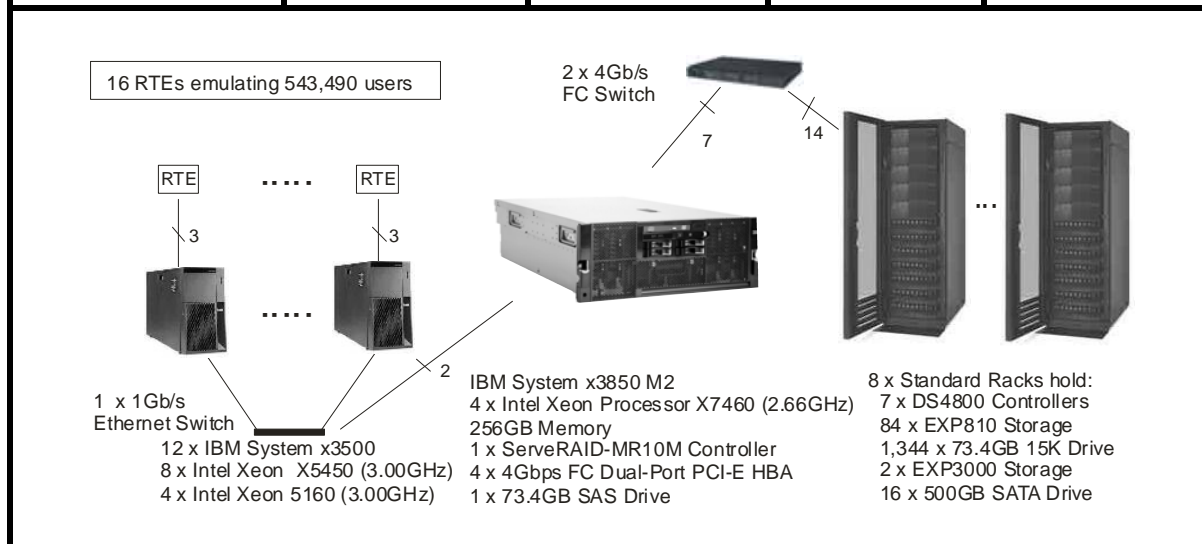


IBM Corporation	IBM® System x3850 M2 Microsoft® SQL Server 2005 (SP2)		TPC-C Rev. 5.10
			Report Date 9/15/08
Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$1,763,438 USD	684,508 tpmC	\$2.58 USD /tpmC	October 31, 2008
Database Server Processors/Cores/Threads	Database Manager	Operating System	Other Software
4/24/24 Intel® Xeon® Processor X7460 2.66 GHz	Microsoft SQL Server 2005 Enterprise x64 Edition (SP2)	Microsoft Windows® Server 2003 R2 Enterprise x64 Edition (SP2)	Microsoft Visual Studio Standard 2005 Microsoft COM+
			543,490



System Component	Qty	Server	Qty	Each of 12 Clients
Processors/Cores/Threads	4/24/24	Intel Xeon Processor X7460 (2.66GHz)	1/4/4	Quad-Core Intel Xeon X5450 (3.00GHz)
Cache	4	9MB L2, 16MB L3	1	2x6MB L2 Cache
Memory	32	8GB ECC RDIMM	4	512MB PC2-5300 FBD
Disk Controllers	7 4 1	IBM System Storage DS4800 IBM DS4000 4Gbps FC PCI-E ServeRAID-MR10M	1	Integrated SAS Interface
Disk Drives	1,344 16 1	73.4GB 15K 4Gbps FC 500GB H/S SATA II 73GB 15K SFF H/S SAS	1	146GB 15K SAS
Total Storage		99,261.89 GB		

