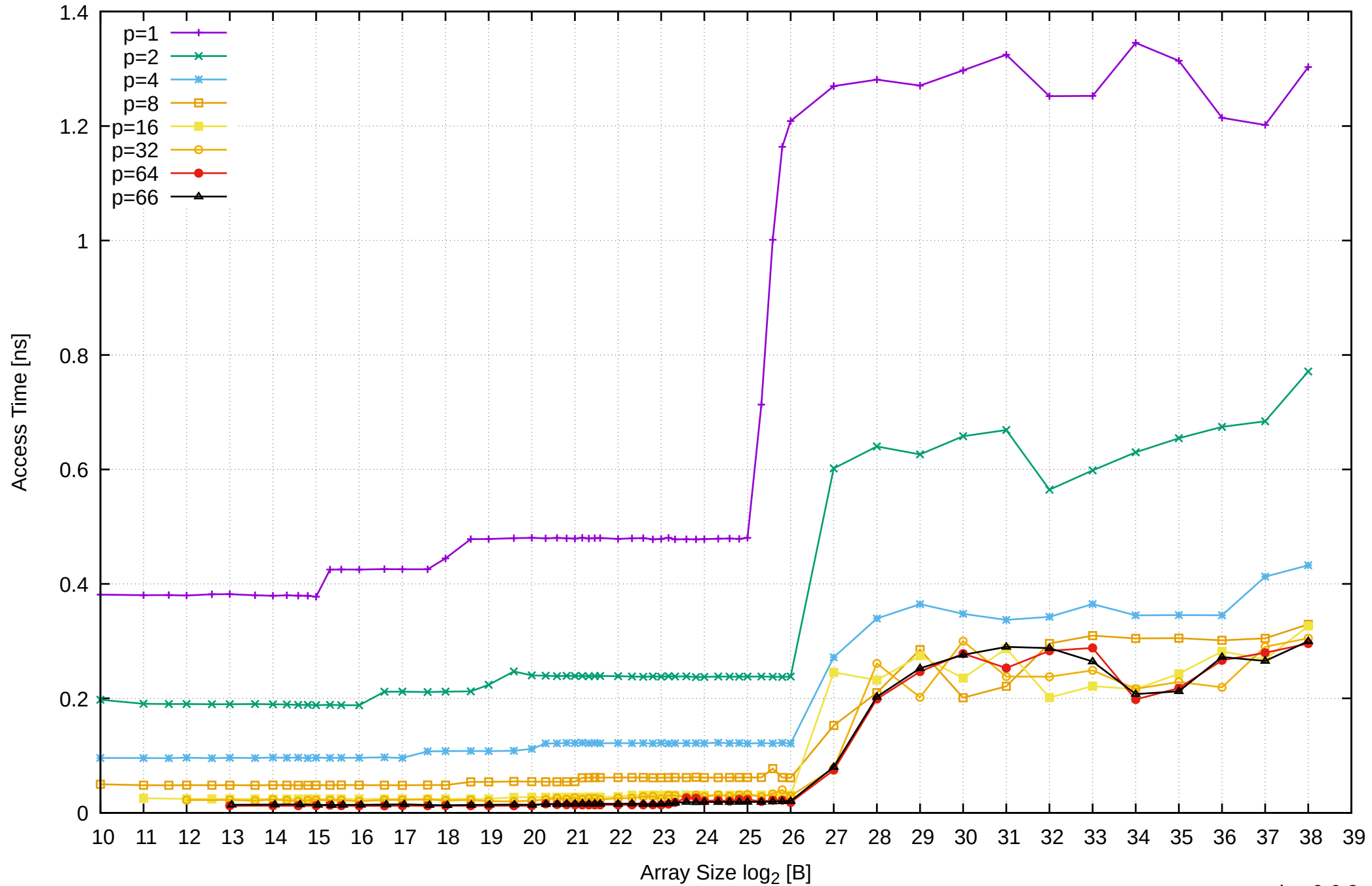




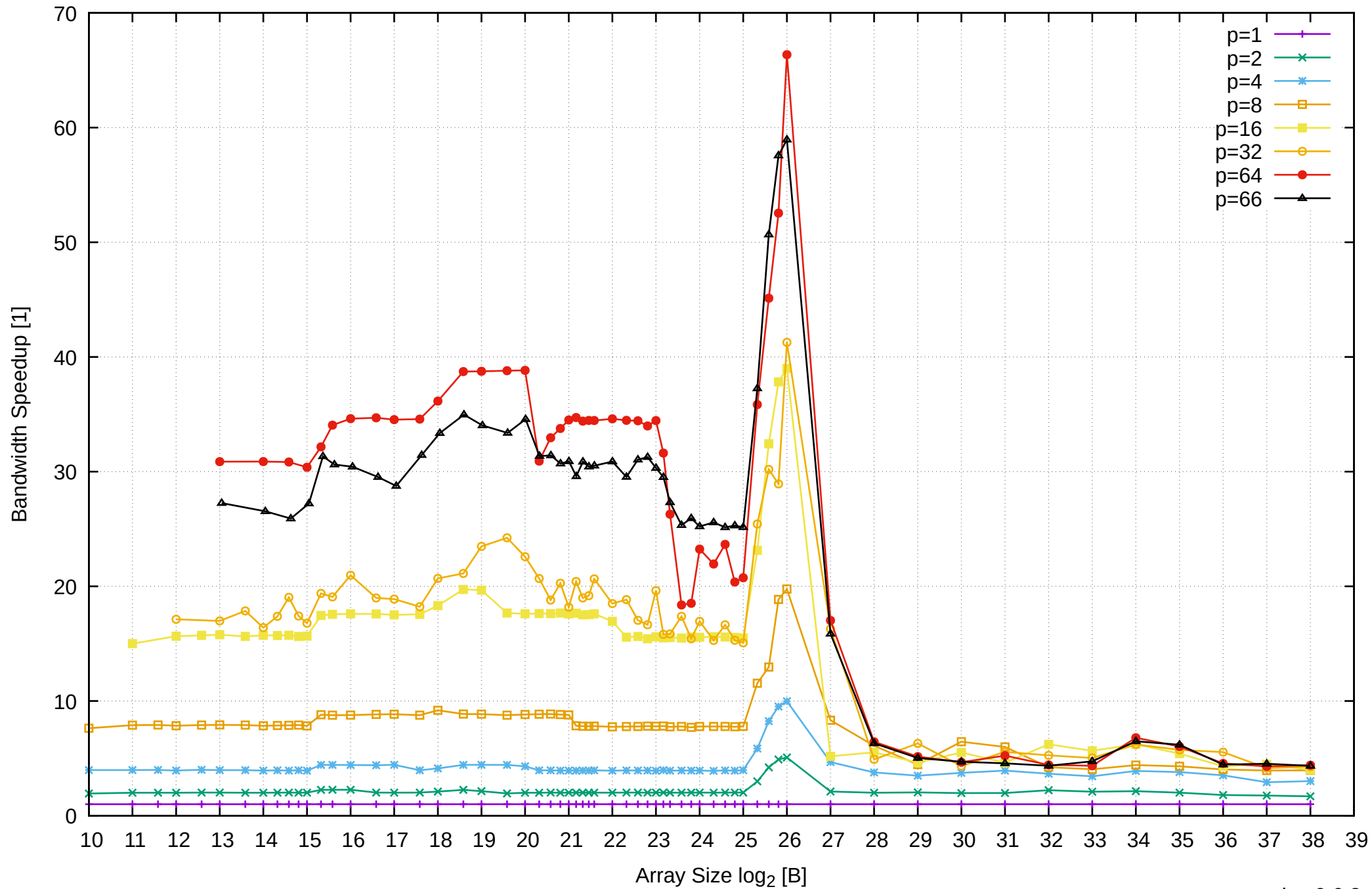
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite64PtrUnrollLoop



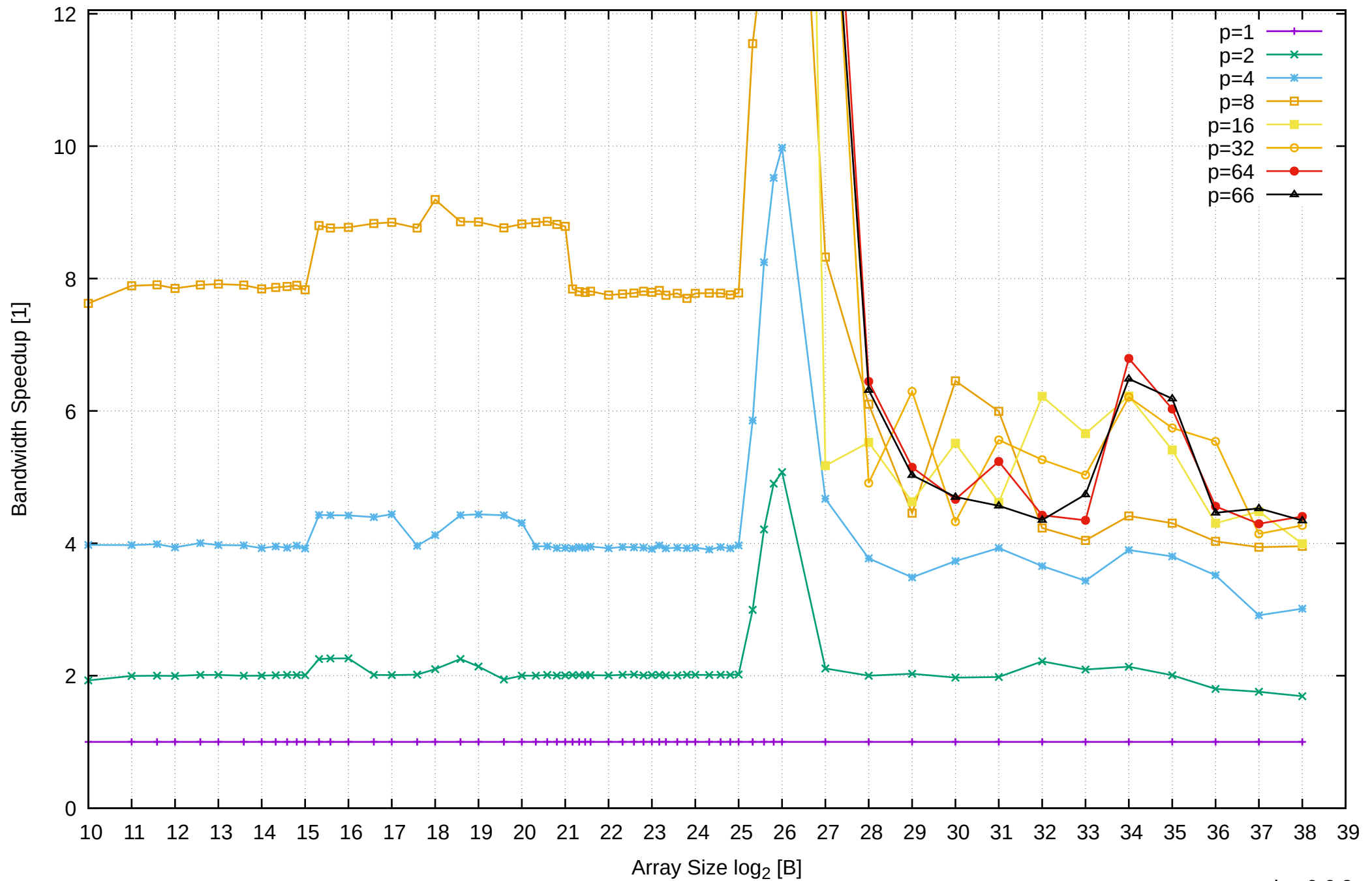
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite64PtrUnrollLoop



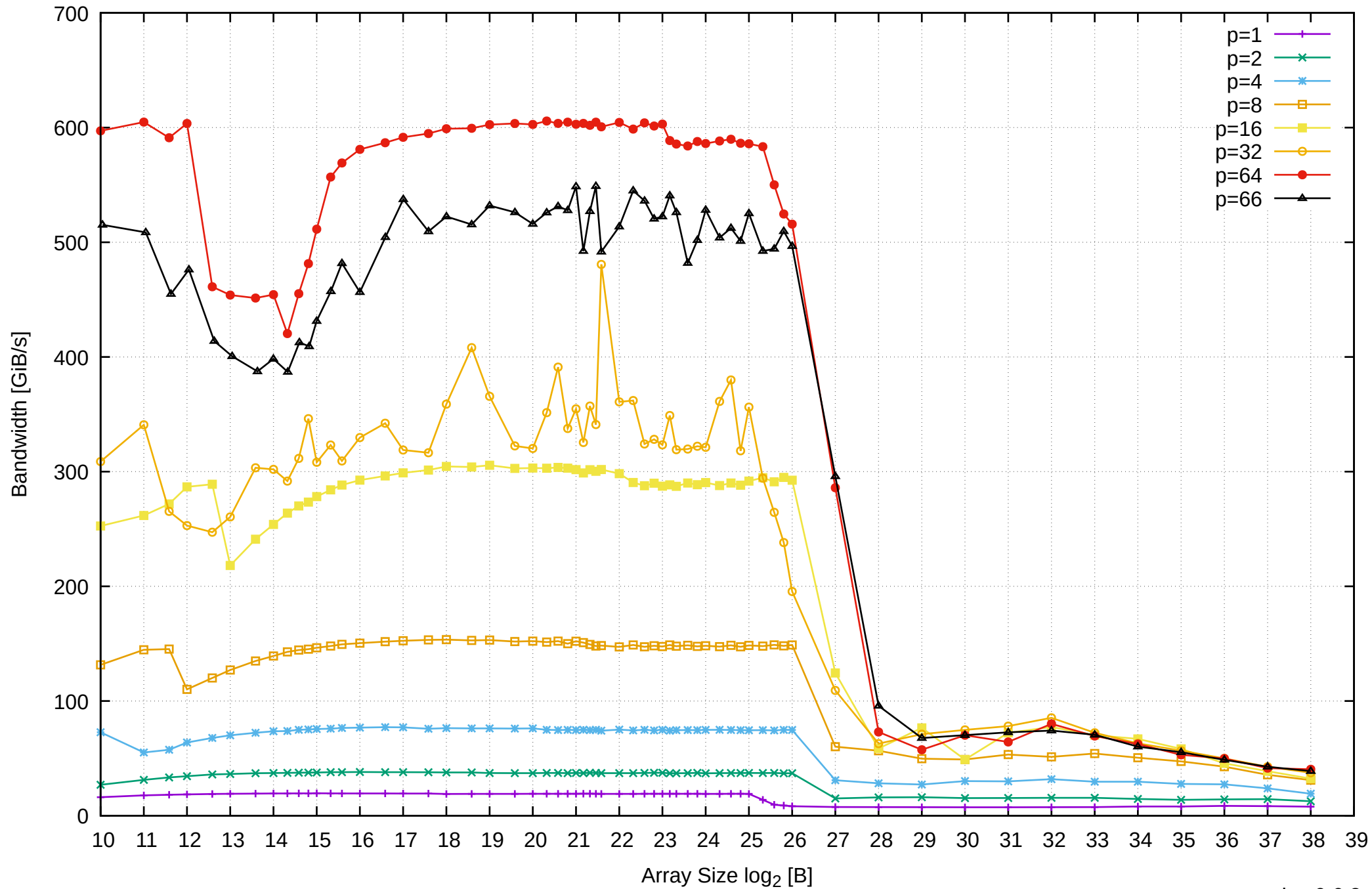
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite64PtrUnrollLoop



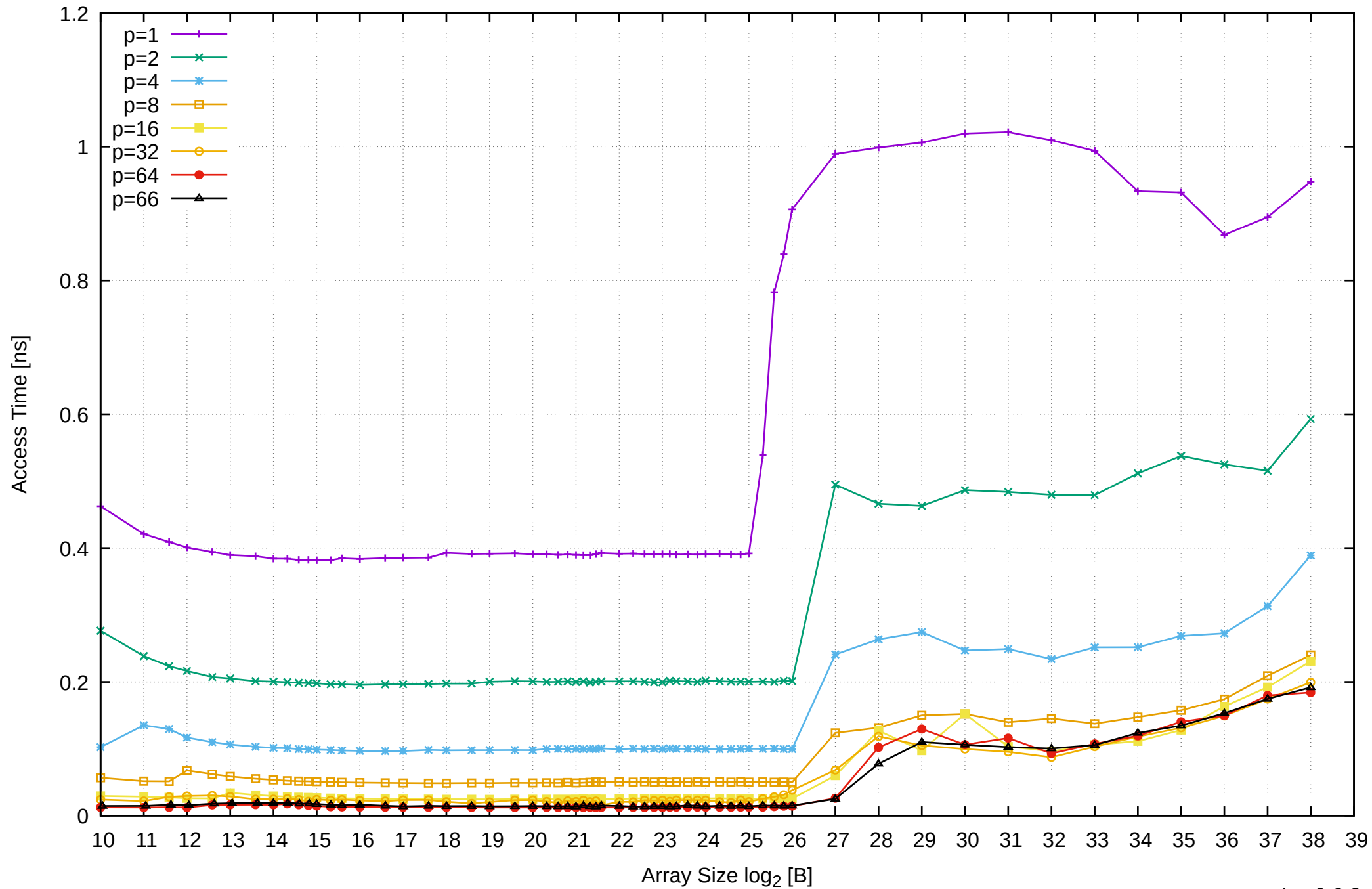
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth (enlarged) - ScanWrite64PtrUnrollLoop



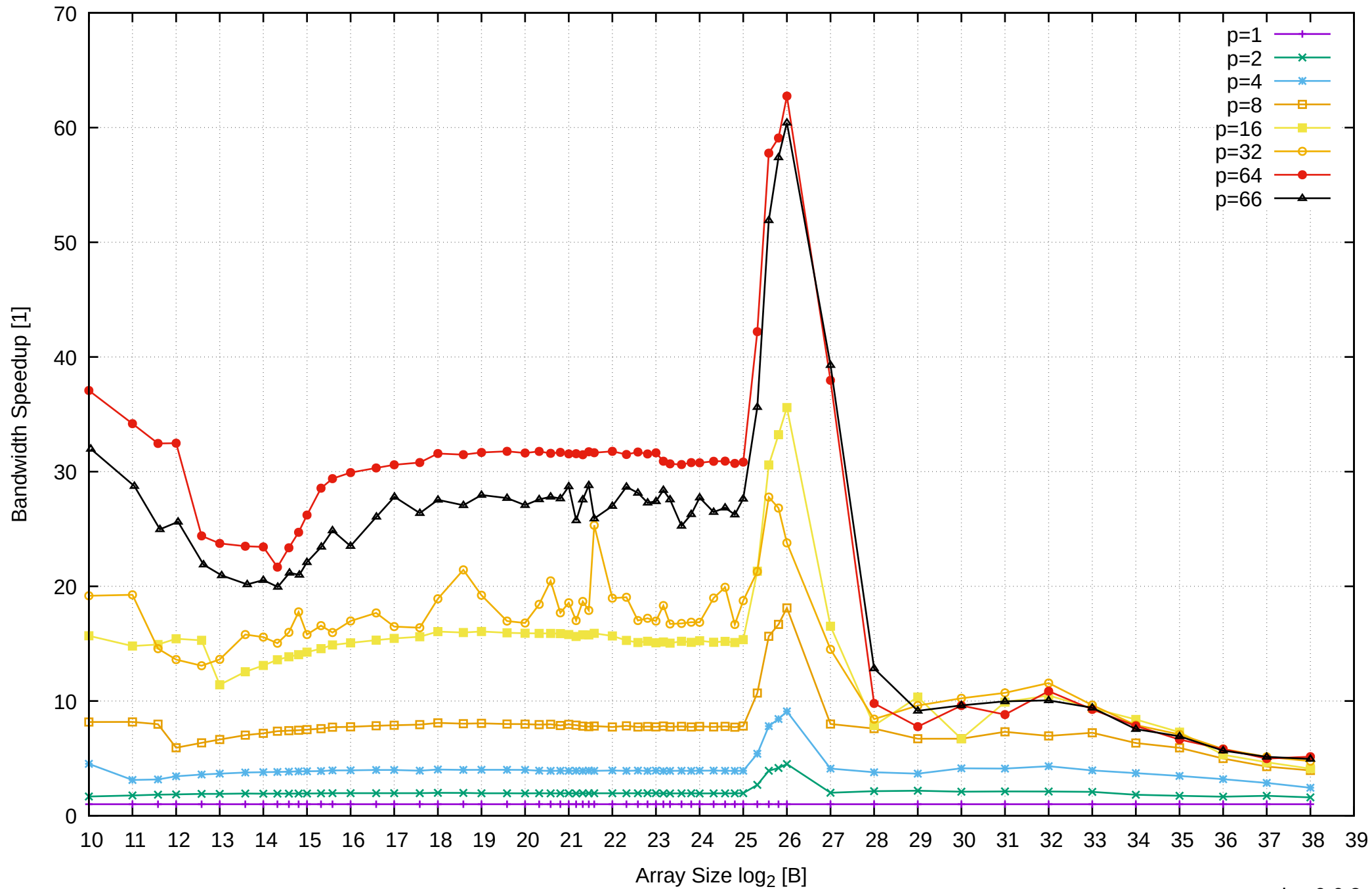
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead64PtrSimpleLoop

