

IBM System x3650 M4 and IBM DB2 achieve industry milestone for virtualized x86-64 benchmark performance, breaking barrier of 1 million transactions per minute

The combination of the IBM® System x3650 M4, IBM DB2®, and Red Hat Enterprise Linux® 6.4 running the Kernel-based Virtual Machine (KVM) hypervisor has produced the first ever TPC-C benchmark result to surpass the 1 million transactions per minute barrier in a virtualized x86 platform — setting a new high bar for x86-64 performance.

February 25, 2013 ... Leveraging the latest hardware virtualization technologies provided by Intel® Xeon® E5 processors, IBM has published the first ever TPC Benchmark C (TPC-C) performance result by an x86-64 processor-based server running in a virtualized configuration. This new result marks an industry milestone, making IBM the first x86 server vendor to surpass 1 million transactions per minute (tpmC), virtualized.

Performance (tpmC):	1,320,082 tpmC
Price/tpmC:	\$0.51 USD / tpmC

The TPC-C benchmark, which involves multiple transaction types and a complex database and overall execution structure, demonstrates IBM's leadership in successfully running demanding workloads in a virtualized environment. It also proves that the latest hypervisor technology available in KVM provides an opportunity for increased customer cost savings through server consolidation, without sacrificing system efficiency or performance. The very low \$0.51 USD / tpmC price point further demonstrates that running an enterprise level workload in a virtualized environment can be done on standard hardware at a cost equivalent to non-virtualized configurations.

IBM achieved this ground-breaking result using the combined power of IBM System x3650 M4 server, DB2 9.7, and the latest Intel Xeon E5 processor technology. The x3650 M4 server reached over 1.3 million tpmC (transactions per minute C), using DB2 9.7 and Red Hat Enterprise Linux 6.4 and Kernel-based Virtual Machine (KVM) hypervisor. Its configuration included two Intel Xeon E5-2690 processors at 2.9 GHz with 20 MB L3 cache per processor (2 chips/16 cores/32 threads), and 24 Netlist 32 GB HyperCloud HCDIMMs).

With its outstanding blend of uptime, performance, scalability, and rock-solid reliability, the IBM System x3650 M4 two-socket, 2U rack server is designed for maximum performance and uptime of business-critical applications, including virtualized deployments. By leveraging the x3650 M4's high memory density and the latest Intel Xeon E5-2600 series processors with up to eight cores, businesses can cost effectively virtualize many workloads on a single system.

Additionally, the x3650 M4's RAS and high-efficiency design keeps virtualized enterprise applications and cloud deployments running safely. Redundant hot-swap fans, disks and power supplies make it easy to replace failure components without taking the system offline.

Results referenced are current as of February 25, 2013. To view all TPC results, visit www.tpc.org. See the details for this result at: http://www.tpc.org/tpcc/results/tpcc_last_ten_results.asp

IBM and DB2 are registered trademarks of IBM Corporation.

Intel and Xeon are trademarks or registered trademarks of Intel Corporation.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Red Hat is a registered trademark of Red Hat, Inc., in the United States and/or other countries.

TPC, TPC Benchmark, TPC-C and tpmC are trademarks of the Transaction Processing Performance Council.

All other company/product names and service marks may be trademarks or registered trademarks of their respective companies.