

IBM posts STAC-M3™ scores for IBM System x3750 M4

IBM System x3750 M4 with four Intel Xeon E5-4650 processors, Intel DC S3700 solid state drives, and Kx kdb+ 2.8 demonstrates excellent performance for tick database applications

June 21, 2013 ... IBM® announces STAC-M3™ Benchmarks (the “Antuco suite”) benchmark scores for the IBM 3750 M4 server using the 8-core Intel® Xeon® Processor E5-4650, 800 GB SATA MLC Intel DC S3700 solid state drives, and Kx Systems kdb+ 2.8.

The 3750 M4 delivered competitive scores for the STAC-M3™ Benchmark (the “Antuco suite”) as performed by the Securities Technology Analysis Center (STAC®) on a stack involving an IBM System x3750 M4 server with four 8-core Intel Xeon E5-4650 2.7 GHz processors and 512 GB of memory, Kx Systems kdb+ 2.8, and eight 800 GB Intel S3700 SATA MLC Enterprise solid-state drives (SSDs). The server was connected to the storage using direct SAS connections that were managed by an IBM ServeRAID M5110e SAS/SATA controller.

The results included a 1.7x to 2.0x speedup of read-intensive benchmarks without heavy compute, including the Market Snapshot:

Market Snapshot (10 client threads requesting)

Table 1 shows the results for each of 10 client threads querying a unique date, time, and set of symbols (1% of the total symbols), and returning the price and size information for the latest quote and trade for each symbol.

Table 1 Market snapshot benchmarking results

Latency (milliseconds)	MEAN	MED	MIN	MAX	STDV
First-result latency	1,003	992	924	1,078	45
Last-result latency	1,003	992	924	1,078	45

A paper highlighting the benchmark results, configuration, and performance tuning tips is available at <http://lenovopress.com/redp5029>. A Kx white paper is available from <http://kx.com/papers/Kx-Intel-Solution-1309.pdf>.

Results are current as of June 21, 2013. The official record of these results is the STAC Report, which is available to the public at <http://www.stacresearch.com/node/14443>. For detailed benchmark versions and other information, see the STAC Report, or the STAC web site for the latest benchmark results at <http://www.stacresearch.com/>.

Two case studies for the 3750 M4 being utilized in financial markets low latency trading applications are available at the following IBM web pages:

- Redline Trading: <http://ibm.com/software/success/cssdb.nsf/CS/STRD-99UF2Z>
- Options IT: <http://ibm.com/software/success/cssdb.nsf/CS/DLAS-9BMHBJ>

The IBM System x3750 M4 provides advanced features and capabilities in a dense 2U design. These include support for up to four sockets and 48 DIMMs, mix and match internal HDD or SSD storage, dual power supplies and integrated 1 Gigabit Ethernet (GbE) and 10 GbE networking with options for fiber or copper. The unique 2+2 socket design enables pay-as-you-grow processing and memory expansion to help lower cost and manage growth. The 5+3 PCIe socket design allows you to pay for I/O capabilities as needed. The x3750 M4’s capabilities and performance allow clients to reduce total cost of ownership (TCO) by up to 52 percent over four years by consolidating multiple 2-socket servers into fewer 4- socket x3750 M4 servers.

For more information on the x3750 M4, see <http://ibm.com/systems/x/hardware/rack/x3750m4/>

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