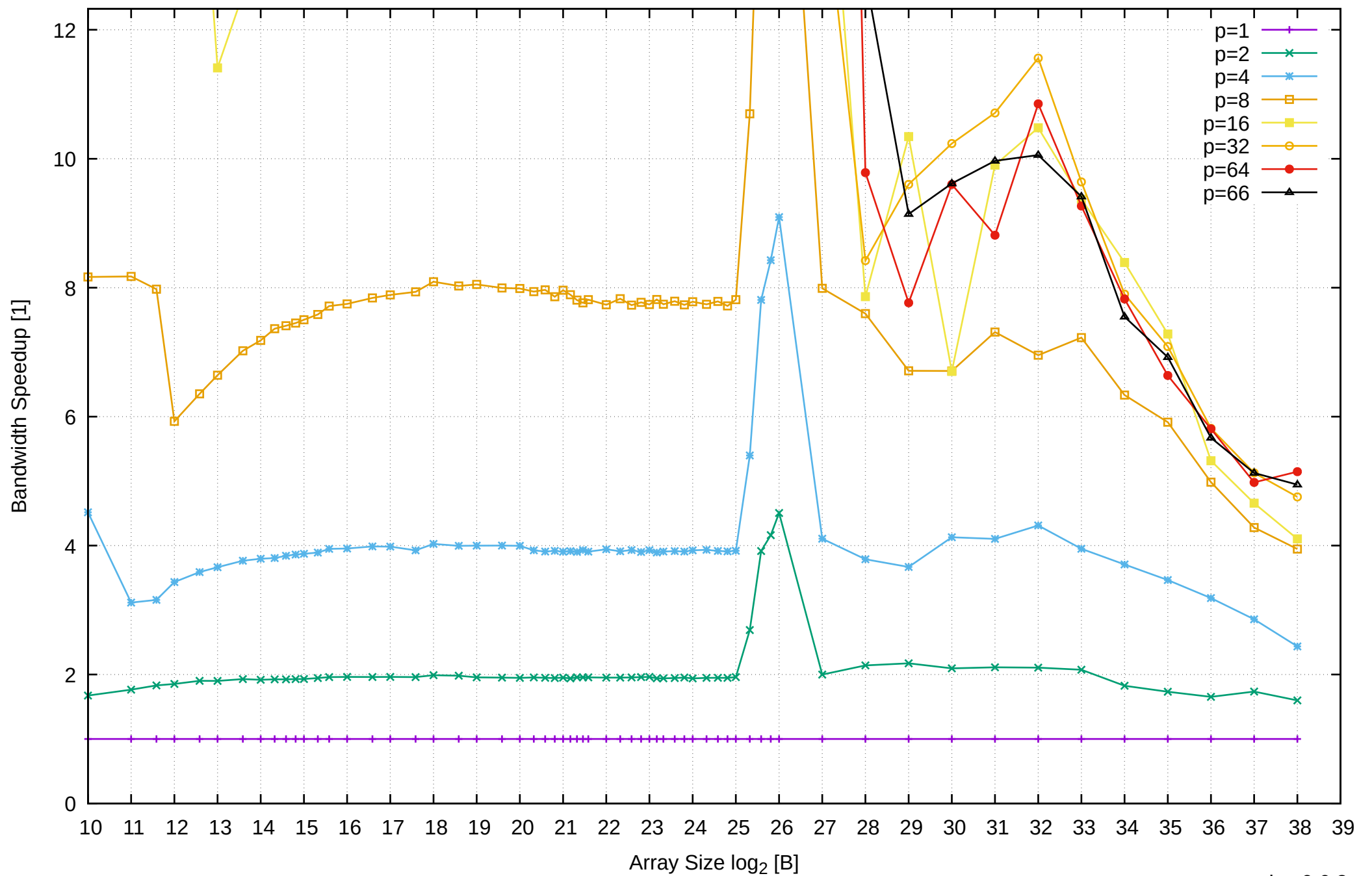


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead64PtrSimpleLoop



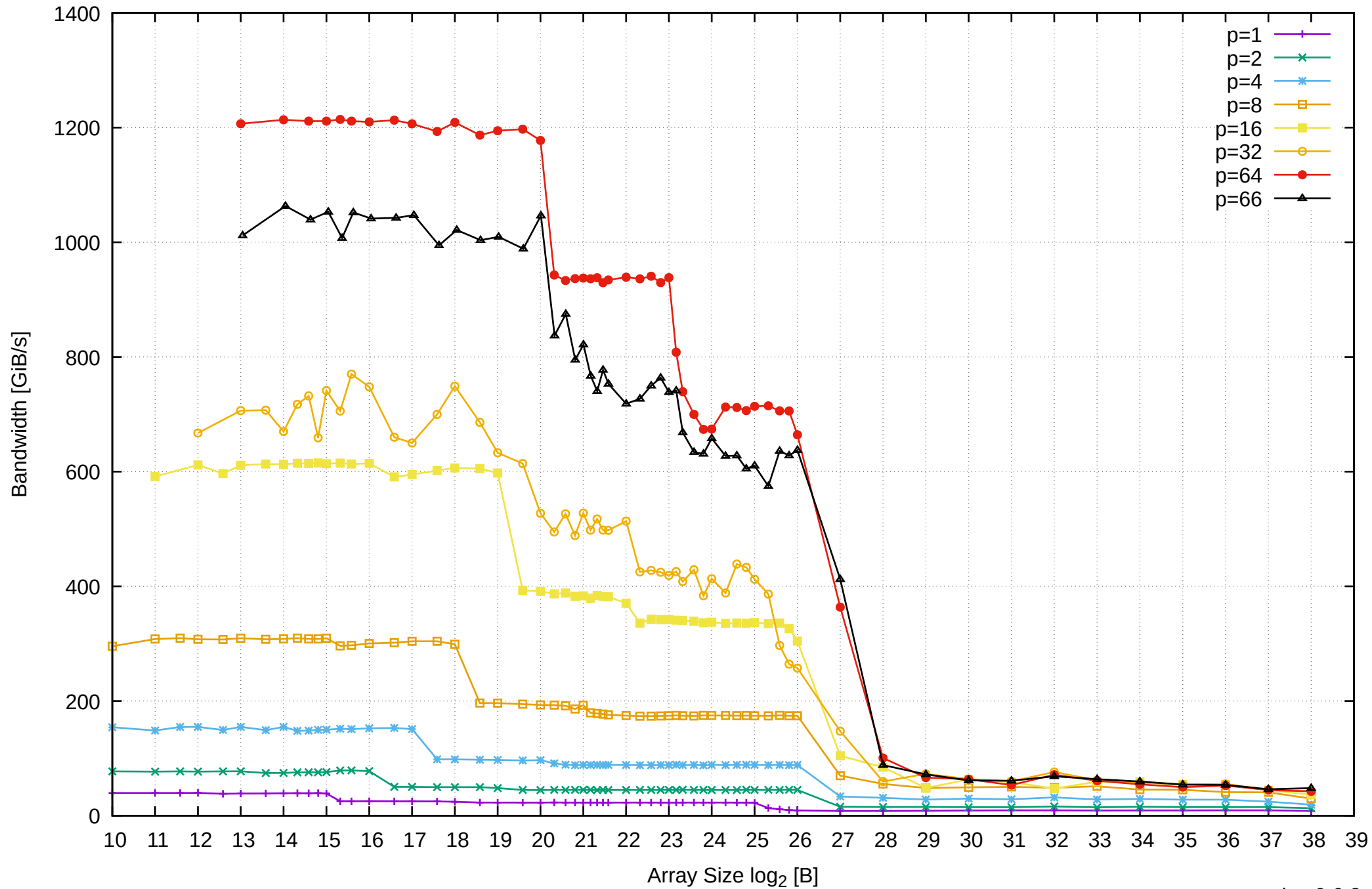
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead64PtrSimpleLoop



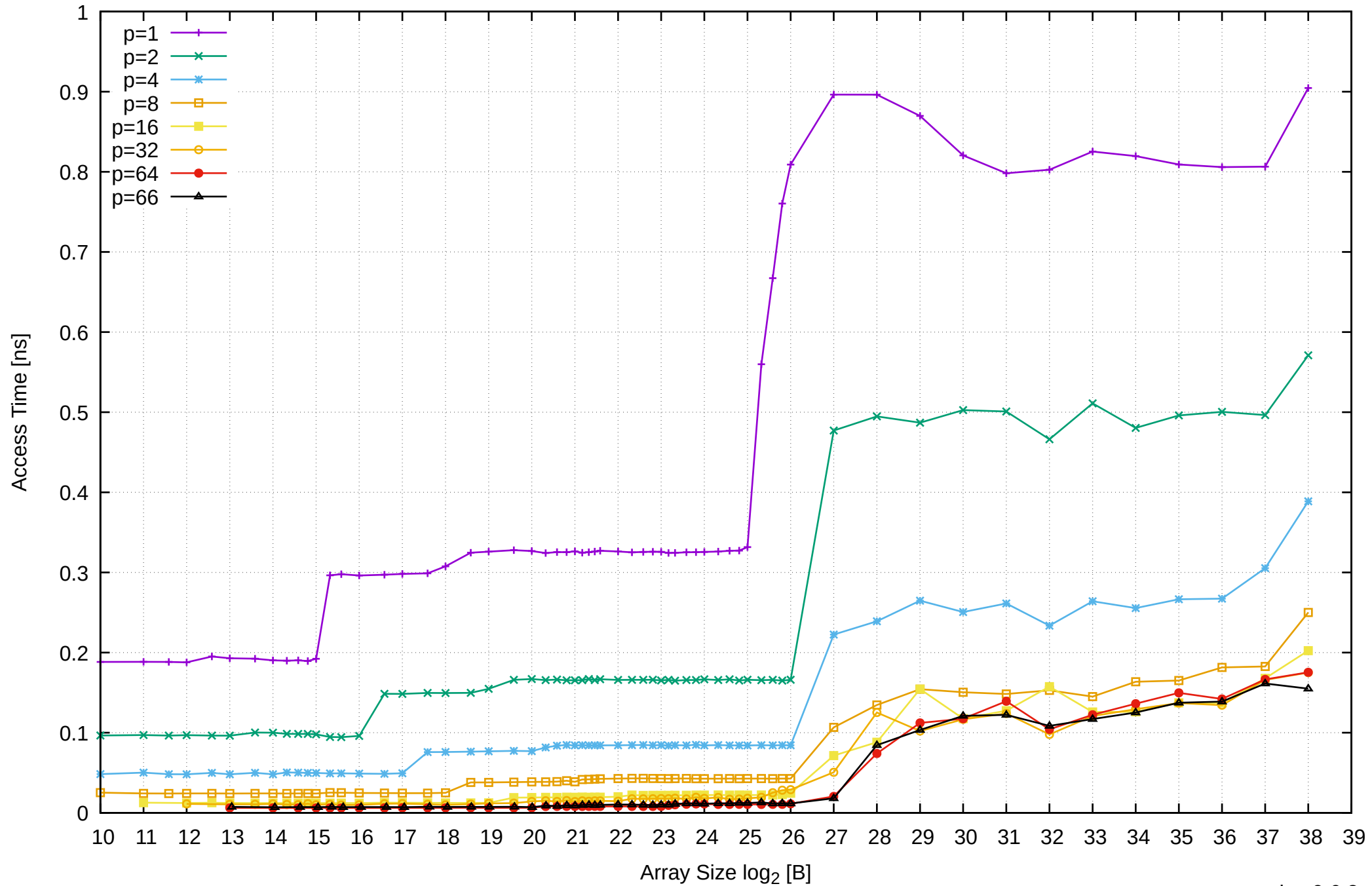




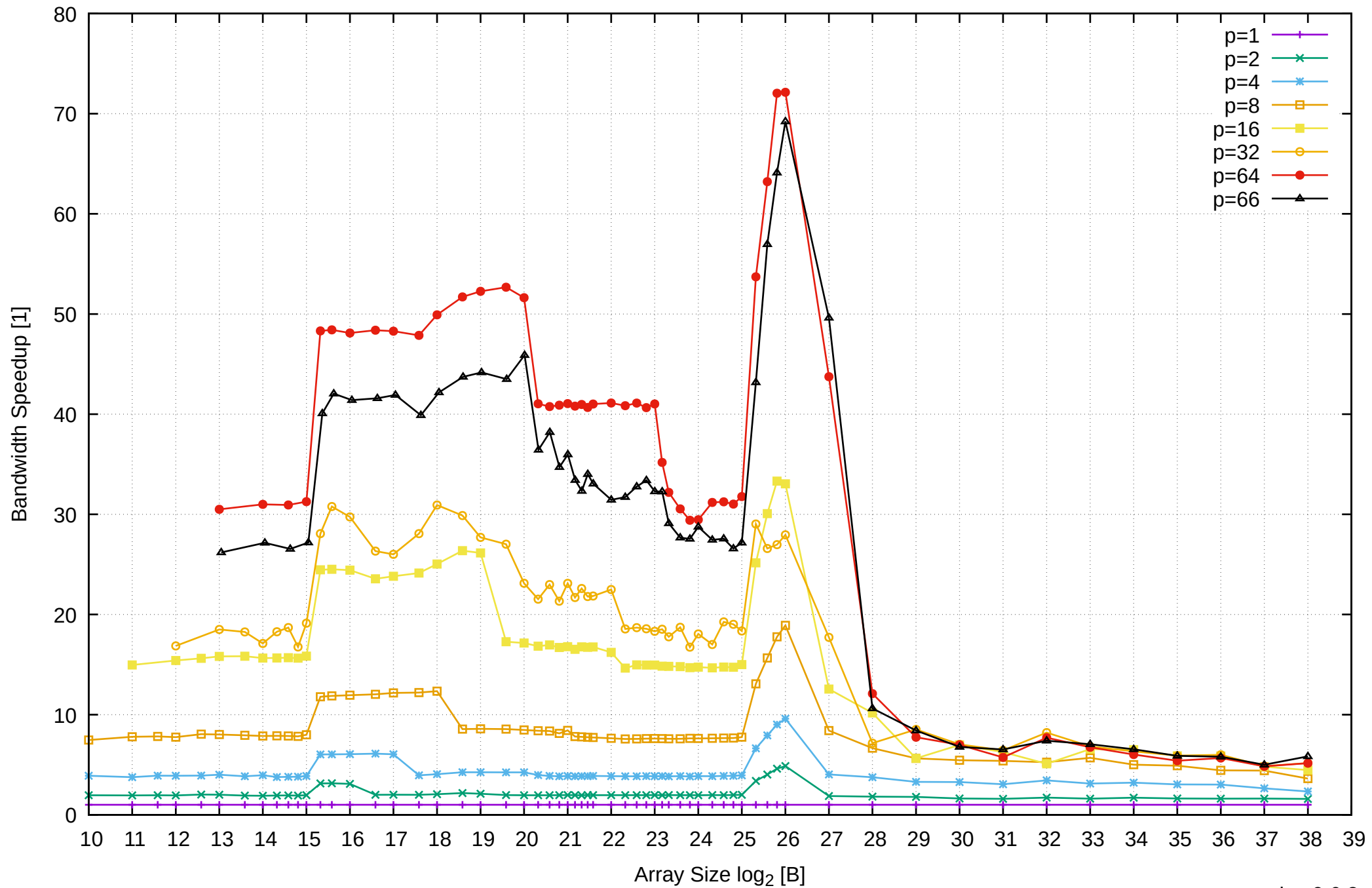
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead64PtrUnrollLoop

