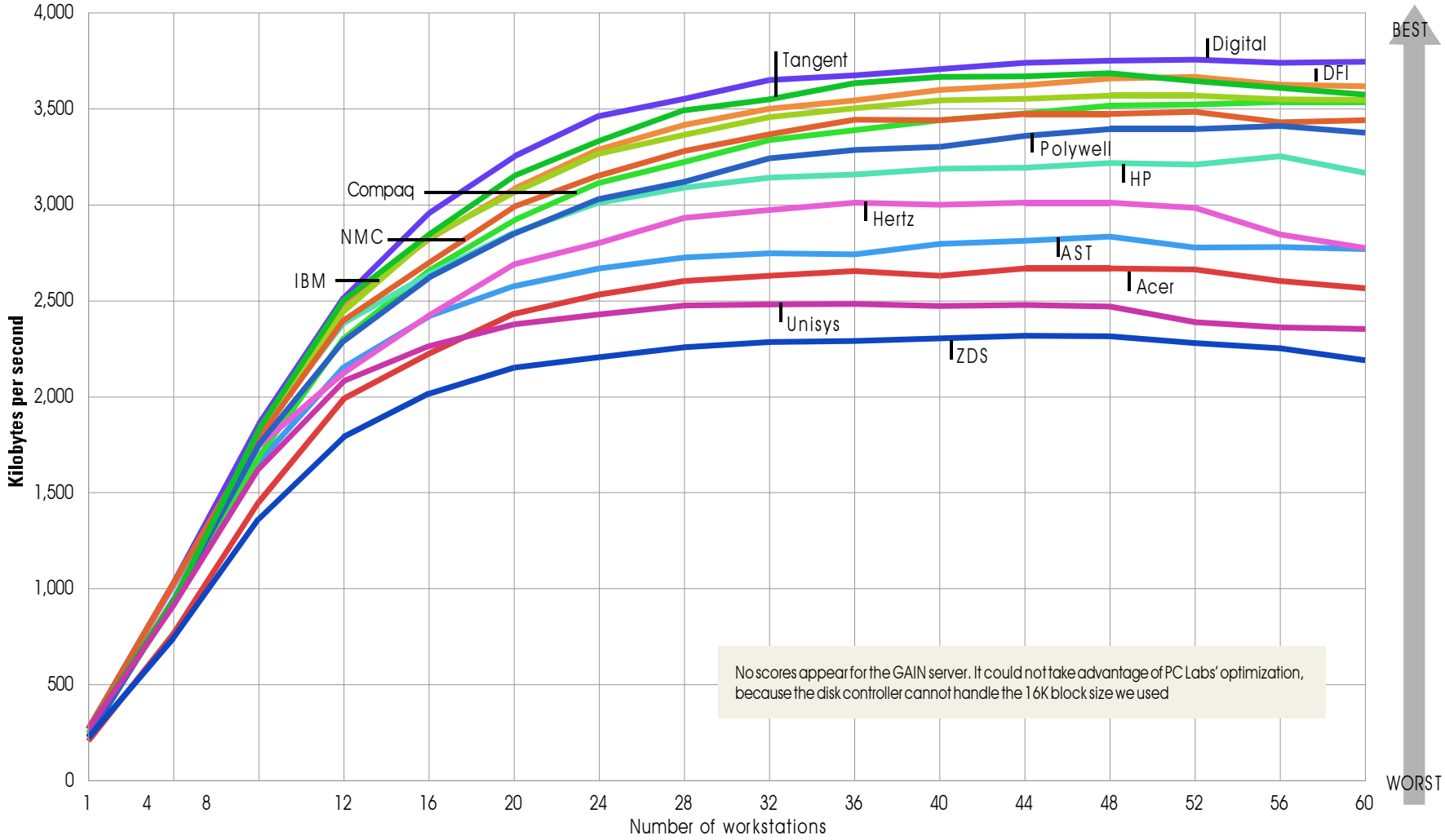OPTIMIZED TOTAL NETWORK THROUGHPUT