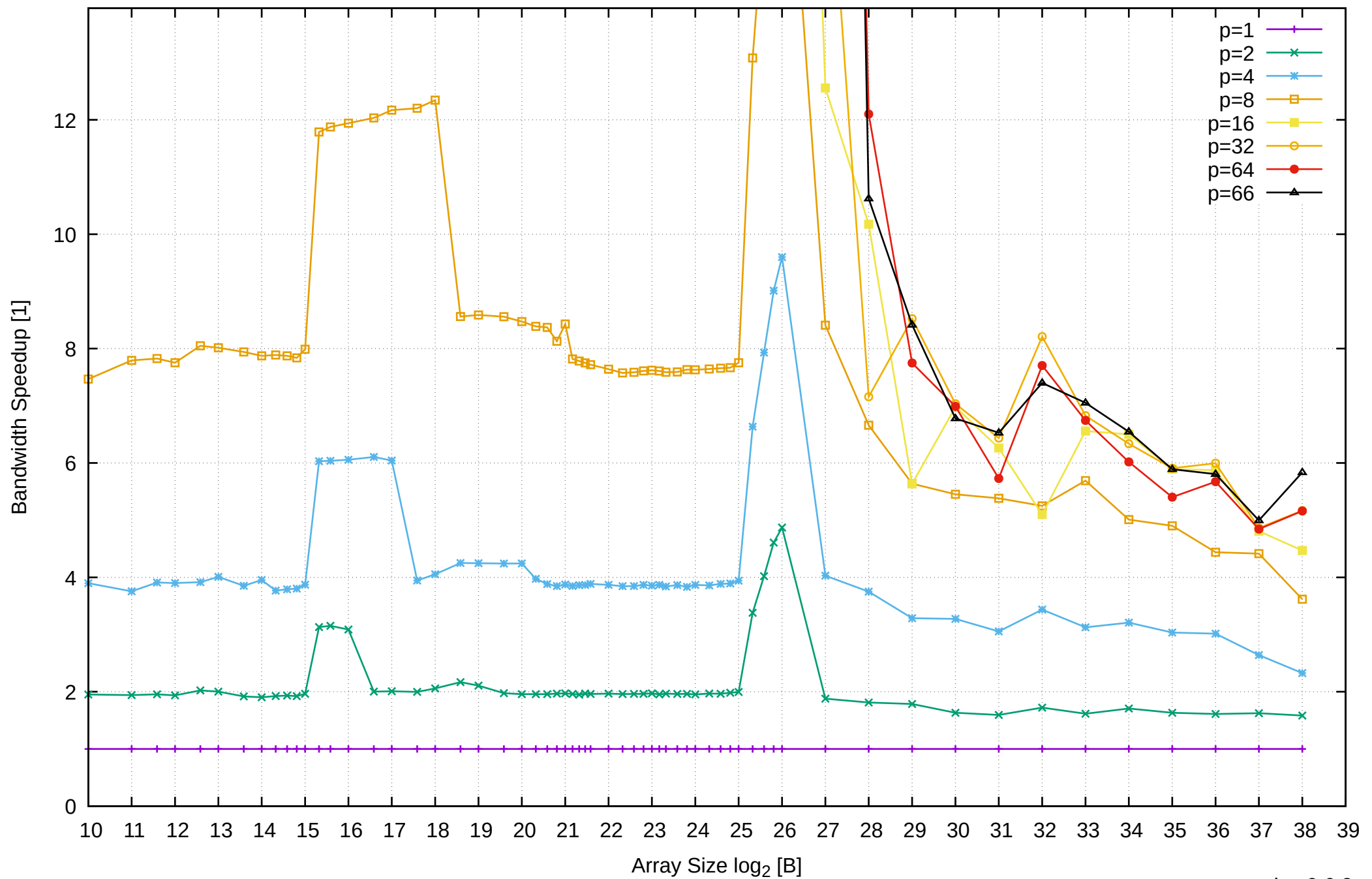


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead64PtrUnrollLoop

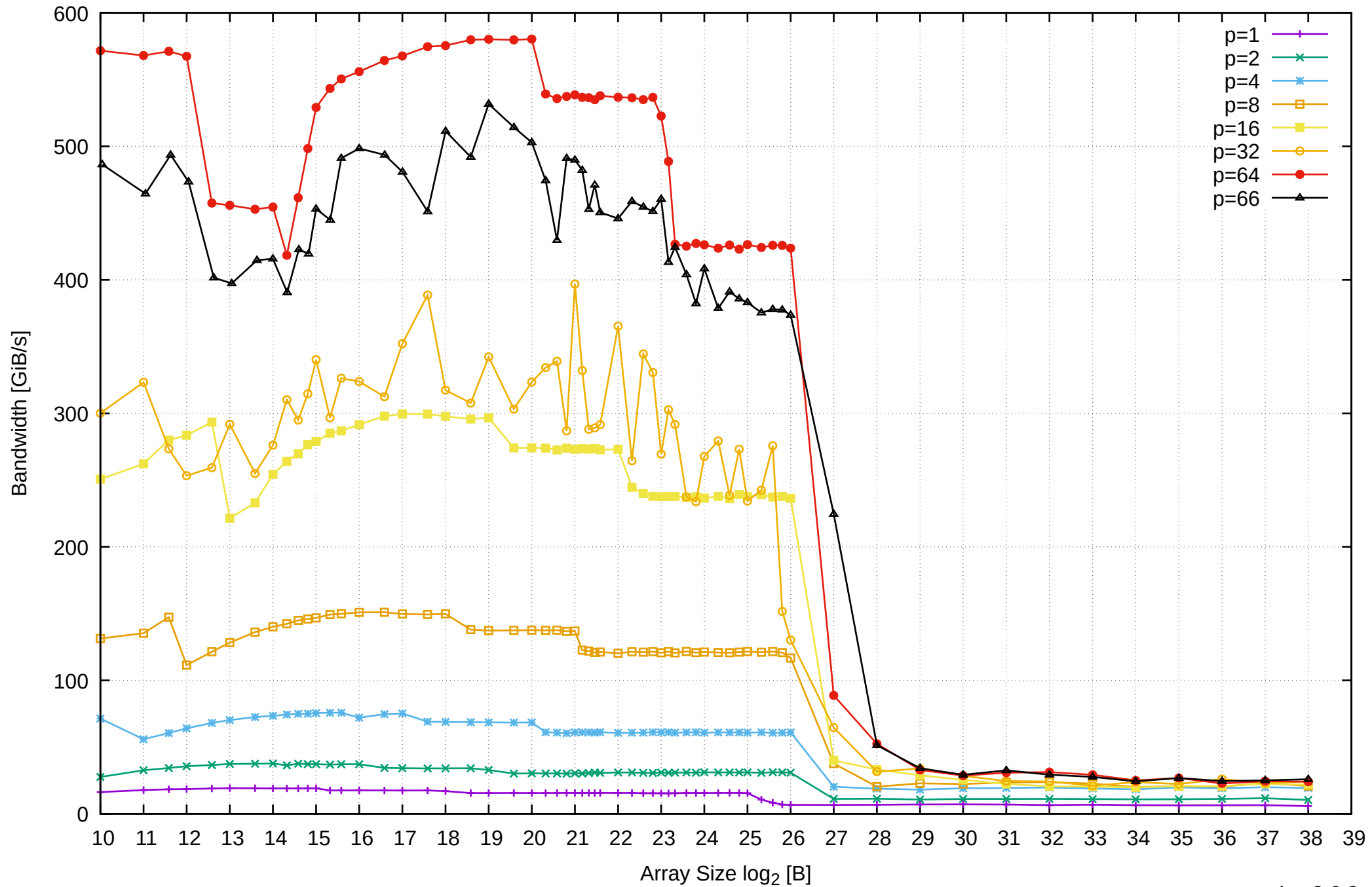


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead64PtrUnrollLoop

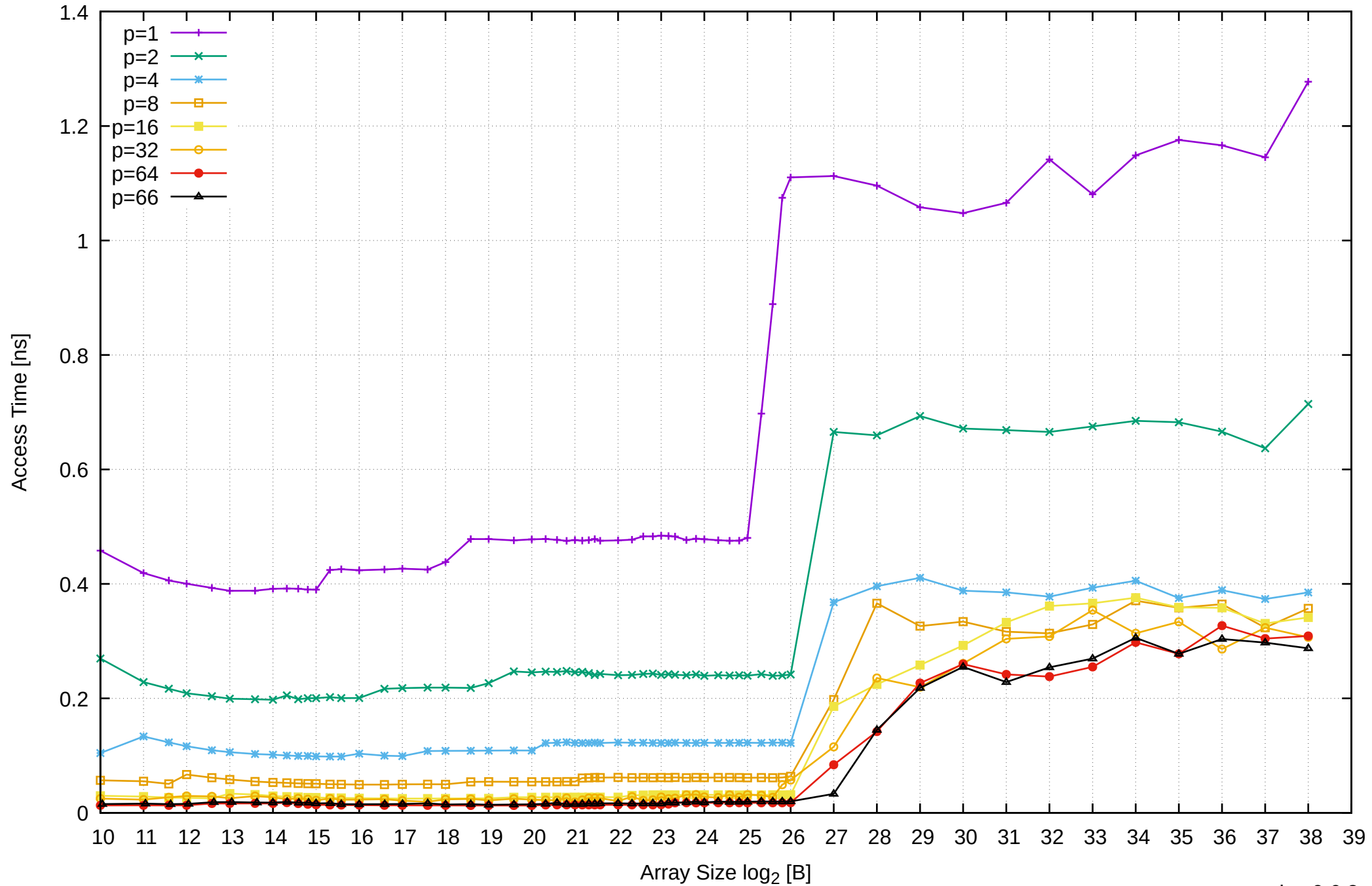




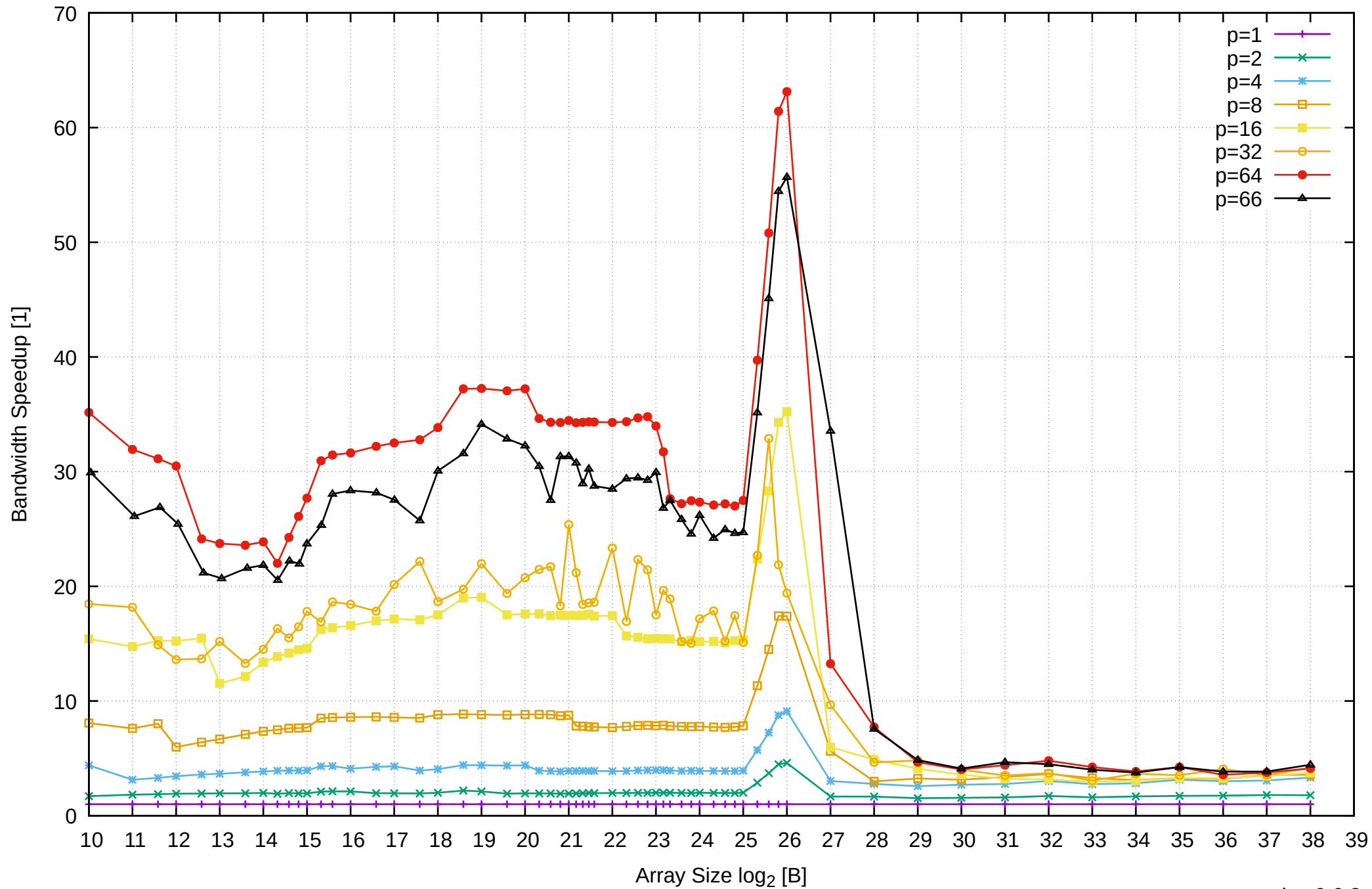
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite64IndexSimpleLoop

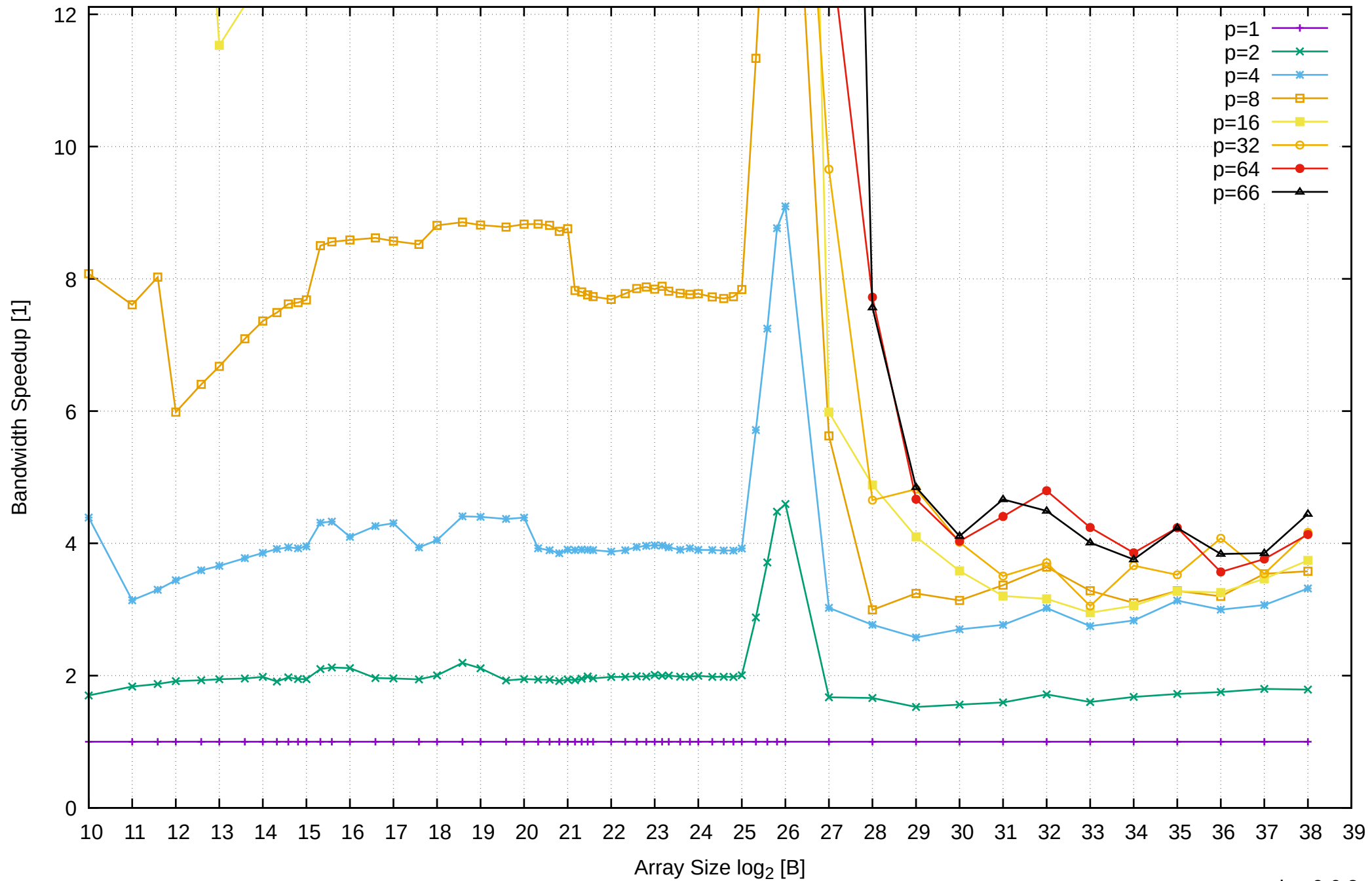


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite64IndexSimpleLoop



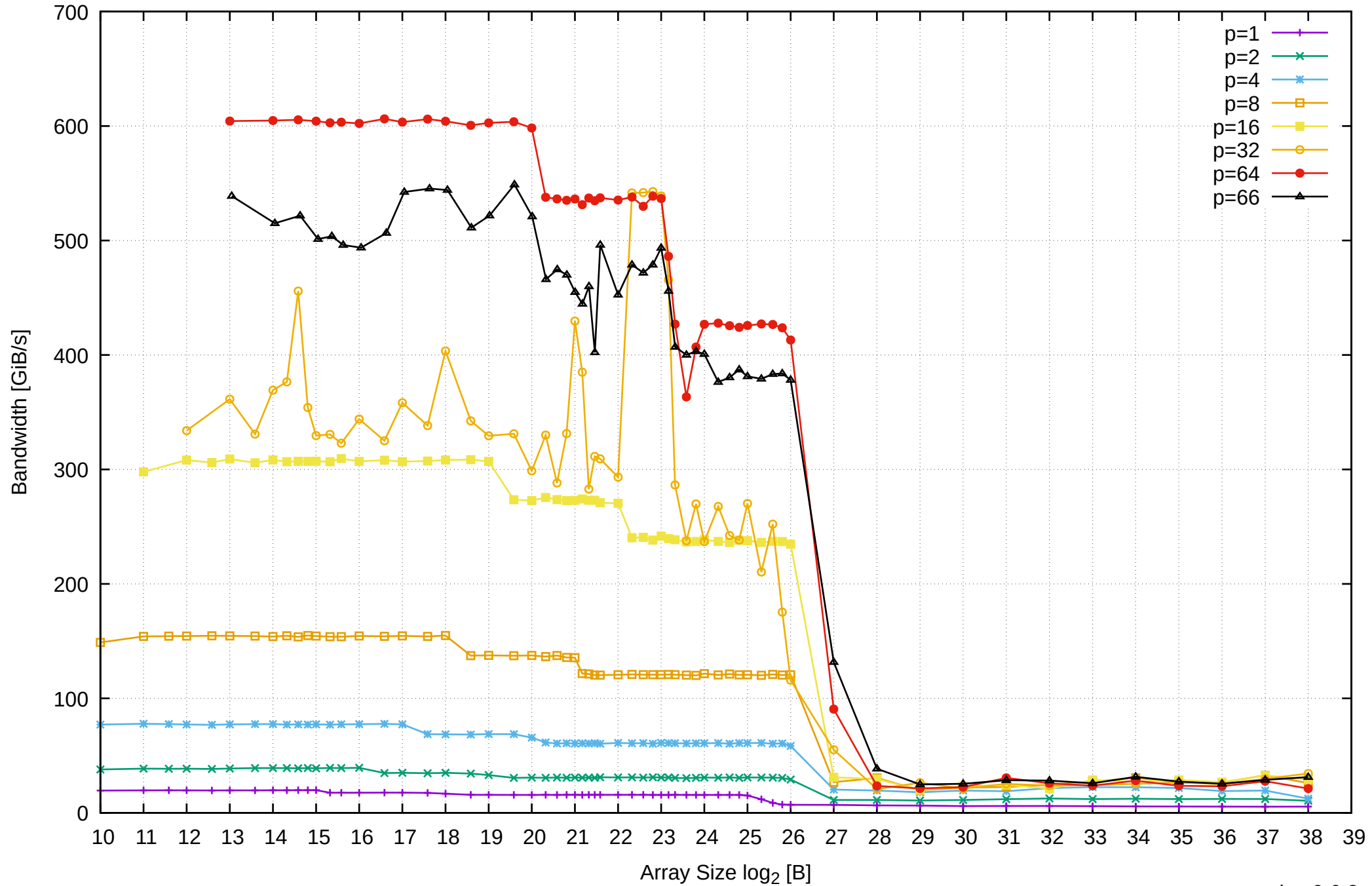
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite64IndexSimpleLoop



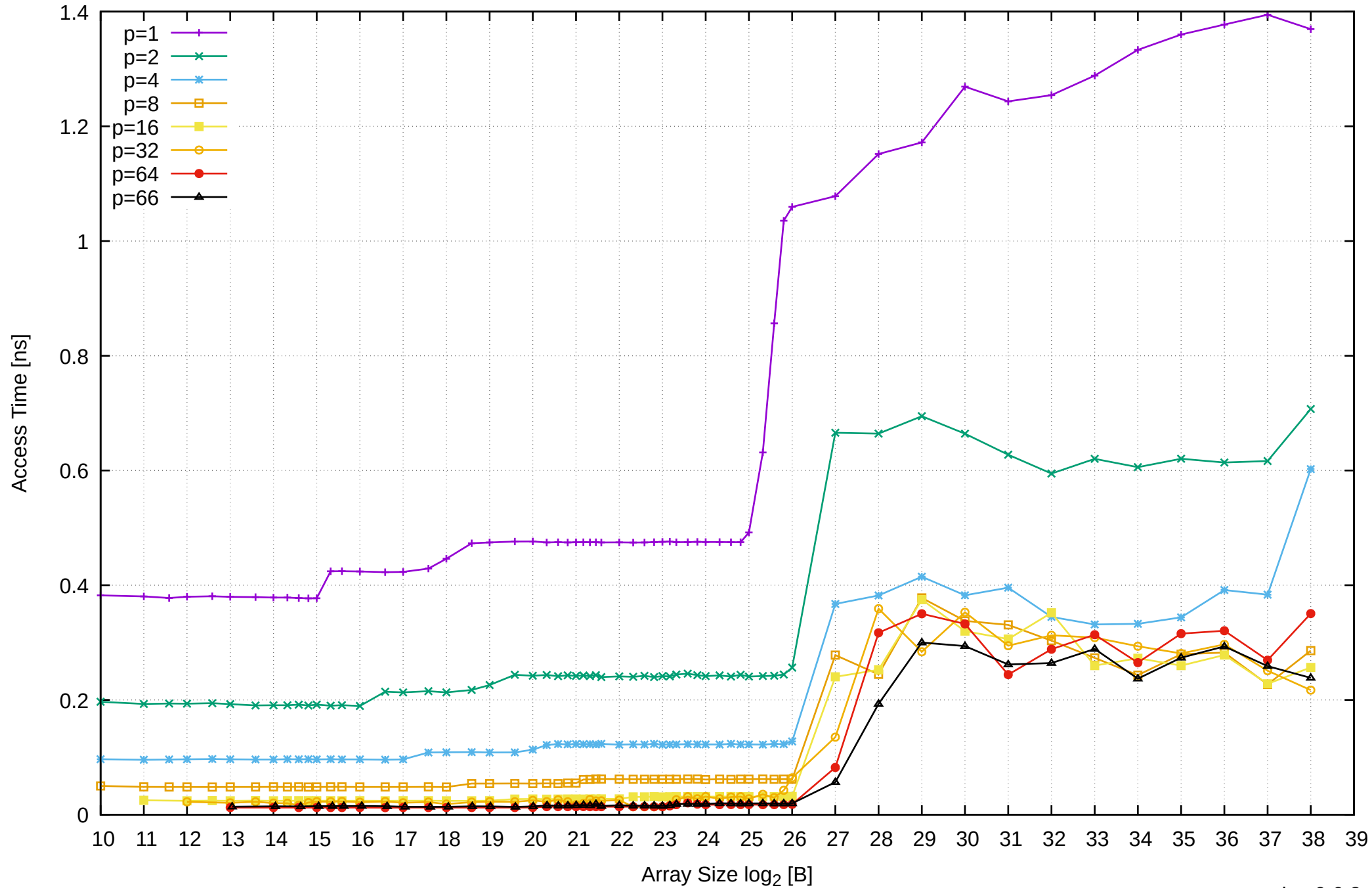




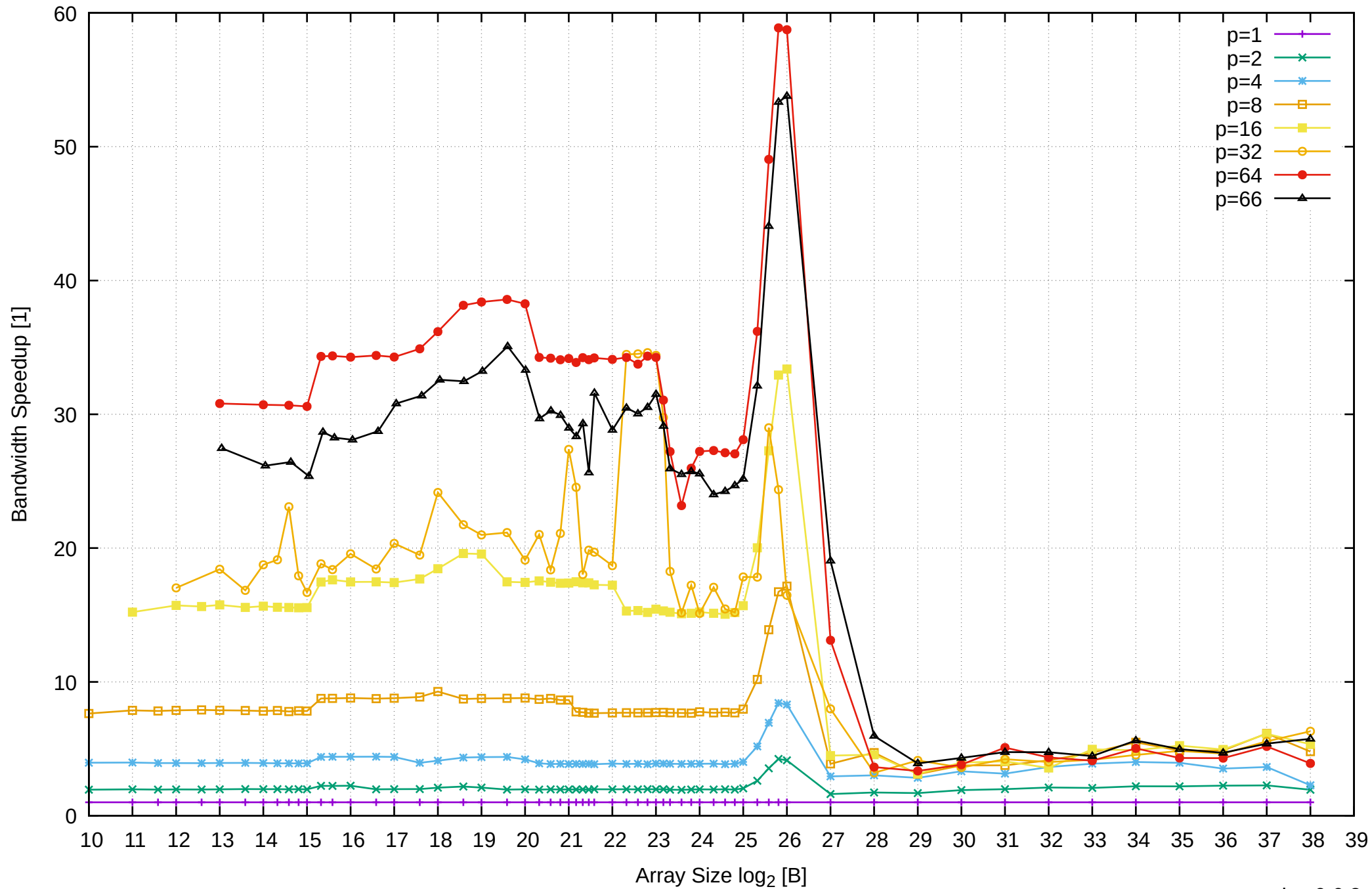
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite64IndexUnrollLoop

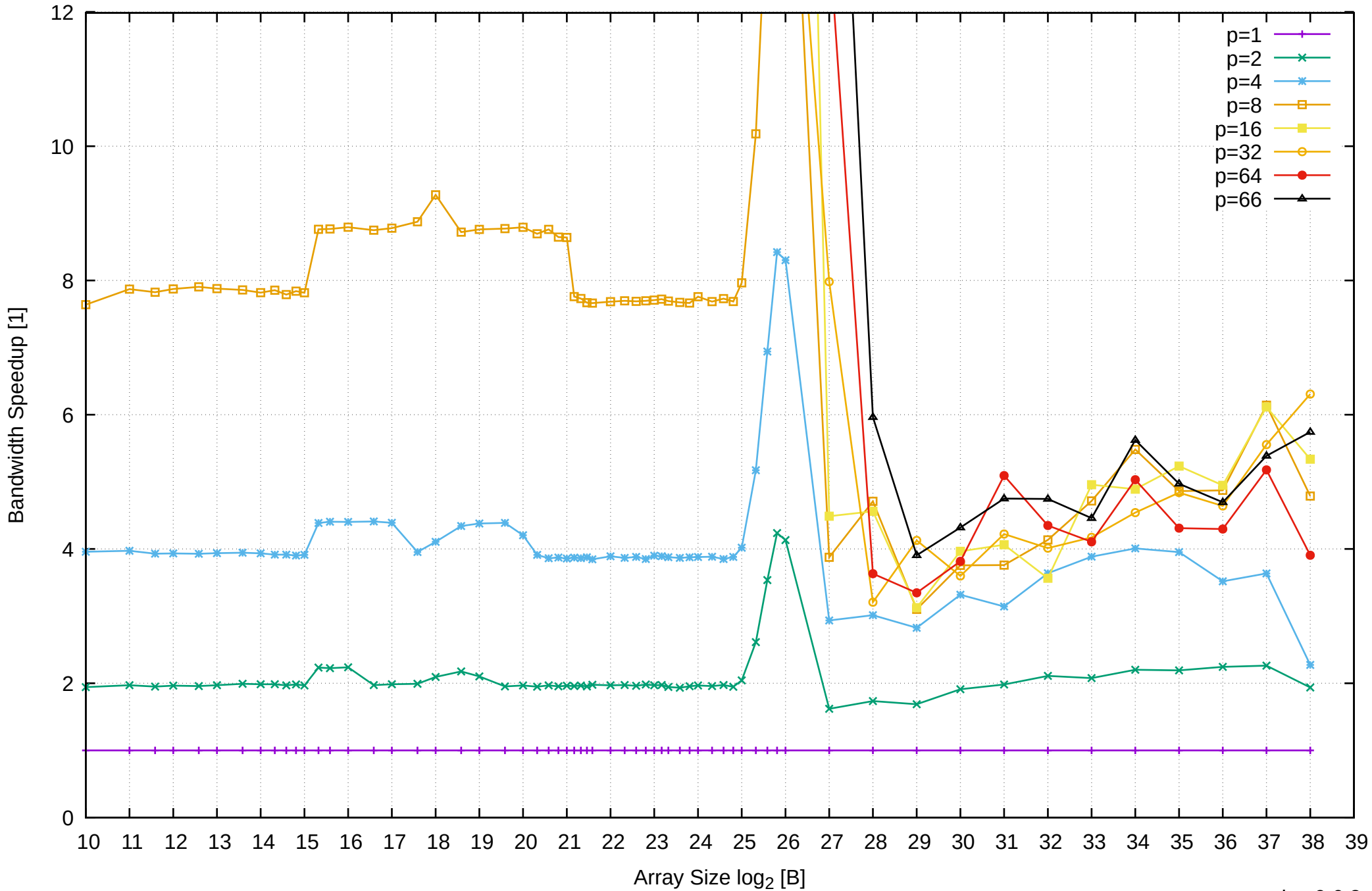


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite64IndexUnrollLoop

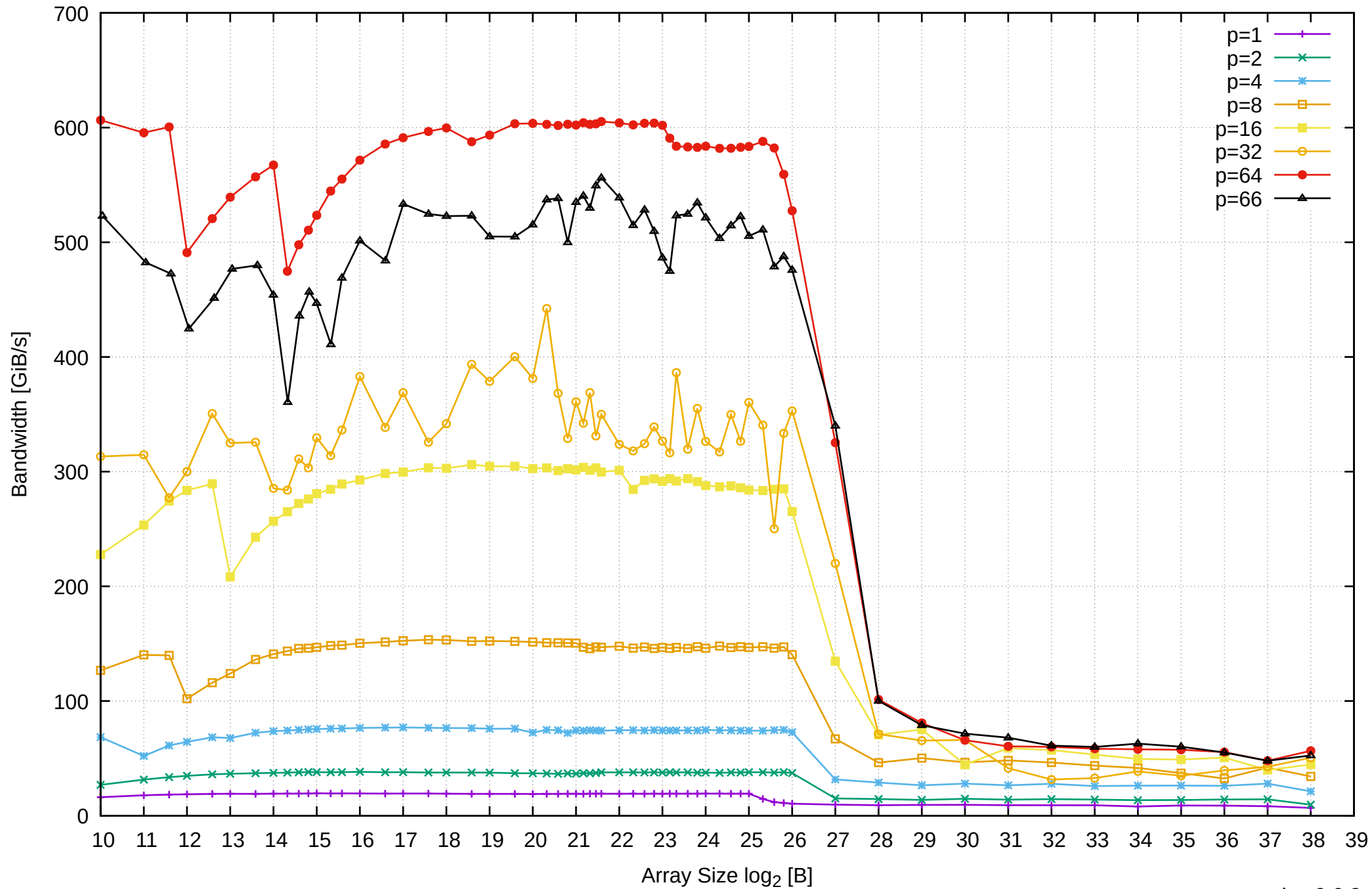


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite64IndexUnrollLoop

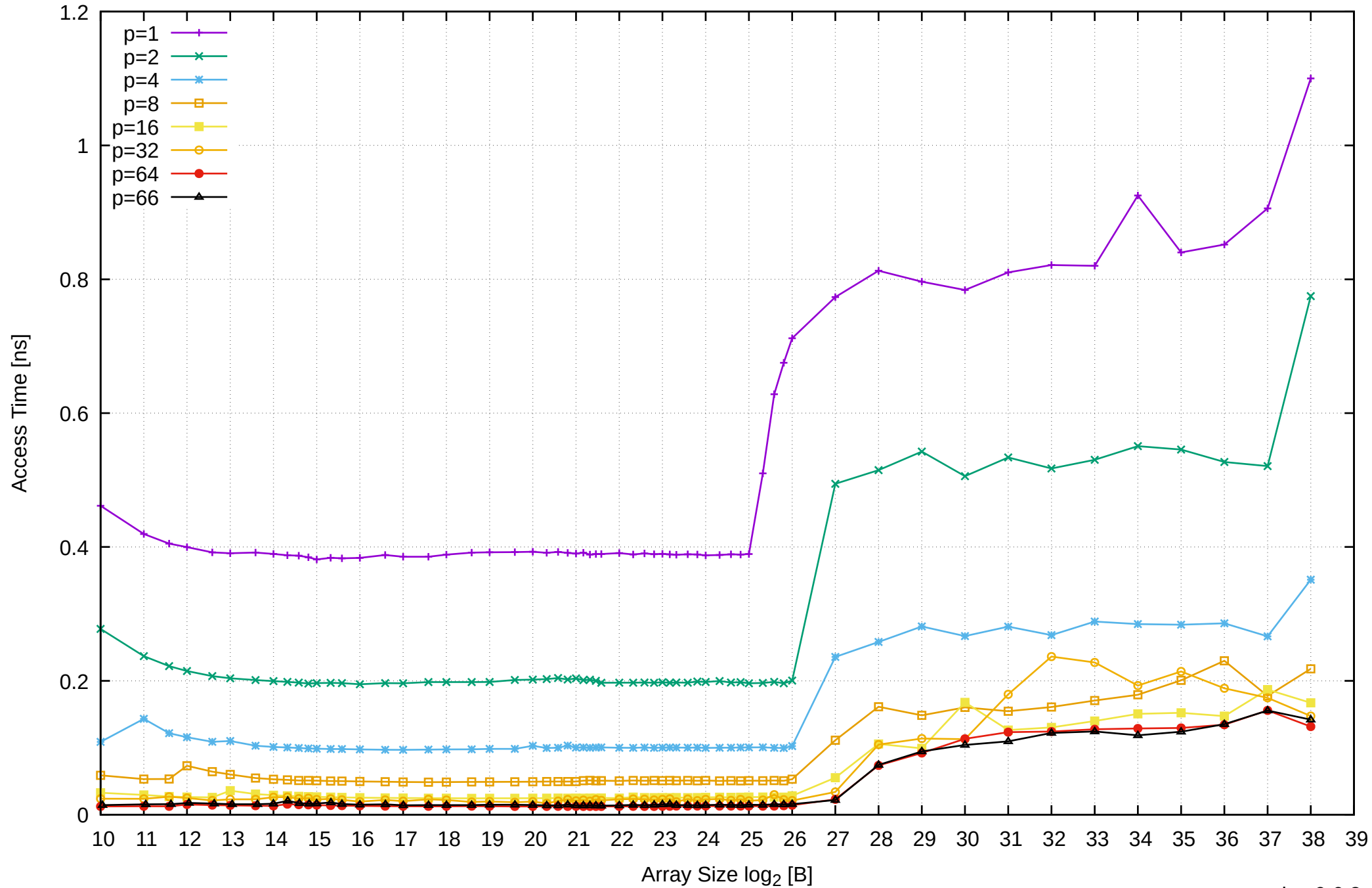




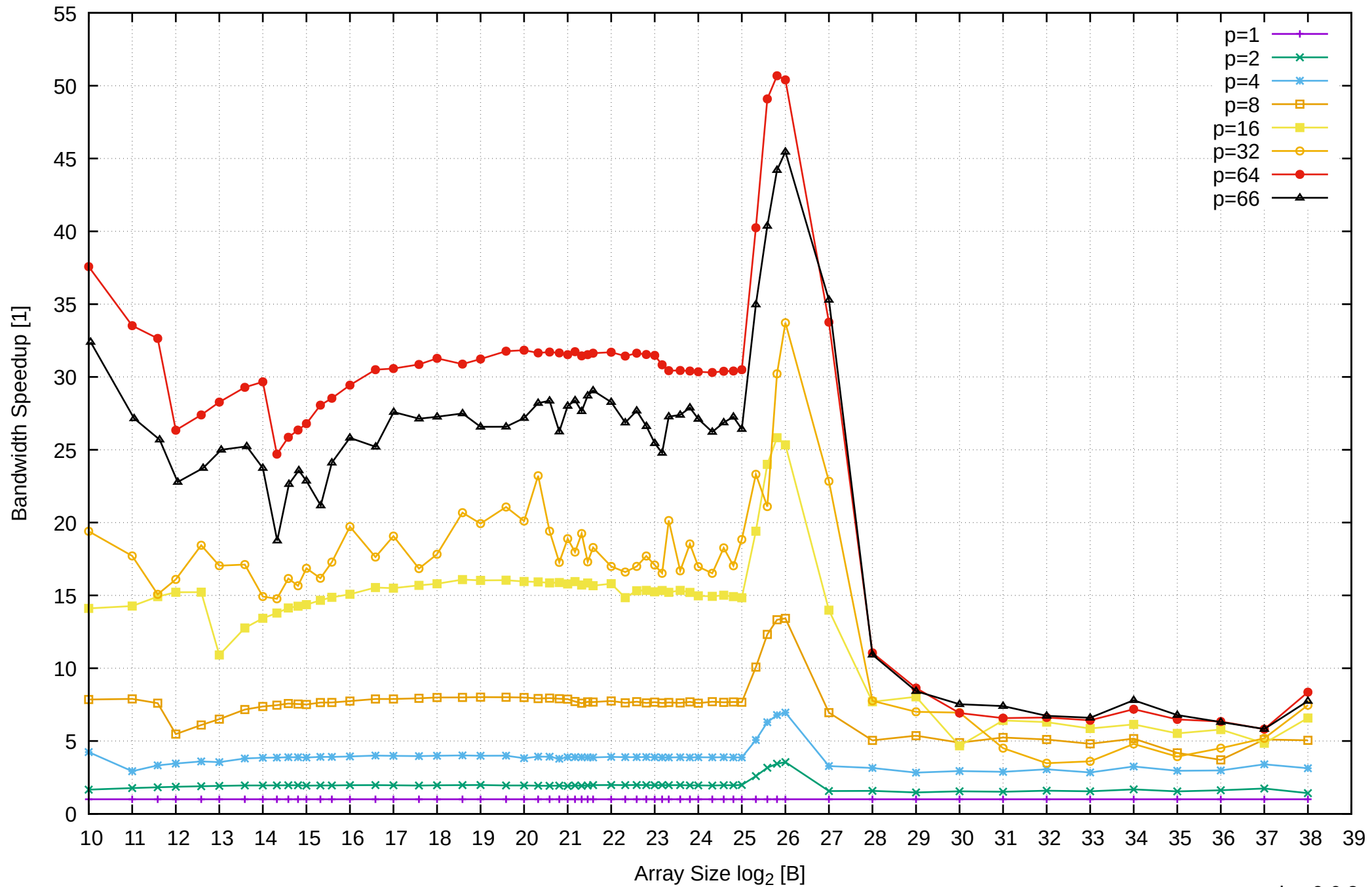
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead64IndexSimpleLoop

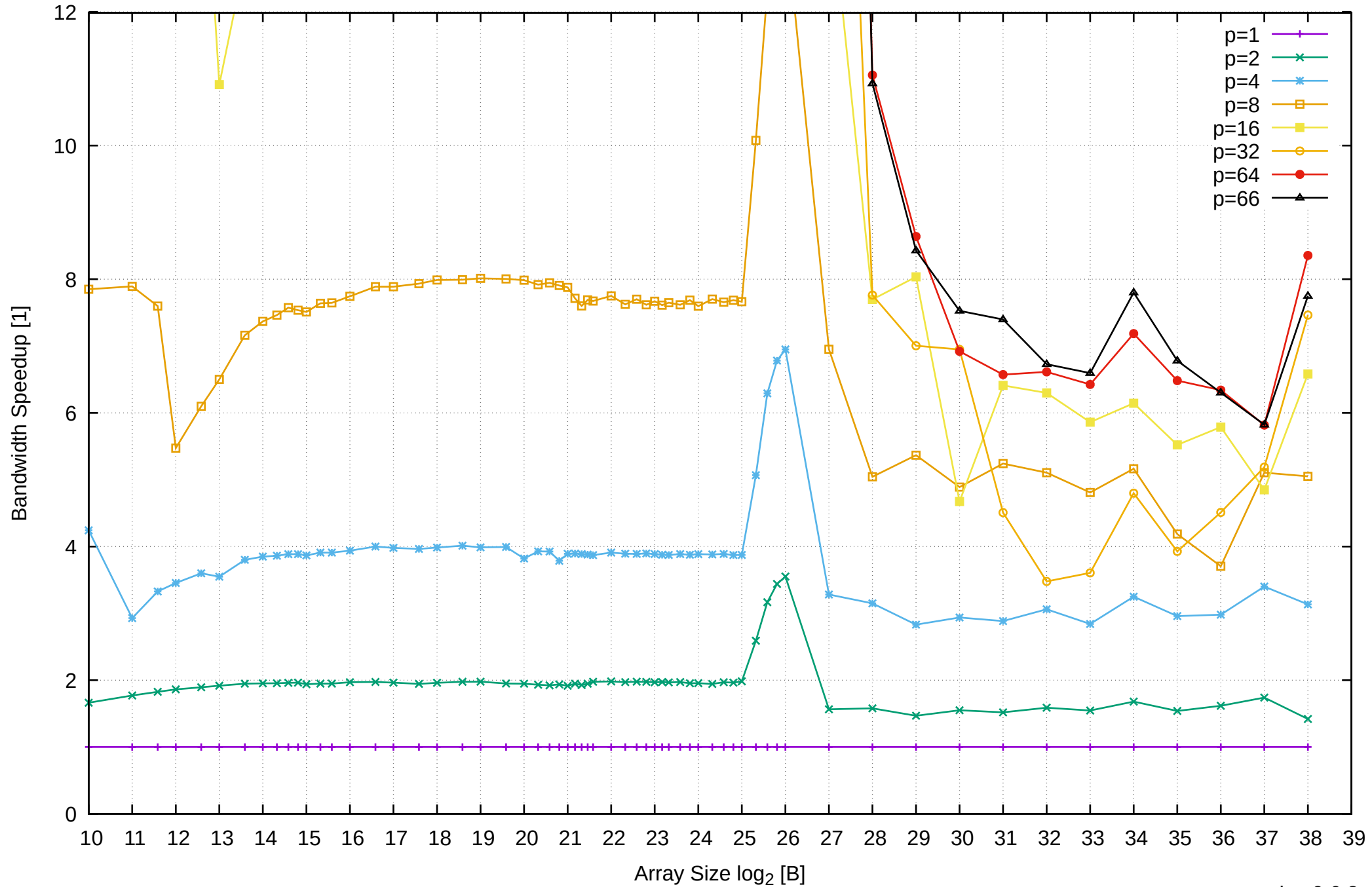


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead64IndexSimpleLoop



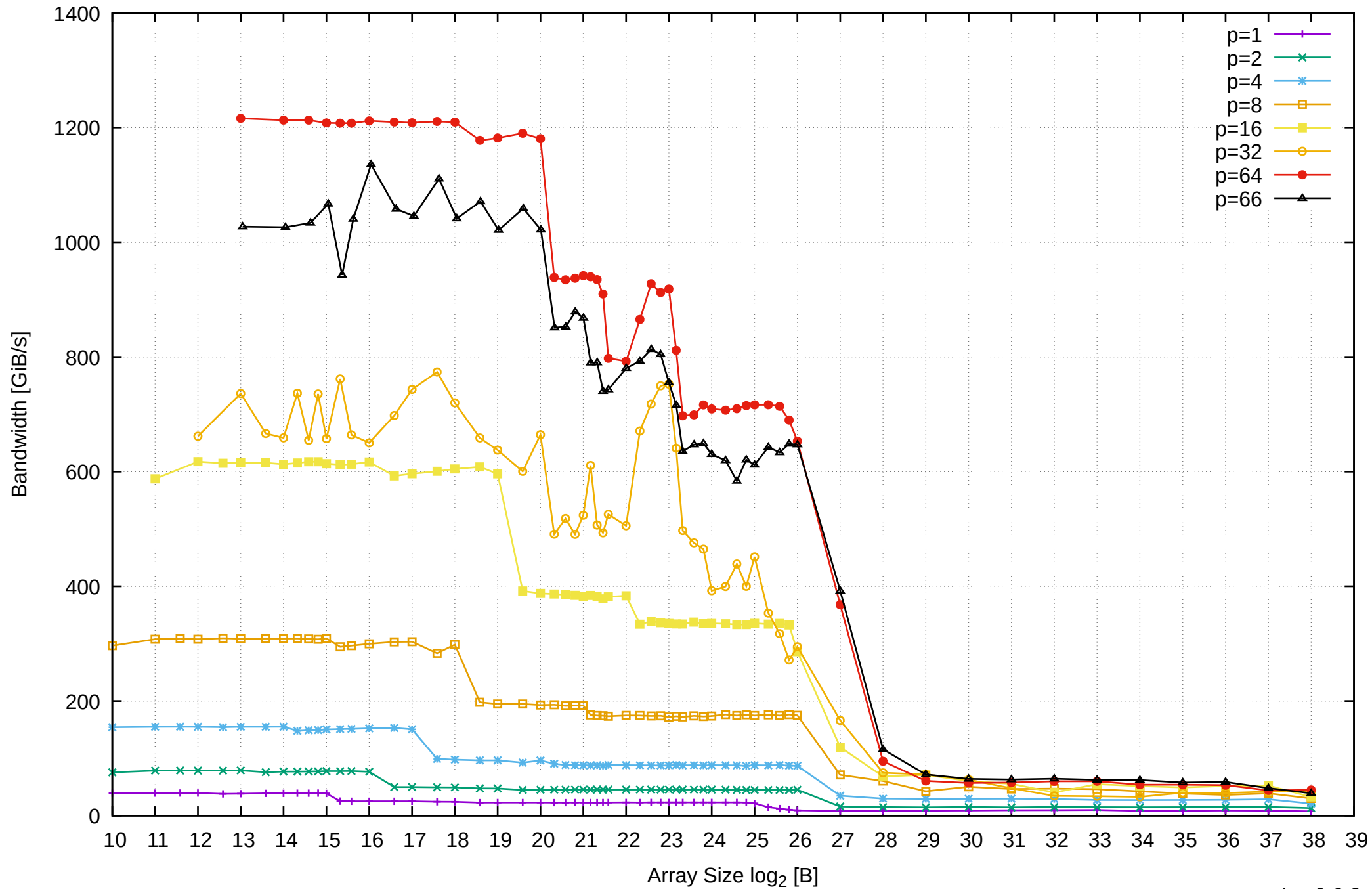
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead64IndexSimpleLoop



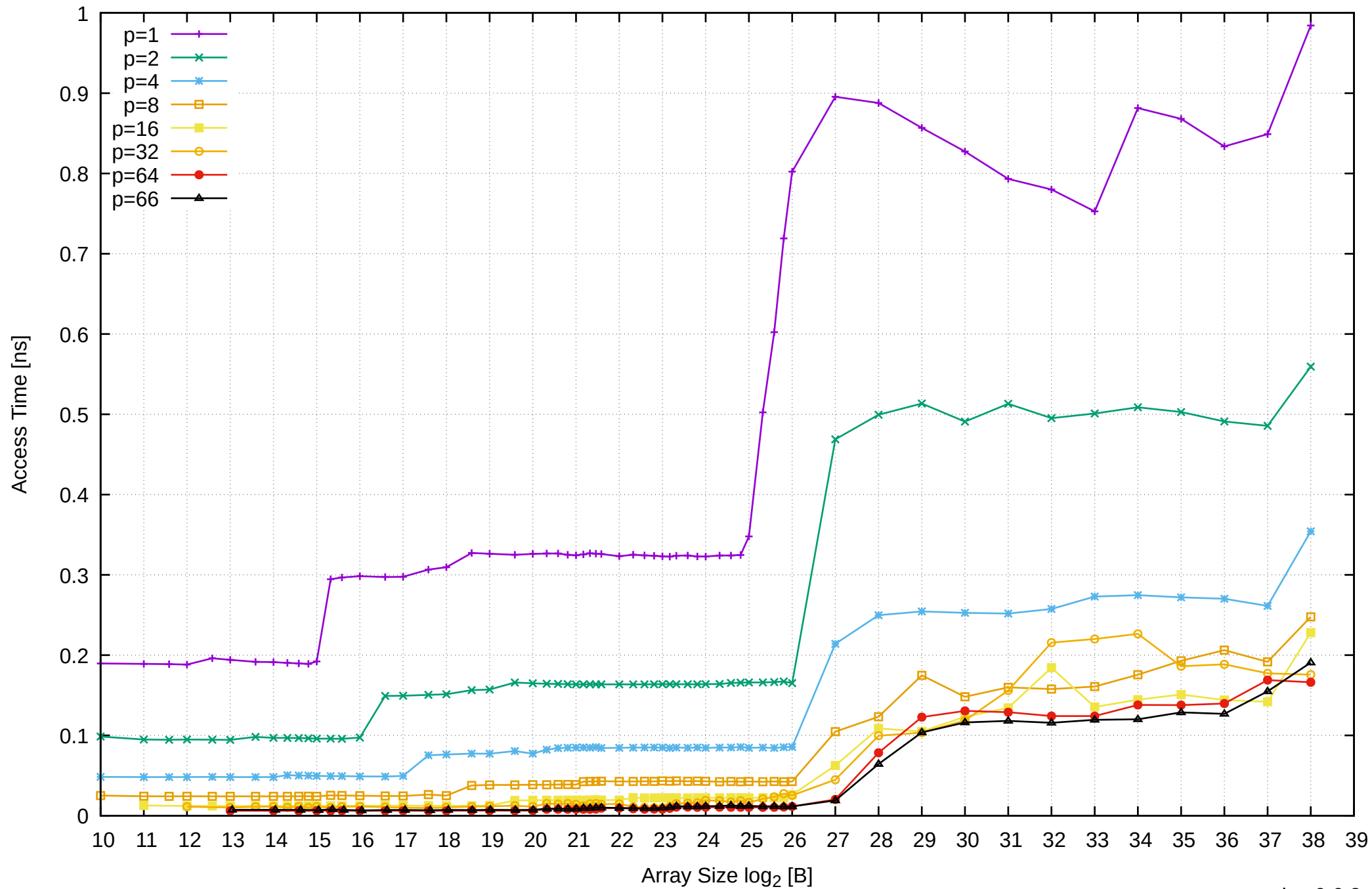




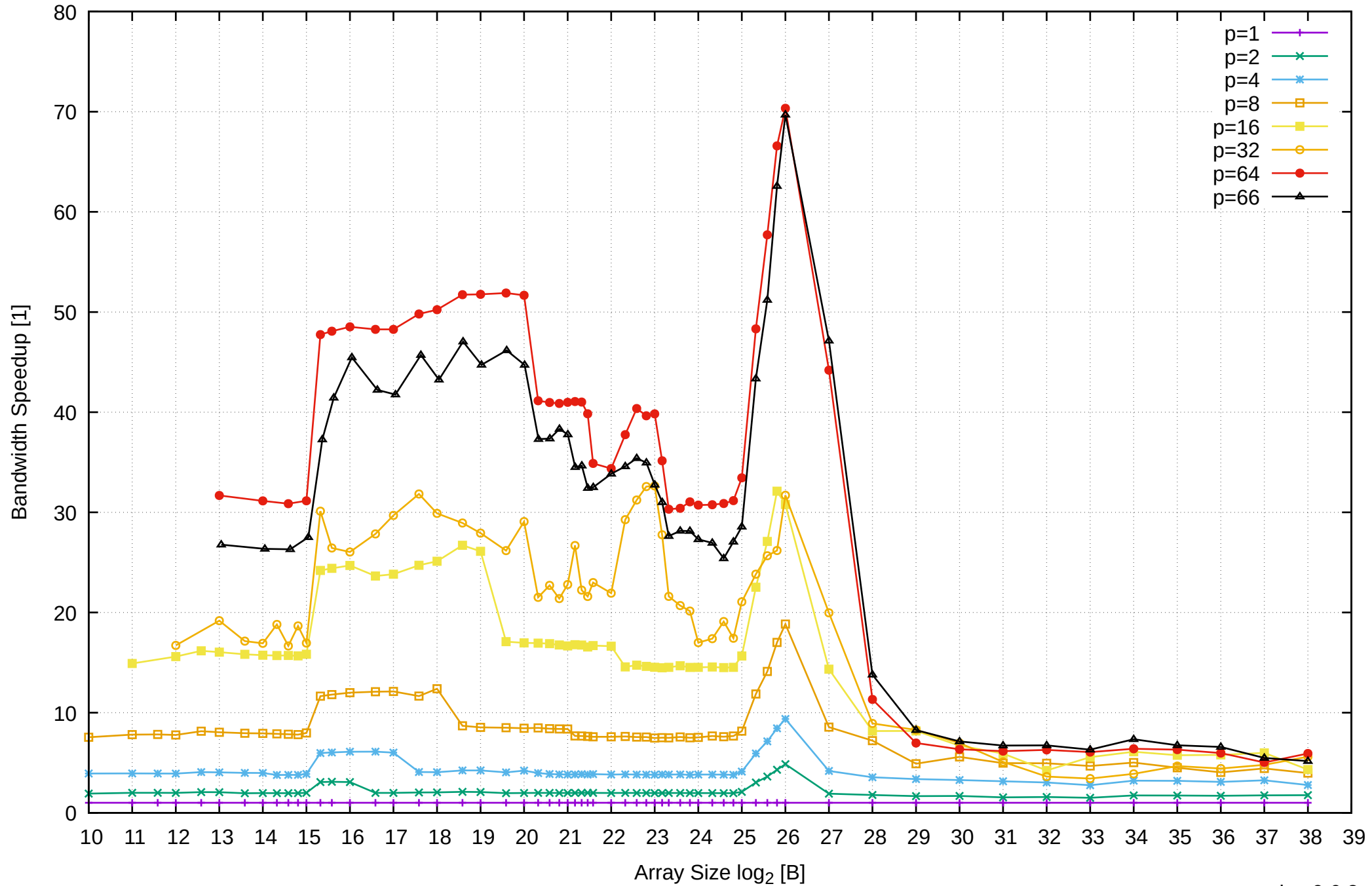
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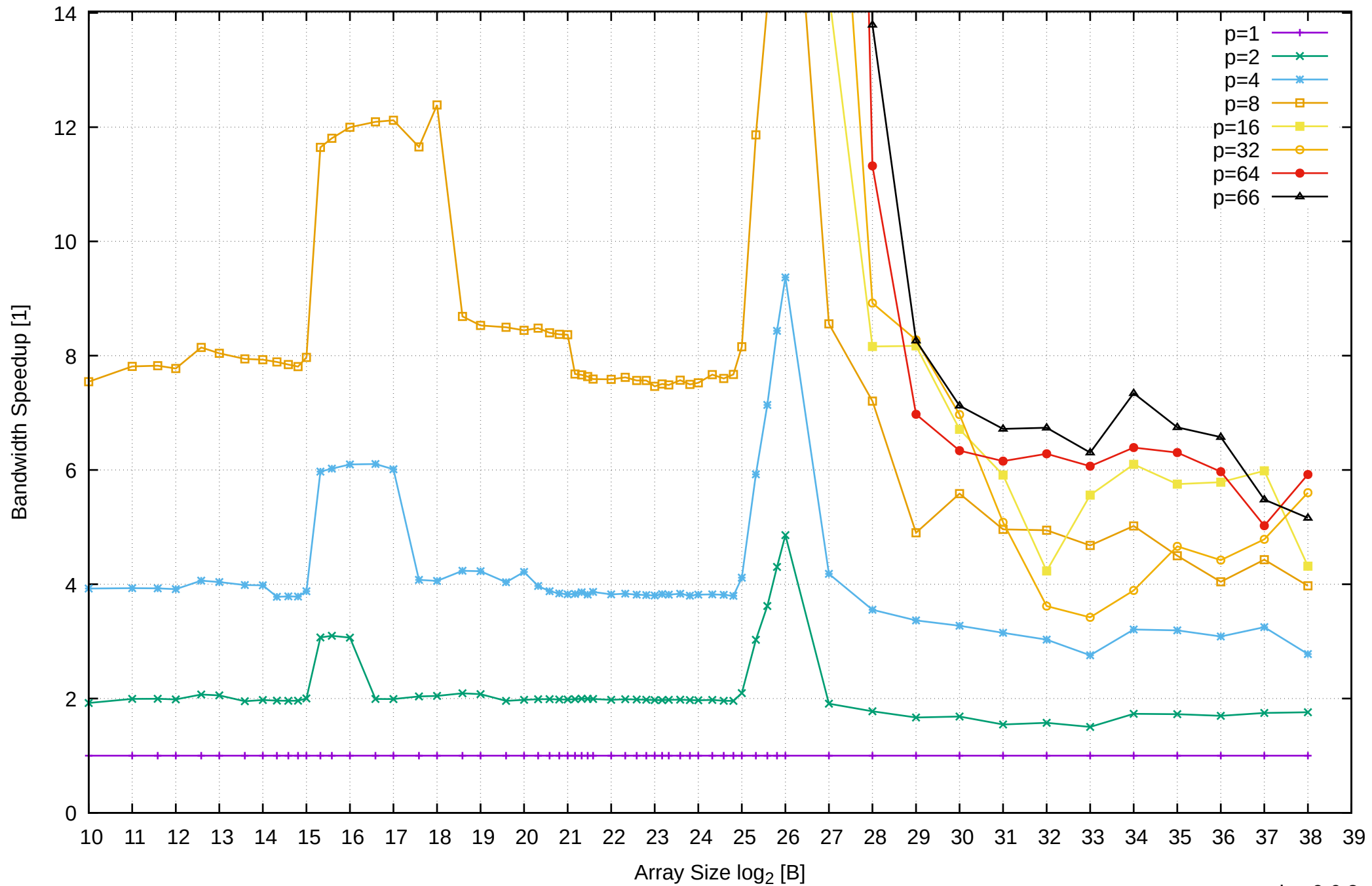


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead64IndexUnrollLoop

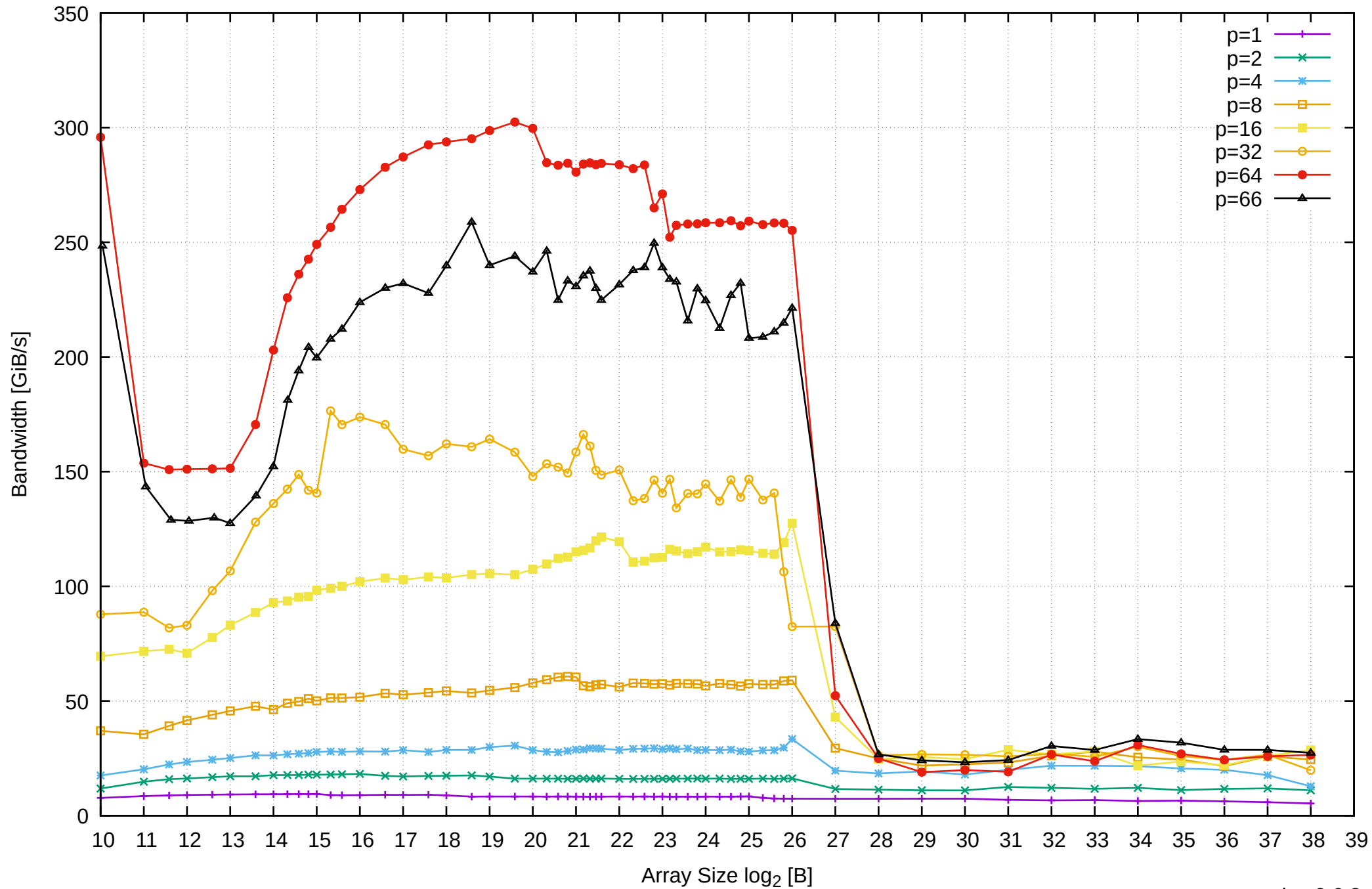


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead64IndexUnrollLoop

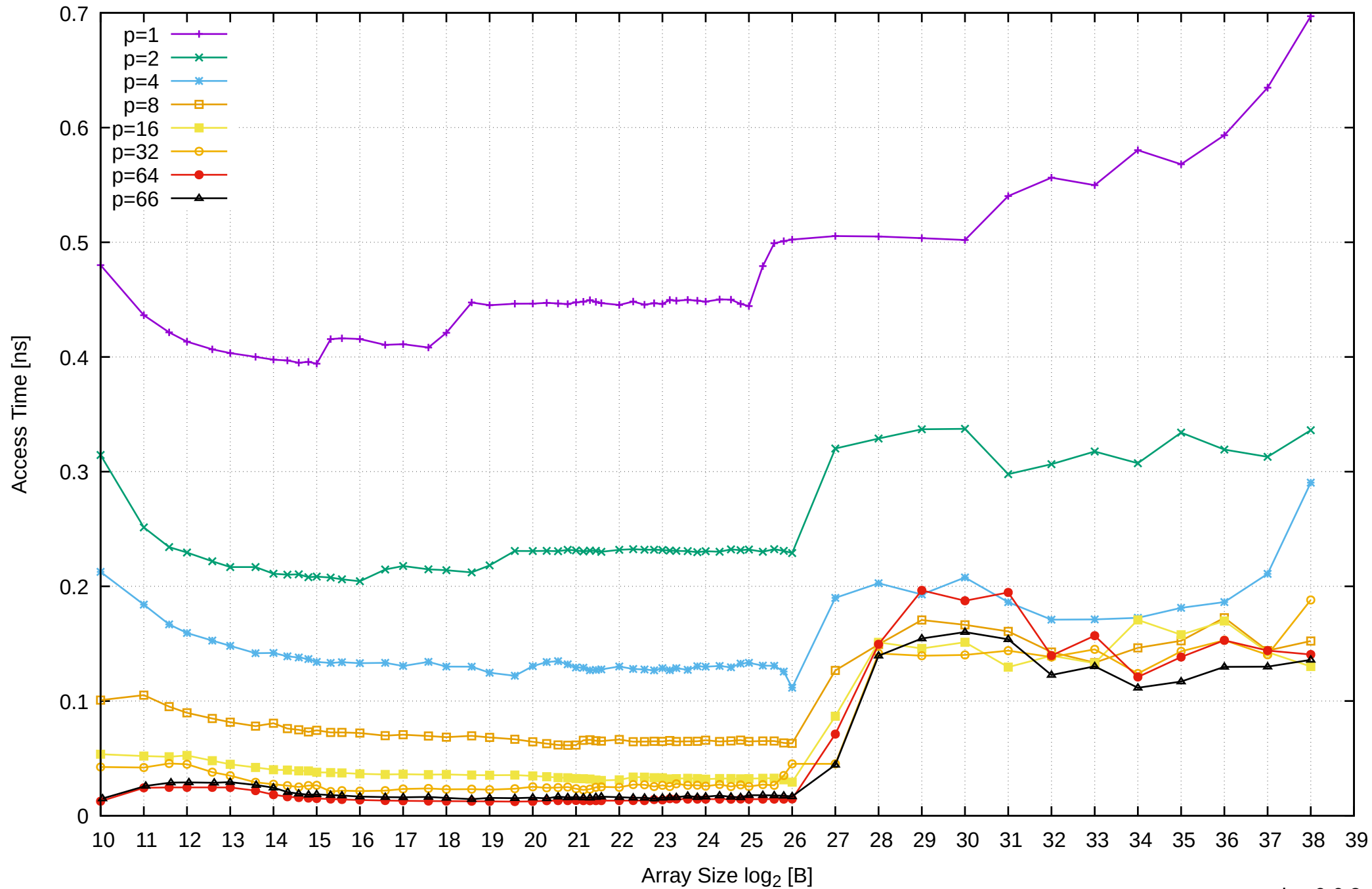




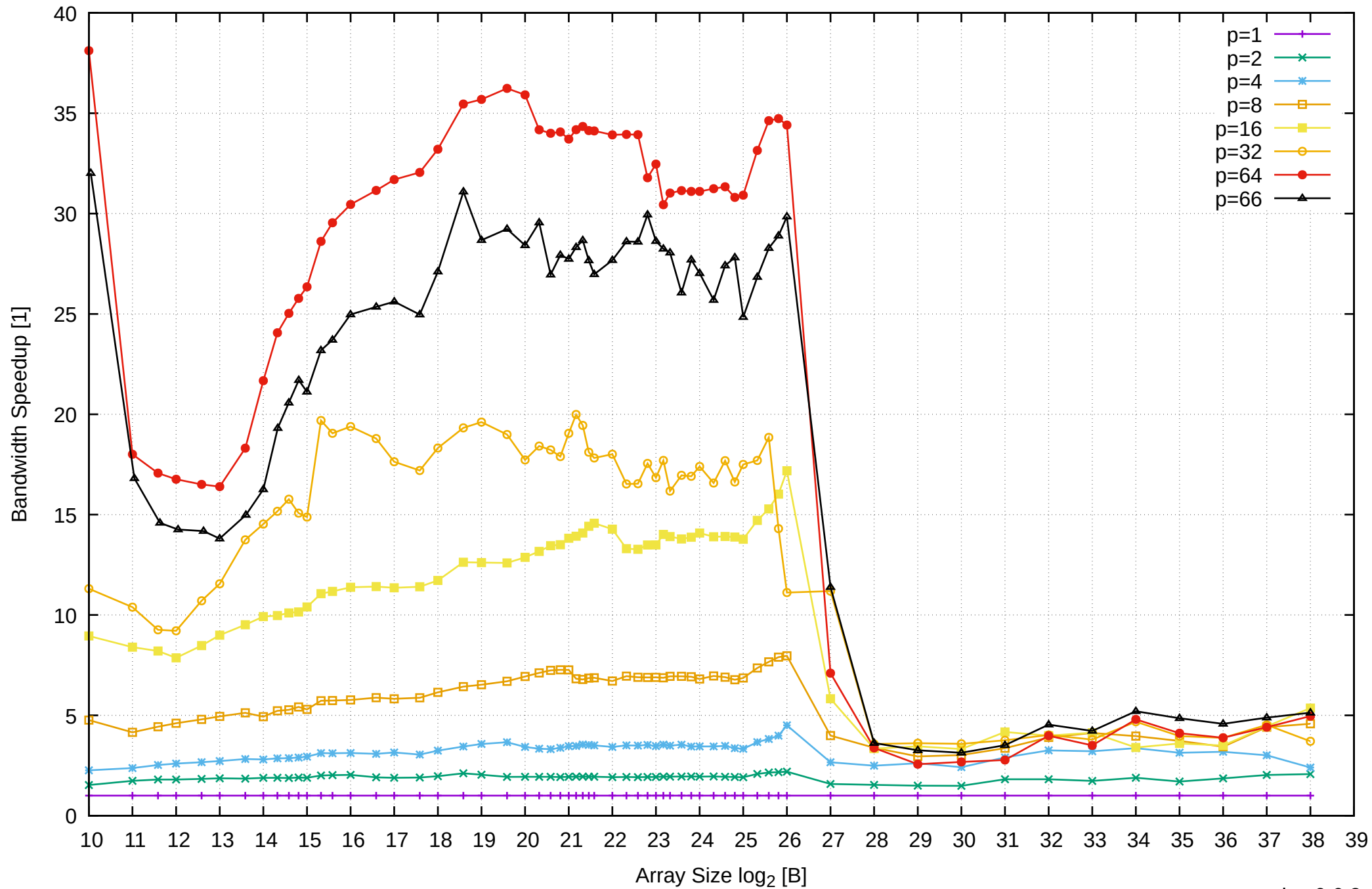
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite32PtrSimpleLoop

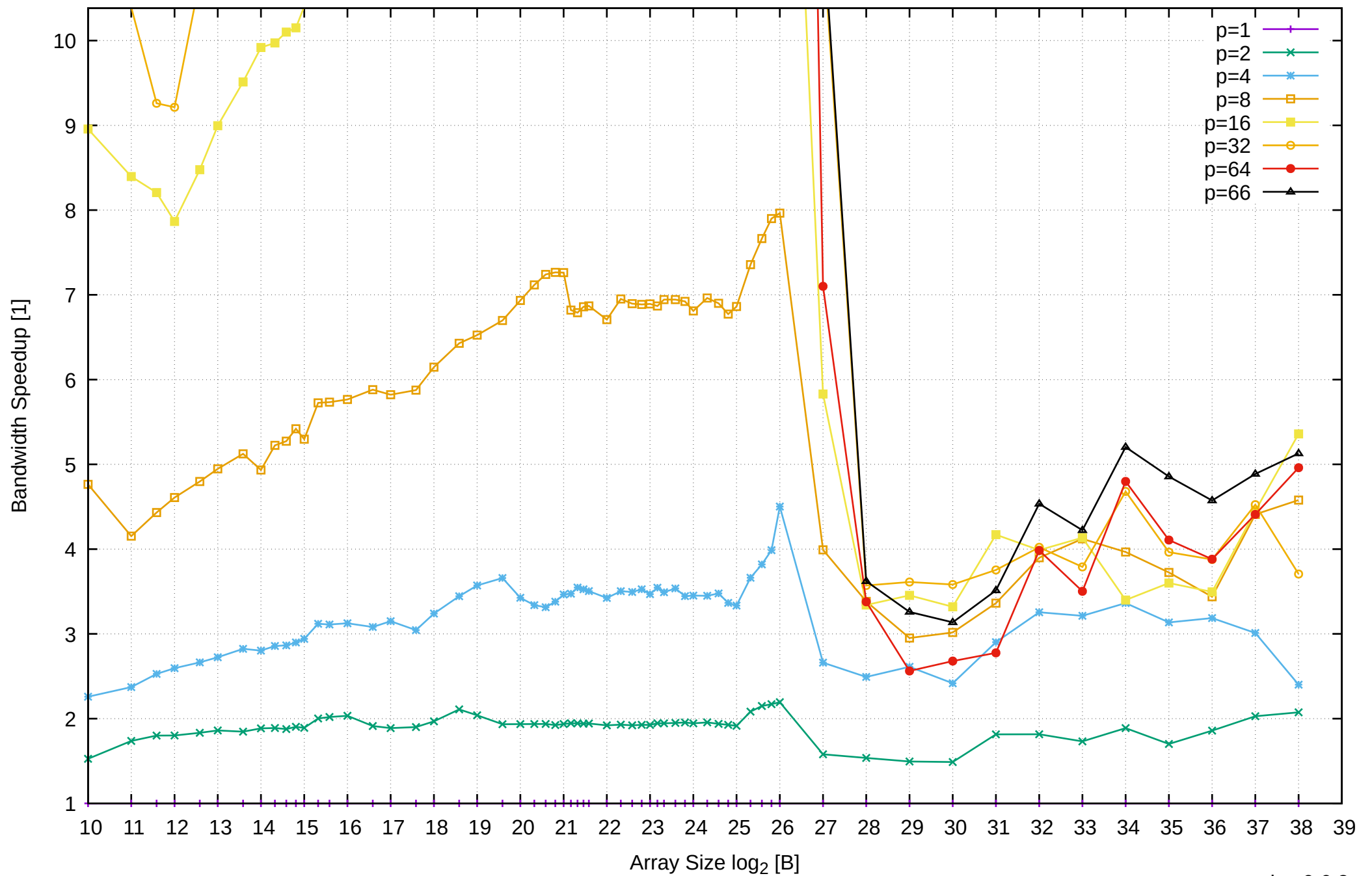


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite32PtrSimpleLoop



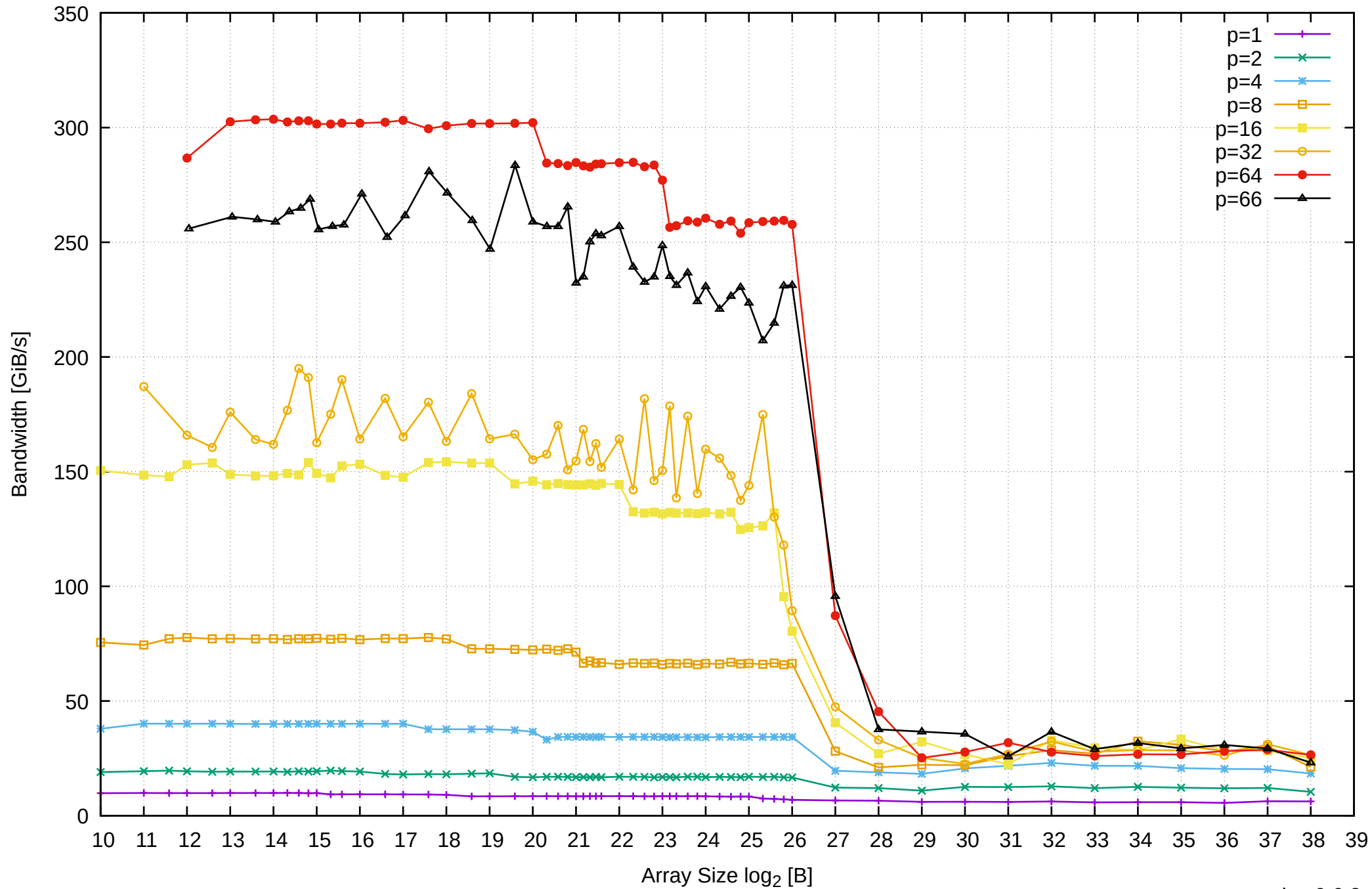
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite32PtrSimpleLoop



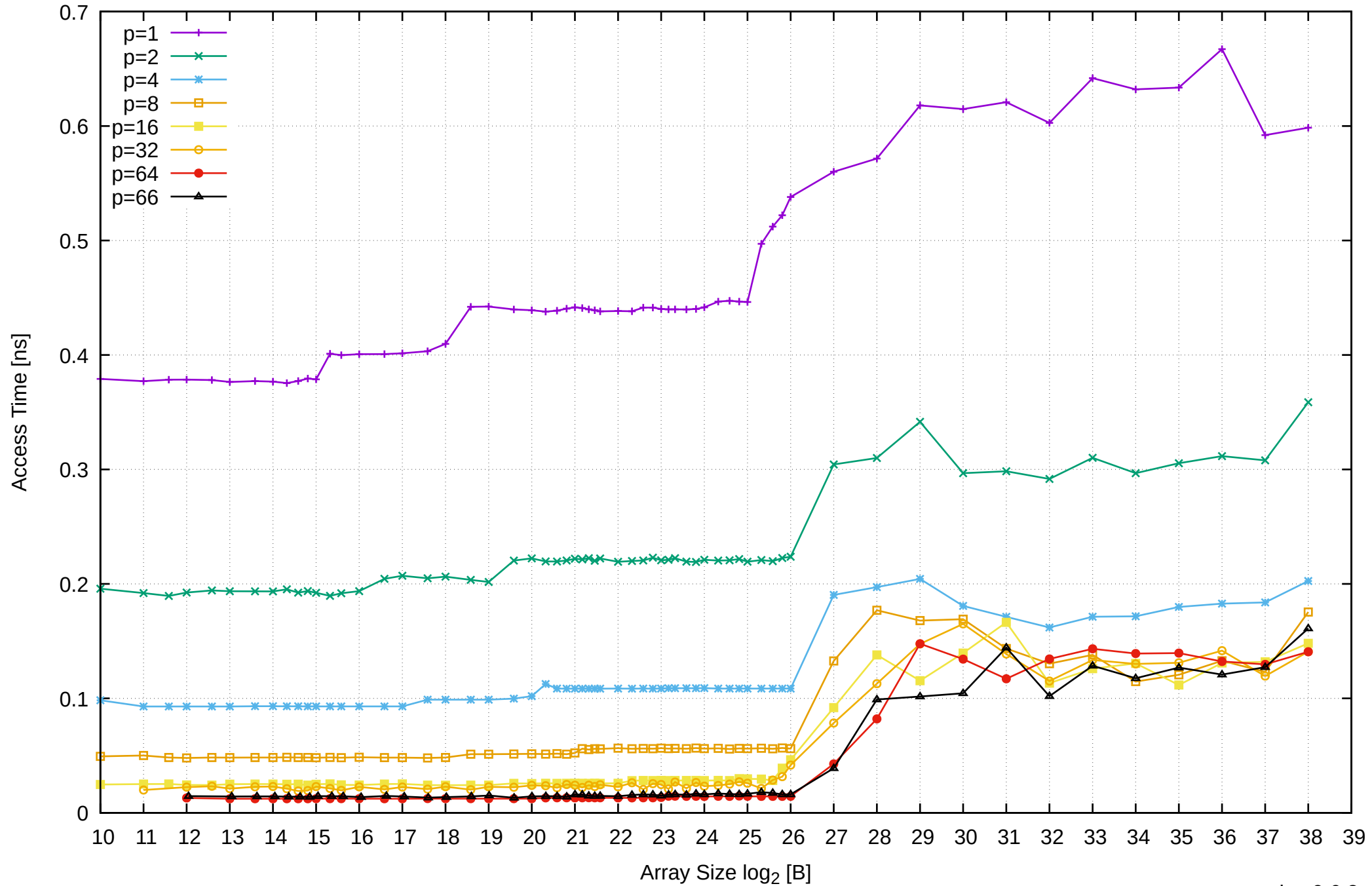




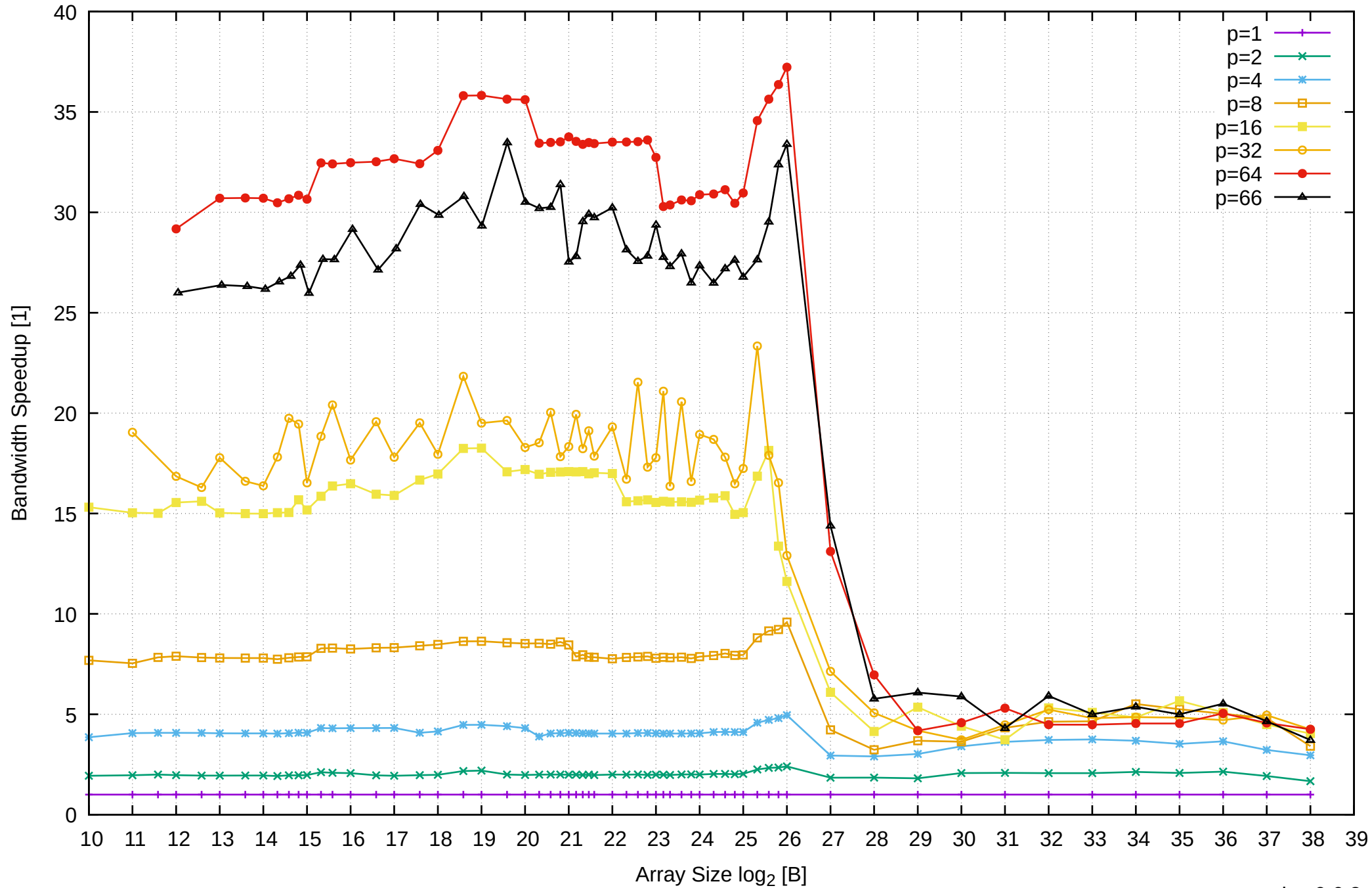
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanWrite32PtrUnrollLoop

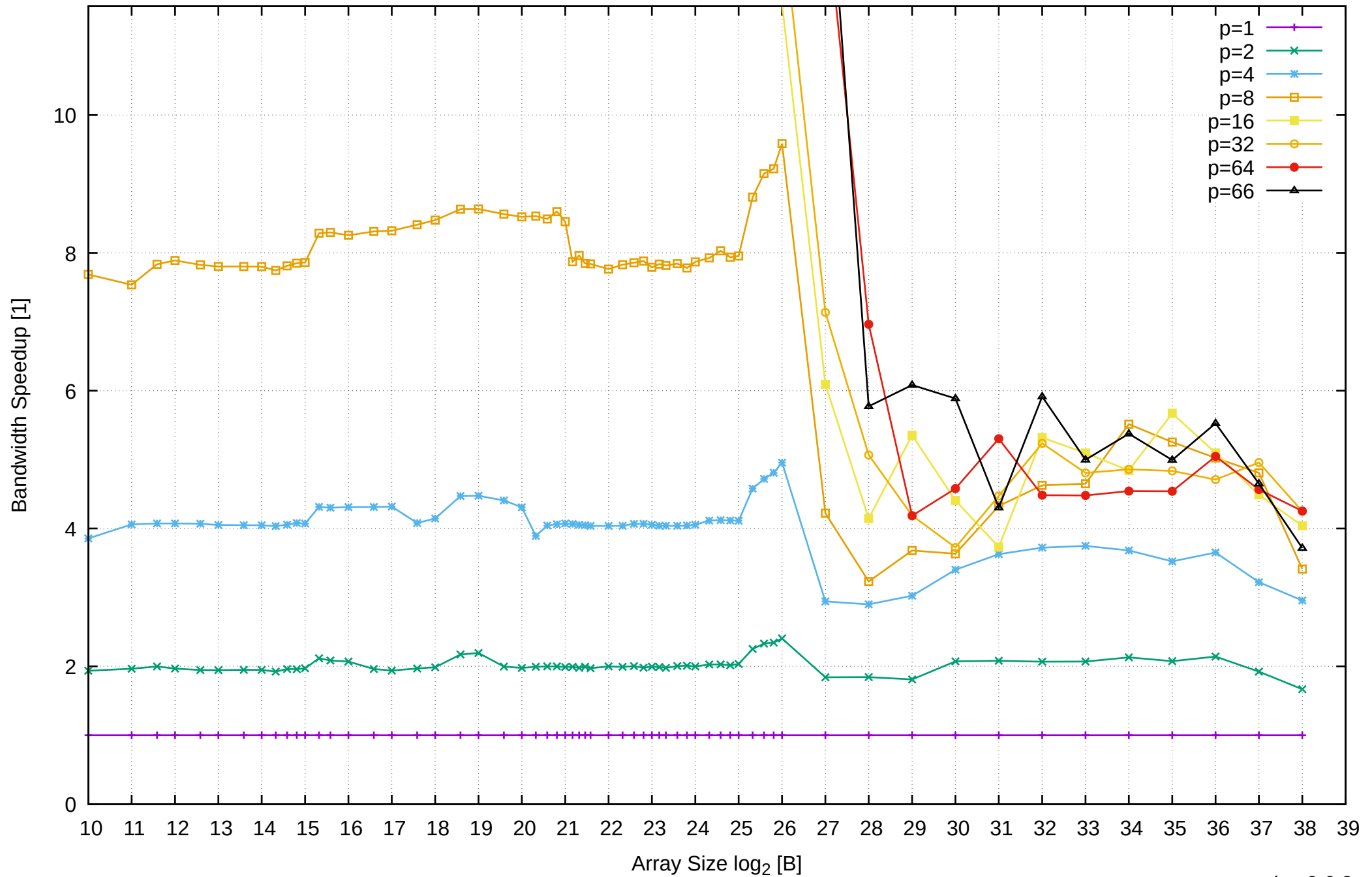


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanWrite32PtrUnrollLoop

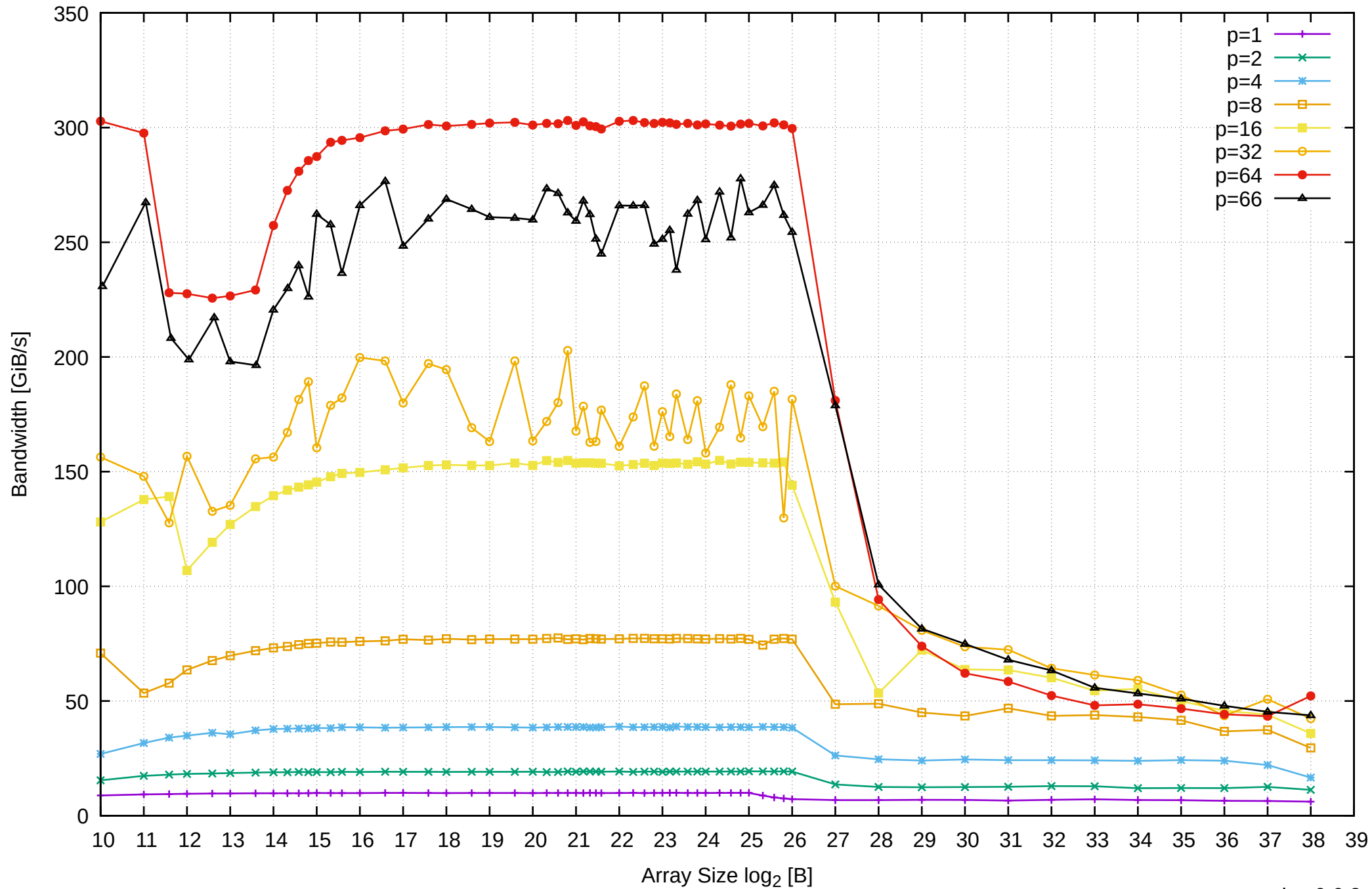


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanWrite32PtrUnrollLoop

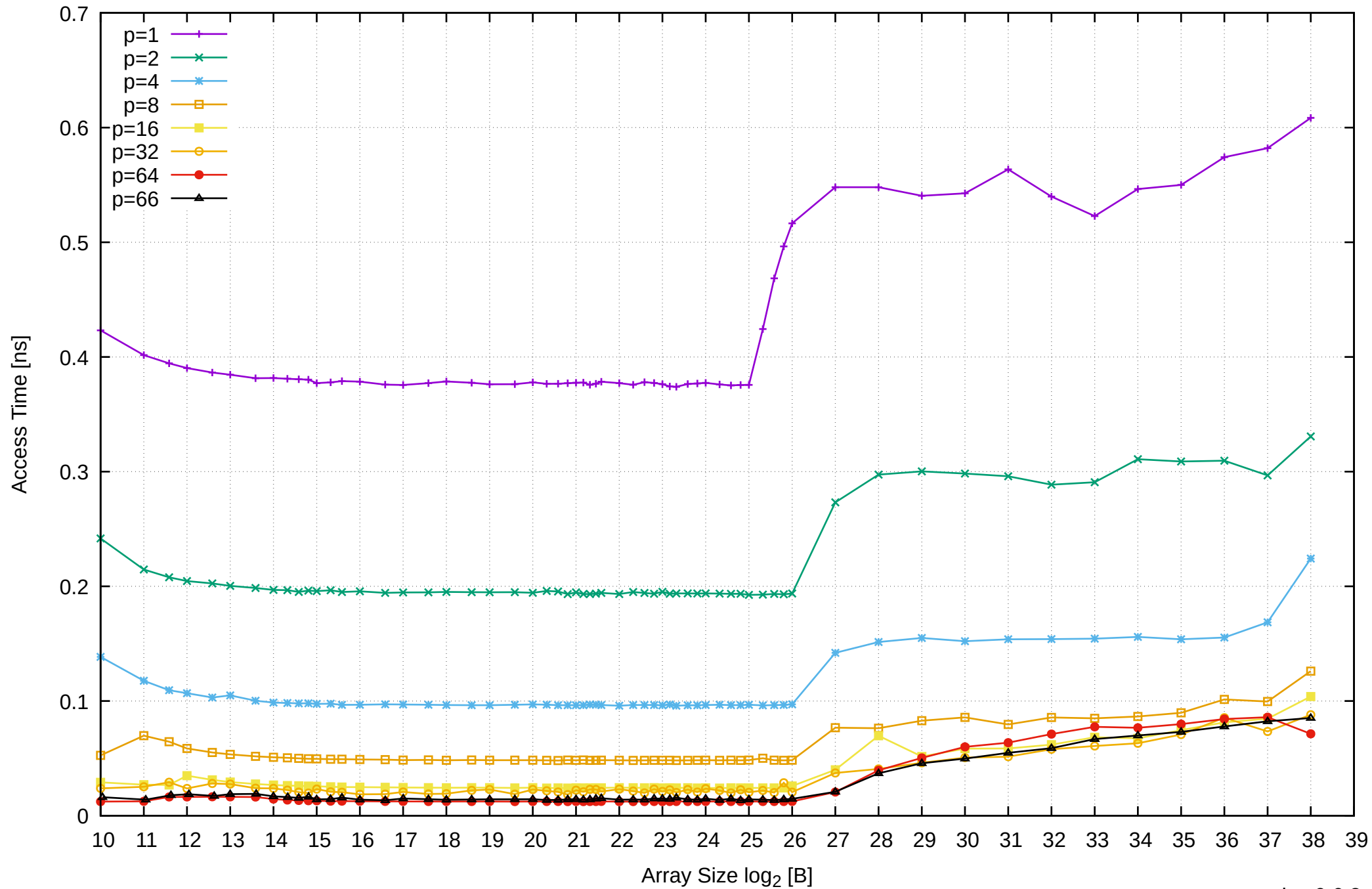




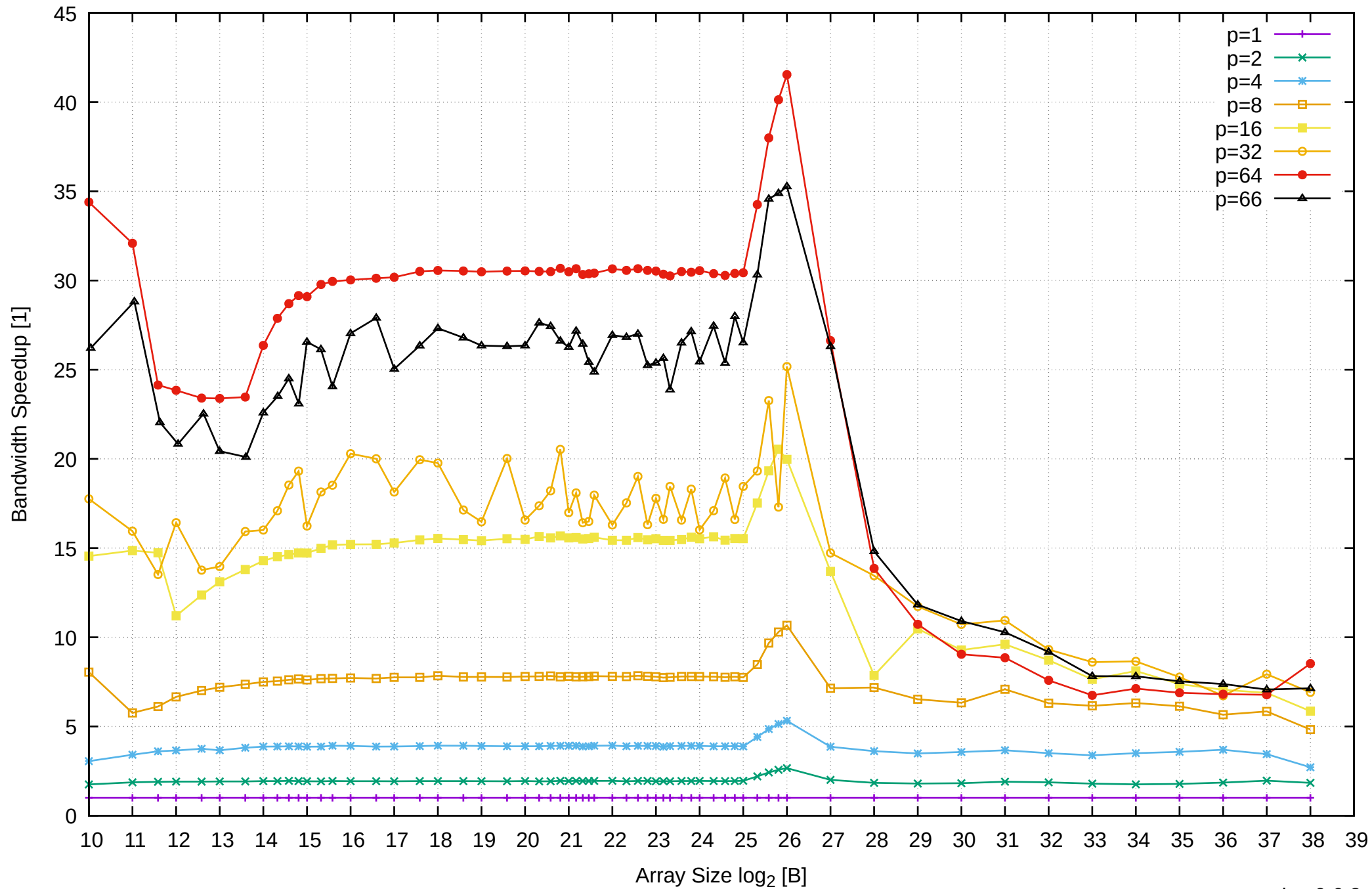
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead32PtrSimpleLoop

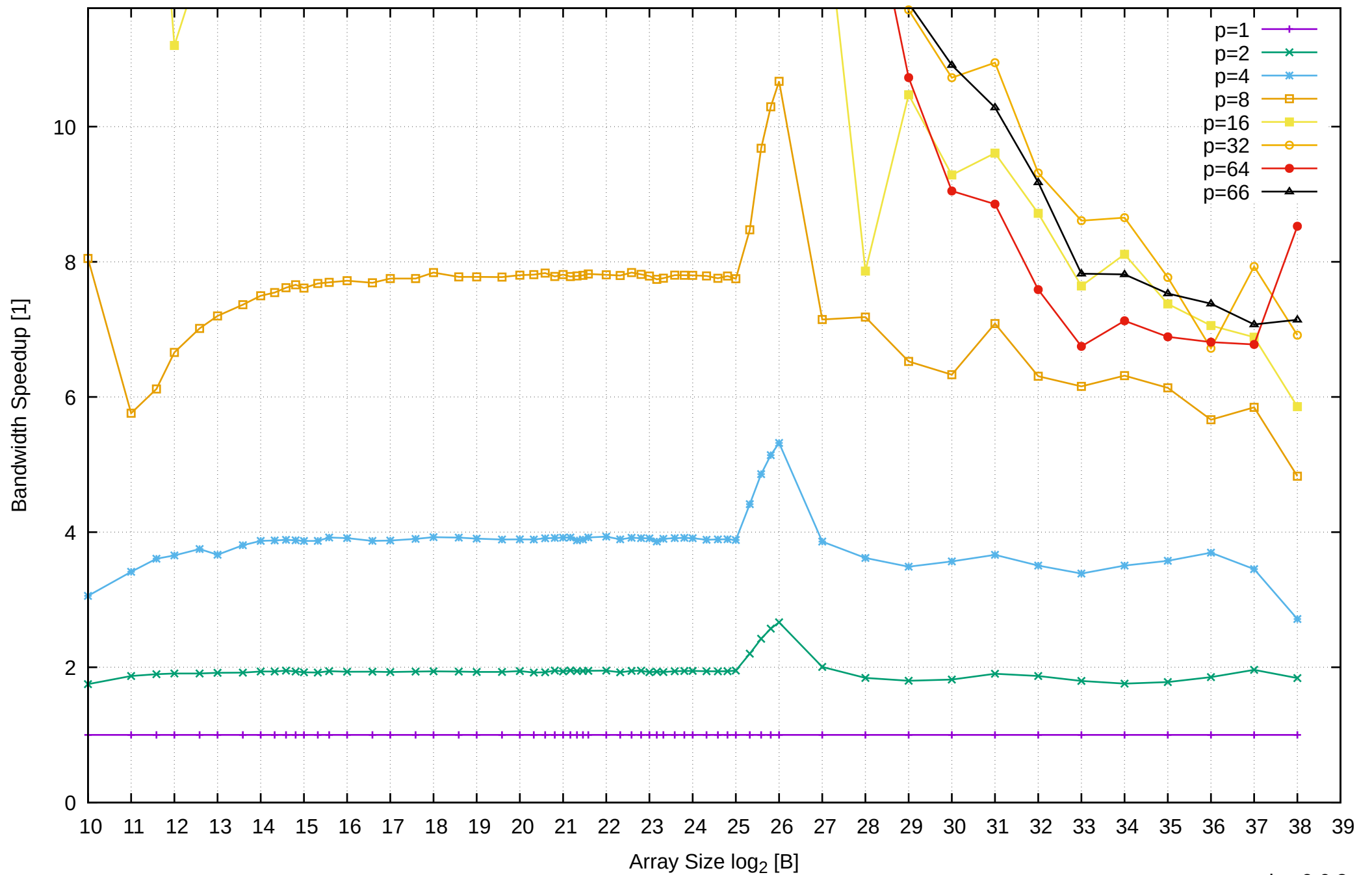


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead32PtrSimpleLoop



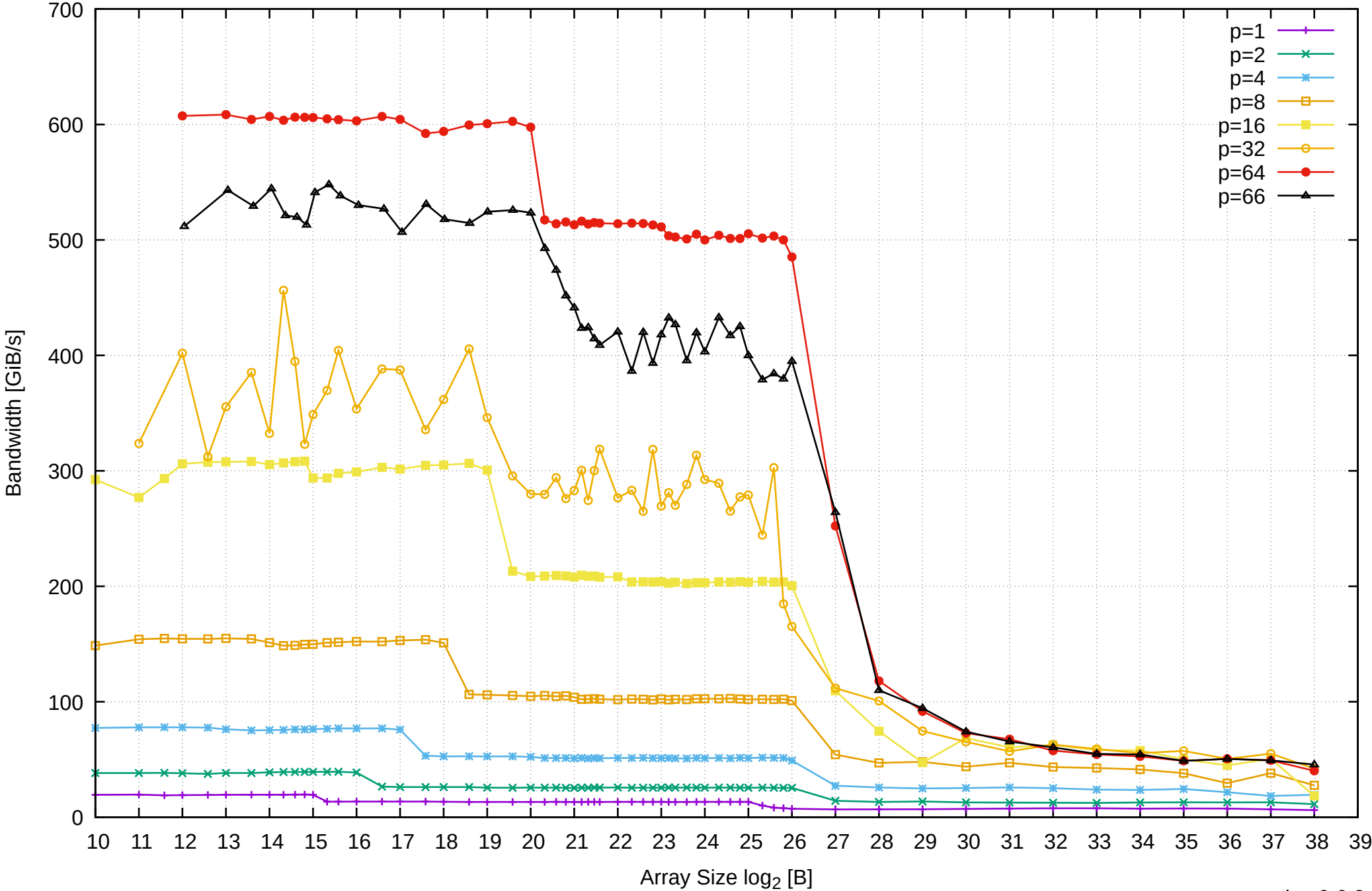
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead32PtrSimpleLoop



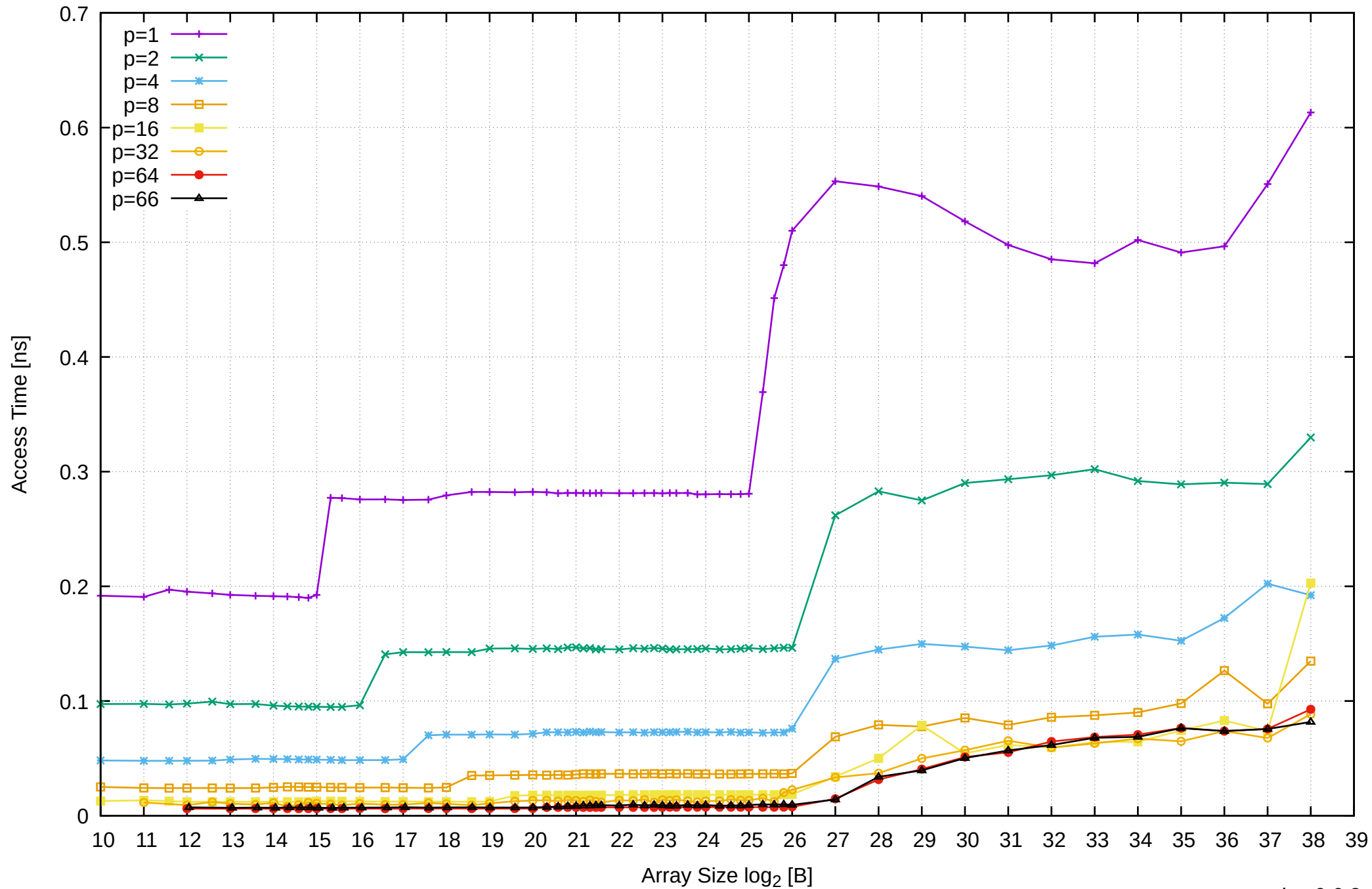




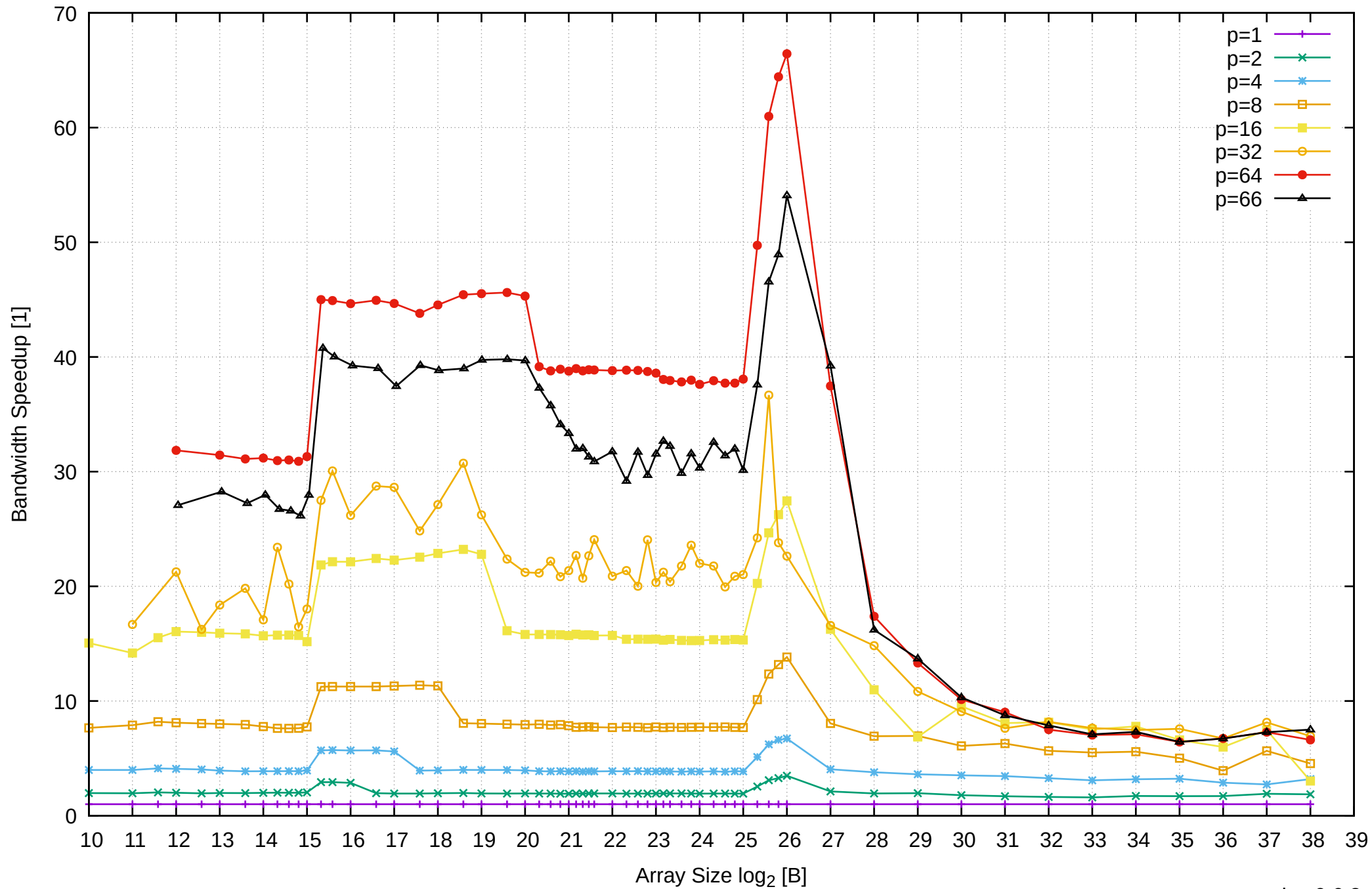
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - ScanRead32PtrUnrollLoop



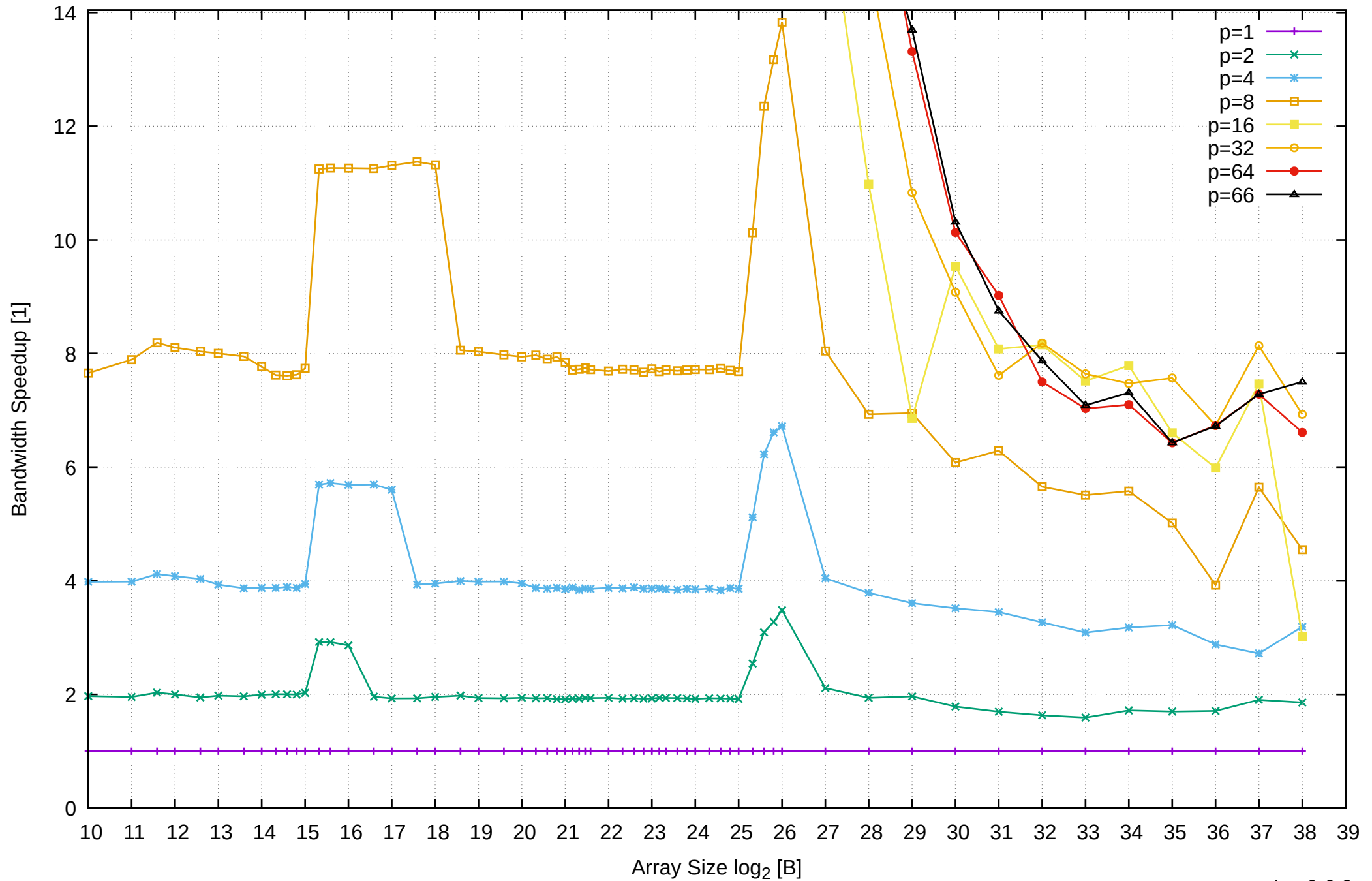
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - ScanRead32PtrUnrollLoop



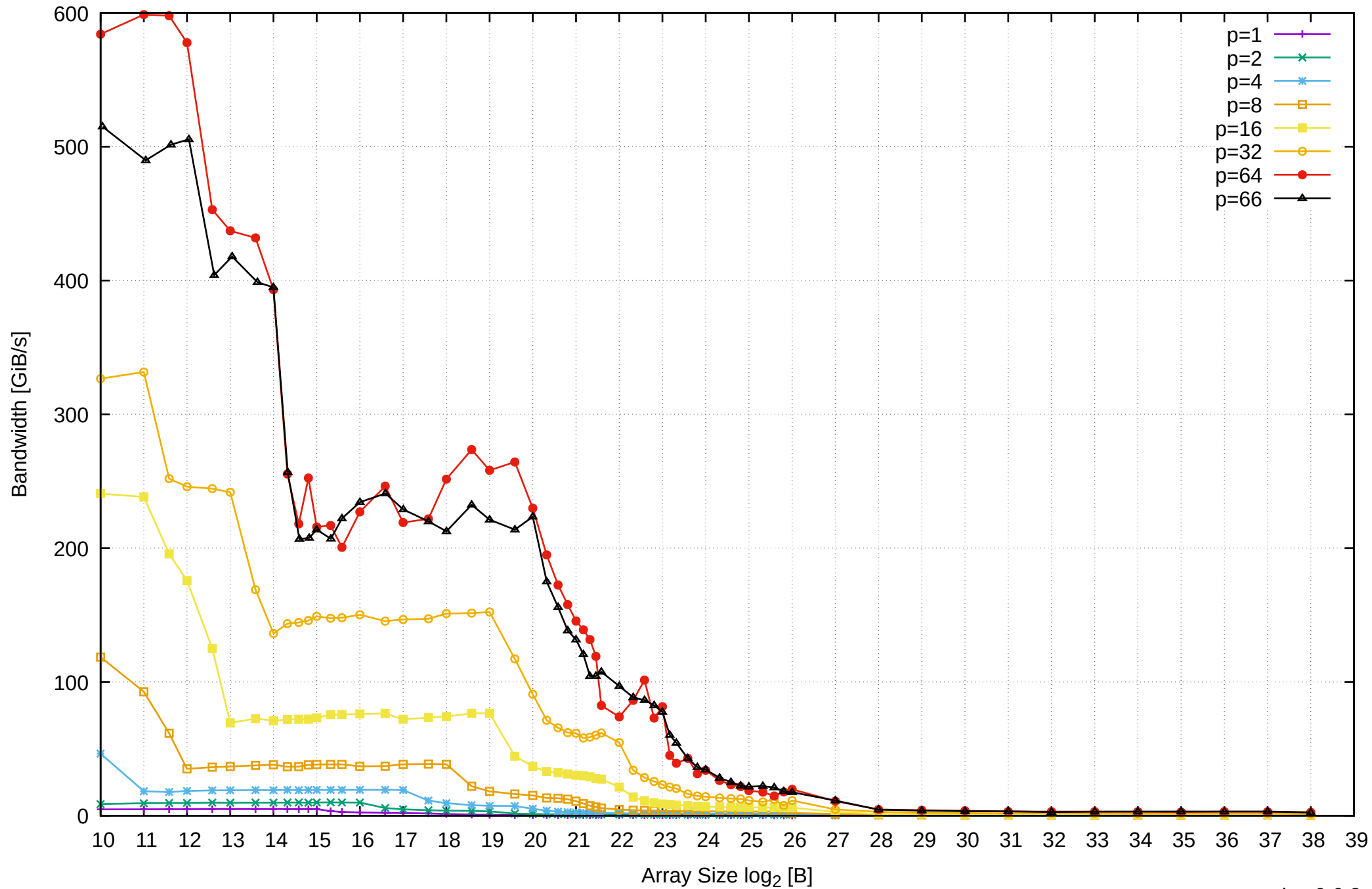
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - ScanRead32PtrUnrollLoop



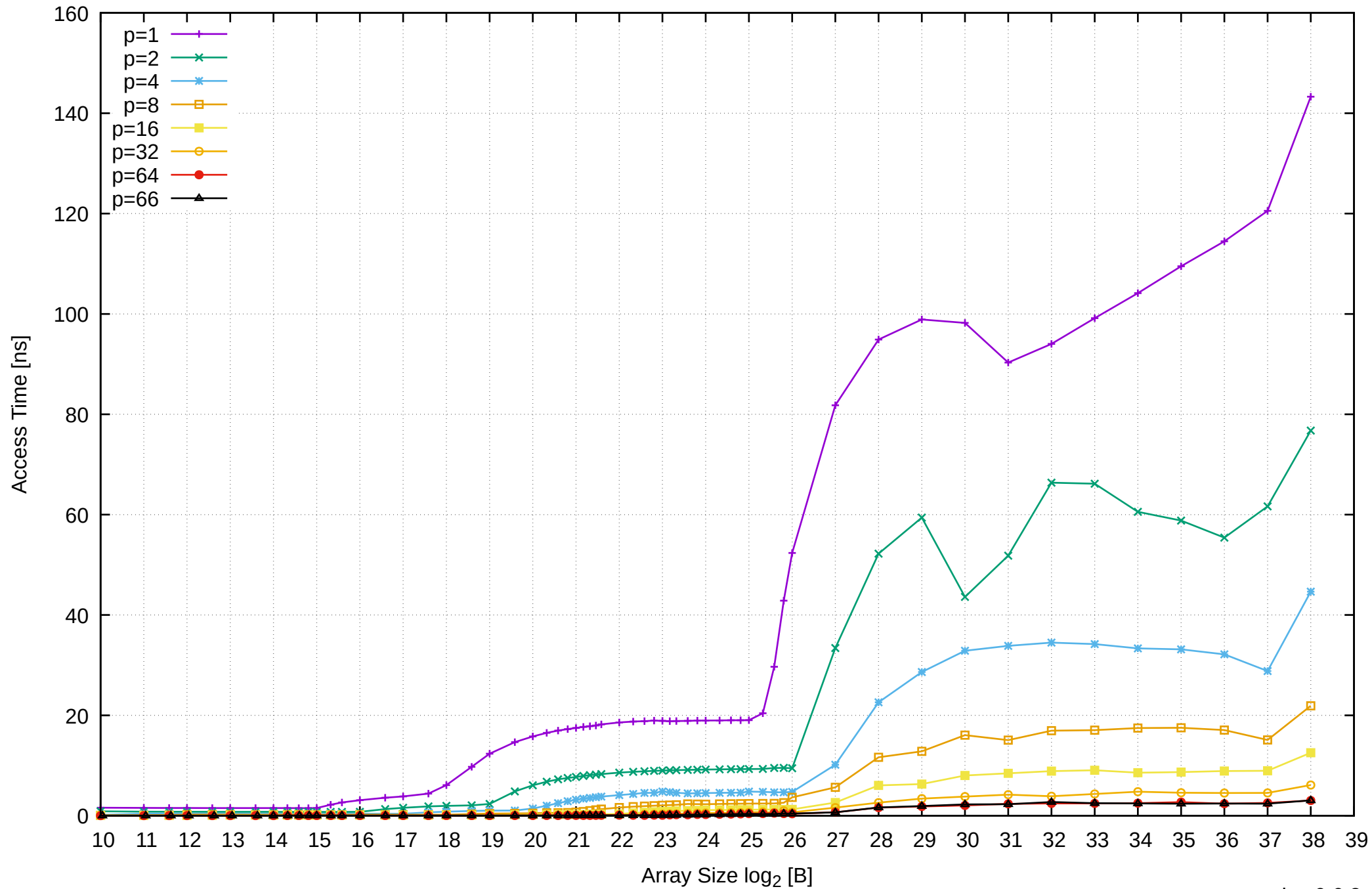
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth (enlarged) - ScanRead32PtrUnrollLoop



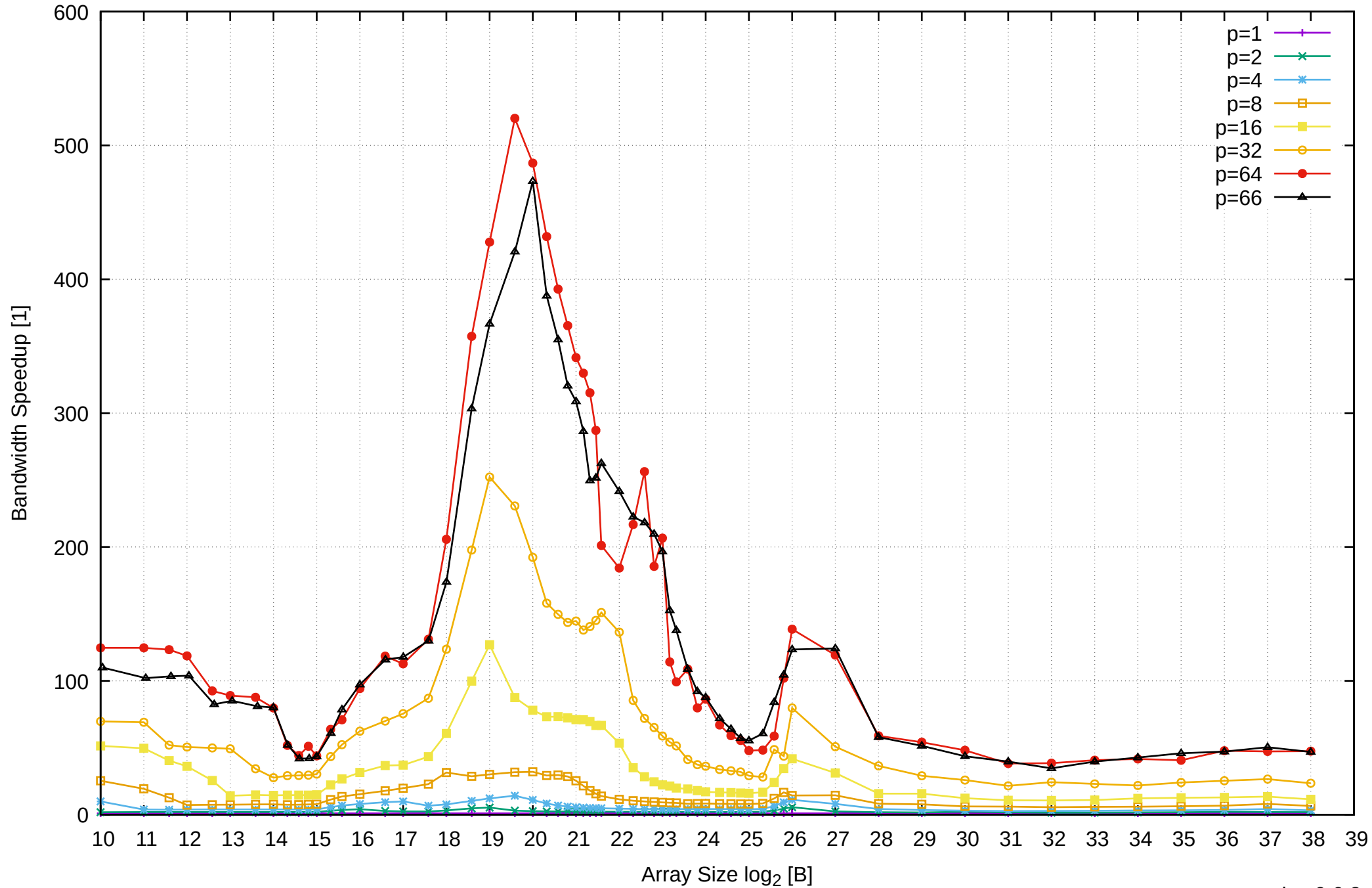
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - PermRead64SimpleLoop



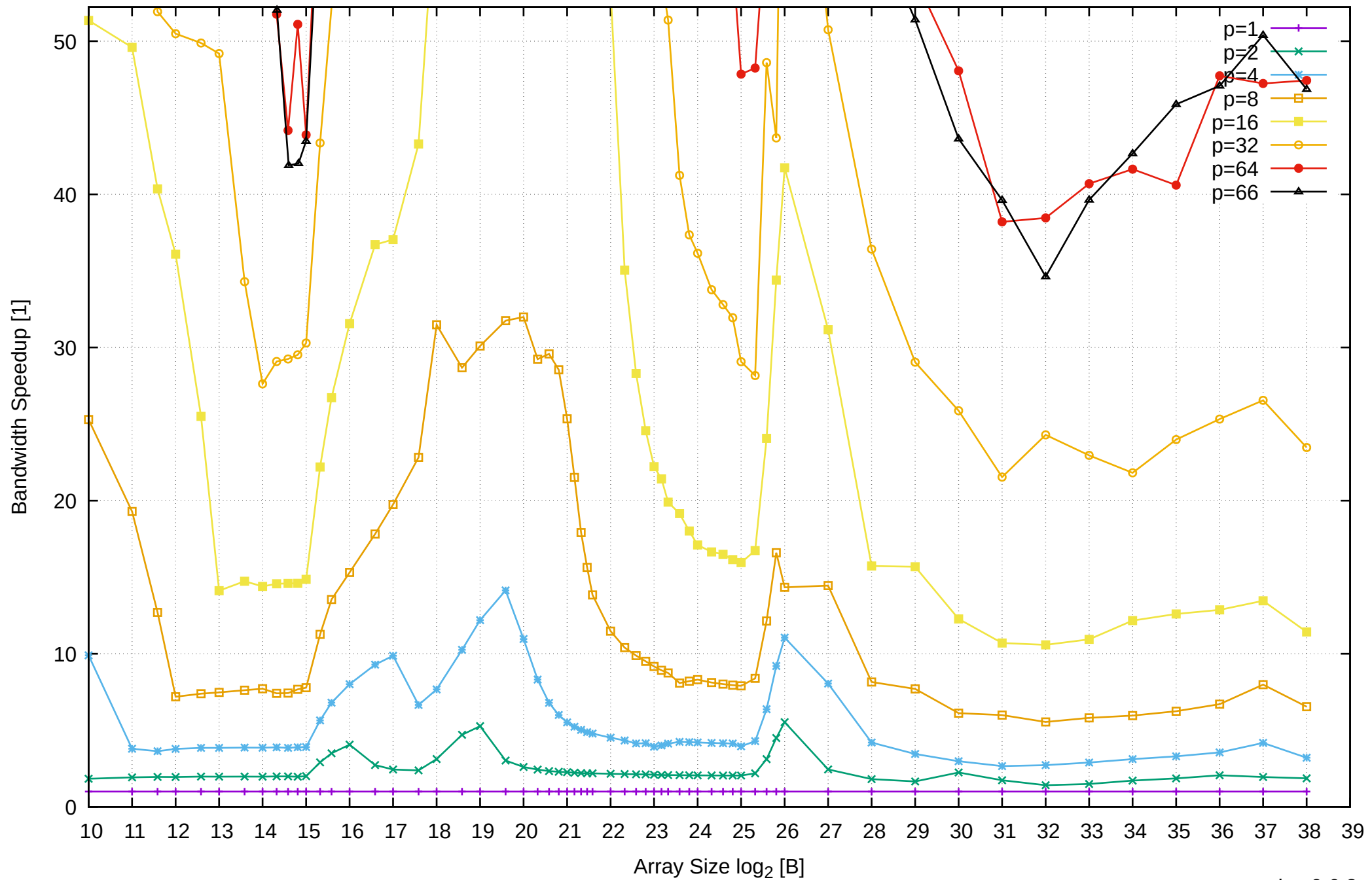
AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - PermRead64SimpleLoop



AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - PermRead64SimpleLoop

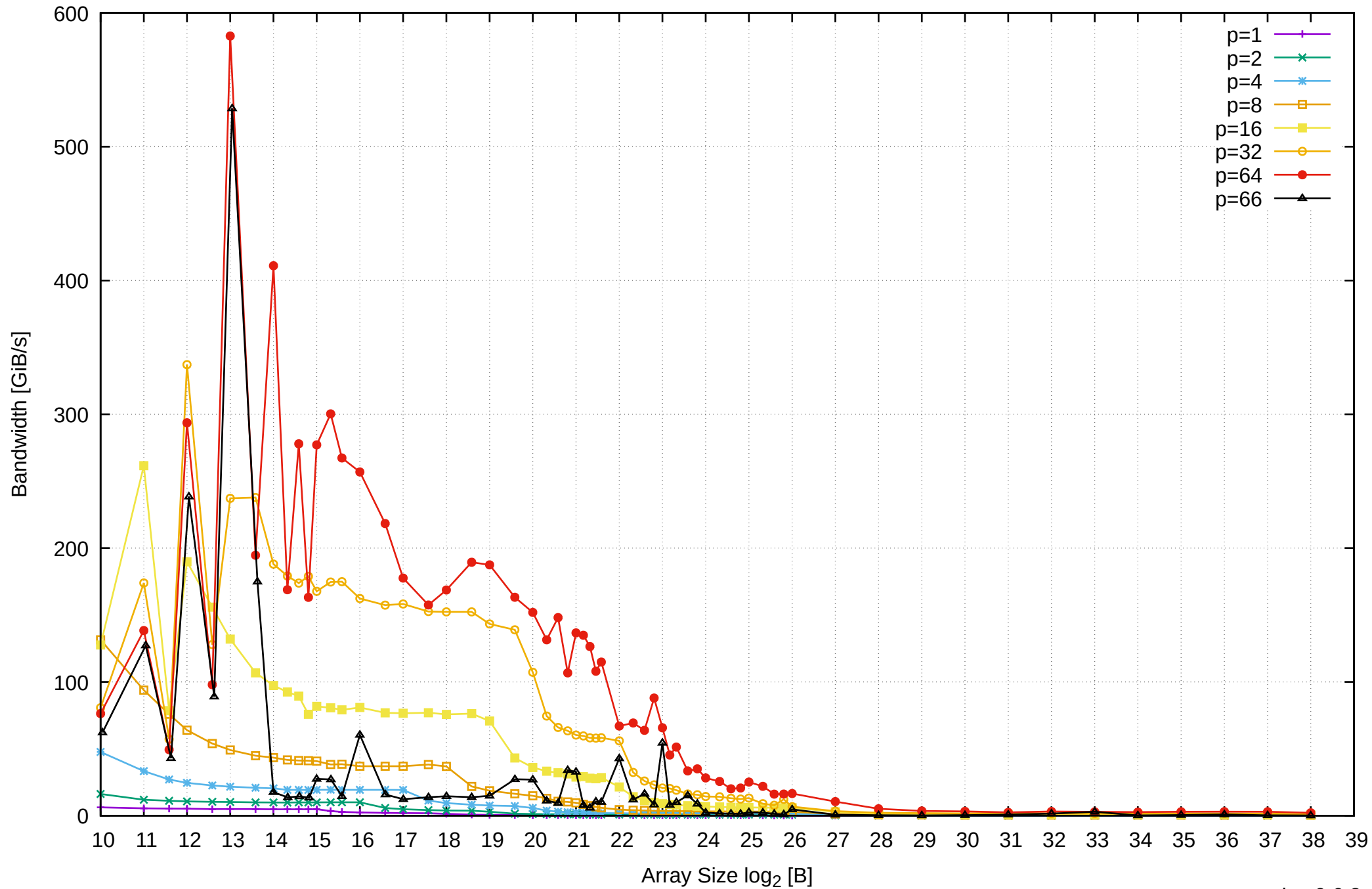


AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth (enlarged) - PermRead64SimpleLoop

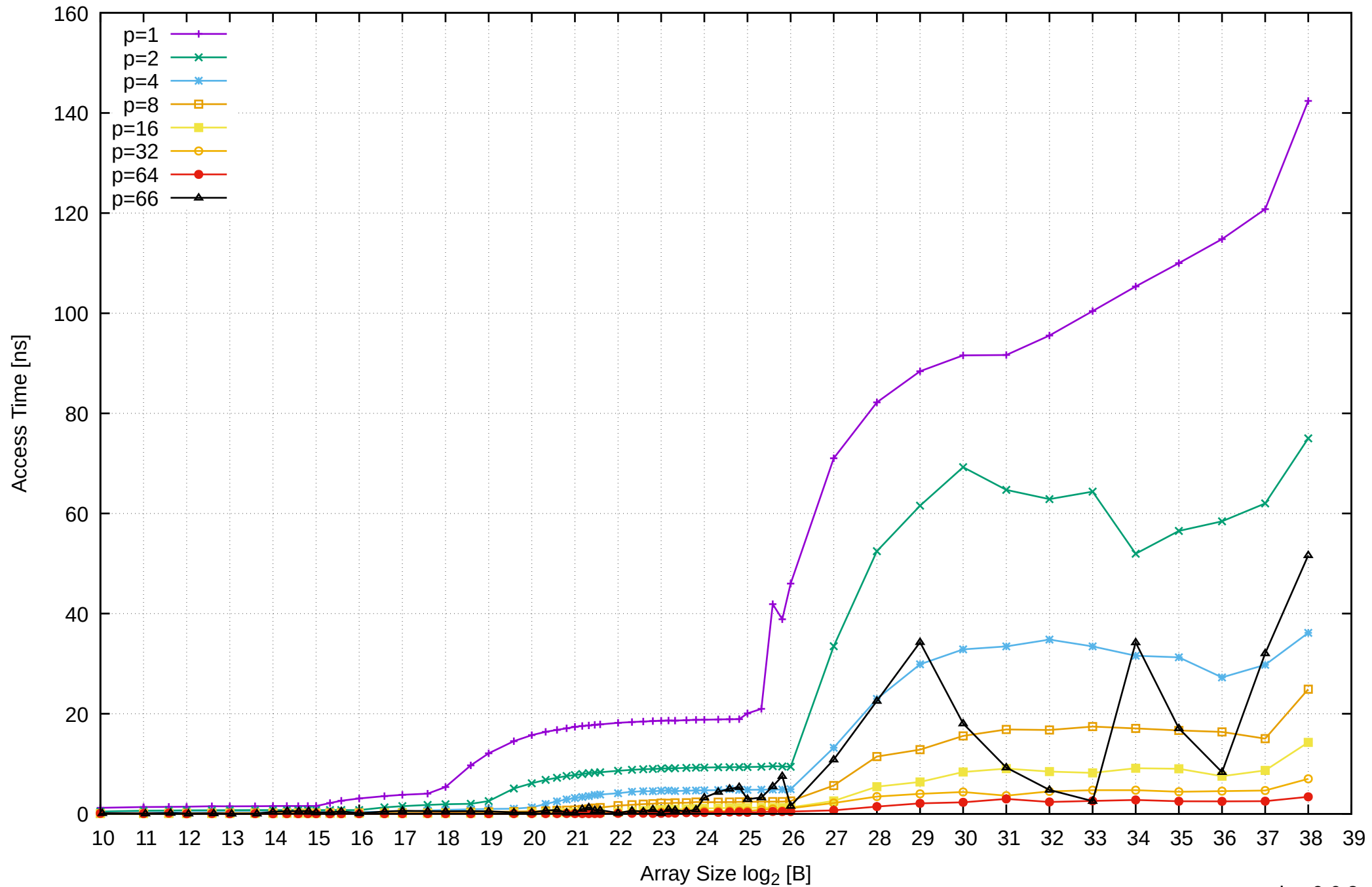




AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Bandwidth - PermRead64UnrollLoop



AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Parallel Memory Access Time - PermRead64UnrollLoop



AWS r4.16xlarge - Intel Xeon E5-2686 v4, 2.30 GHz 488GB - Speedup of Parallel Memory Bandwidth - PermRead64UnrollLoop