Description	Part Number	Brand	Price Source	Unit Price	Quantity	Extended Price	3-Yr. Maint. Price
Server Hardware							
IBM System x3850 M2 (2 x Intel Xeon Processor X7460 with 2.66GHz/16MB L3 Cache, 4 Memory Cards, 8 x 1GB DIMM)	7233-6RU	IBM	1a *	19,539	1	19,539	
Intel Xeon Processor X7460 (2.66GHz/16MB L3 Cache)	44E4473	IBM	1a *	4,469	2	8,938	
16GB (2x8GB) 667MHz PC2-5300 ECC DDR2 SDRAM DIMM	43V7356	IBM	1	6,999	16	111,984	
ServeRAID-MR10M SAS/SATA Controller	43W4339	IBM	1	899	1	899	
73.4GB 15K Hot Swap SAS	43W7523	IBM	1	329	1	329	
IBM T115 15-inch TFT Display	494215U	IBM	1a	209	1	209	
IBM Preferred Pro USB Keyboard	40K9584	IBM	1	29	1	29	
IBM 3-Button Optical Mouse - Black - USB	40K9201	IBM	1	19	1	19	
NetXtreme II 1000 Express Ethernet Adapter	39Y6066	IBM	1	169	2	338	
ServicePac for 3-Year 24x7x4 Support (x3850 M2)	10N3059	IBM	1	1,695	1		1,695
ServicePac for 3-Year 24x7x4 Support (Display)	10N3110	IBM	1	90	1		90
					Subtotal	142,284	1,785
Server Storage							
IBM 4Gb FC Dual-Port PCI-E HBA for IBM System x	39R6527	IBM	1	1,899	4	7,596	
IBM System Storage DS4800 Midrange Disk Subsystem	1815-82A	IBM	1	53,995	7	377,965	
4 Gbps SW SFP Transceiver 4 Pack	22R4897	IBM	1	550	33	18,150	
IBM 1m LC-LC Fibre Channel Cable	39M5696	IBM	1	79	168	13,272	
IBM 5m LC-LC Fibre Channel Cable	39M5697	IBM	1	129	21	2,709	
IBM System Storage DS4000 EXP810 Storage Exp. Unit	1812-81A	IBM	1	6,000	84	504,000	
16 PAK 73GB 15K 4Gbps FC E-DDM Hot-Swap HDD	1812-5433	IBM	1-S	14,816	84	1,244,544	
IBM TotalStorage SAN16B-2	200516B	IBM	1	4,120	2	8,240	
B16 4-Port Activation	22R4901	IBM	1	1,570	2	3,140	
IBM System Storage EXP3000	172701X	IBM	1	3,199	2	6,398	
500GB 3.5" Dual Port Hot-Swap SATA II	39M4558	IBM	1	399	16	6,384	
IBM EXP3000 1m Cable	39R6529	IBM	1	119	2	238	
IBM UPS 750TLV	2130R1X	IBM	1	299	1	299	
IBM S2 42U Standard Rack	93074RX	IBM	1	1,489	8	11,912	
ServicePac for 3-Year 24x7x4 Support (EXP810)	10N3651	IBM	1	960	84		80,640
ServicePac for 3-Year 24x7x4 Support (DS4800)	41C5953	IBM	1	3,200	7		22,400
ServicePac for 3-Year 24x7x4 Support (SAN16B-2)	41E9144	IBM	1	1,120	2		2,240
ServicePac for 3-Year 24x7x4 Support (EXP3000)	41L2768	IBM	1	760	2		1,520
ServicePac for 3-Year 24x7x4 Support (Rack)	41L2760	IBM	1	300	8		2,400
					Subtotal	2,204,847	109,200
Server Software							
Microsoft SQL Server 2005 Enterprise x64 Edition	810-03134	Microsoft	2	24,999	4	99,996	
Microsoft Windows Server 2003 R2 Enterprise x64 Edition	P72-01684	Microsoft	2	3,999	1	3,999	
Microsoft Problem Resolution Services		Microsoft	2a	245	1		245
					Subtotal	103,995	245
Client Hardware							
x3500 with 3.0GHz/12MB Xeon X5450, 1GB (2x512) Memory	7977R2U	IBM	1-S	3,459	12	41,508	
1GB (2x512MB) PC2-5300 CL5 ECC DDR2 FBD 667MHz	39M5782	IBM	1	129	12	1,548	
146GB 15K Hot Swap SAS	40K1044	IBM	1	359	12	4,308	
PRO/1000 PT Dual-Port Server Adapter	39Y6126	IBM	1	229	24	5,496	
ServicePac for 3-Year 24x7x4 Support (x3500)	21P2084	IBM	1	689	12		8,268
					Subtotal	52,860	8,268
Client Software							
Microsoft Windows Server 2003 R2 Standard Edition	P73-01972	Microsoft	2	999	12	11,988	
Microsoft Visual Studio Standard 2005	127-00012	Microsoft	2a	250	1	250	
					Subtotal	12,238	0
Network Components							
NetGear 24-Port Ethernet Switch (2 spares)	JGS524		3	225	3	675	
Ethernet Cable (2 spares)	A3L791-10-BLK		3	5	15	75	
					Subtotal	750	0
					Total	2,516,974	119,498
IBM Large Purchase Discount (See Note 1.)	34.60%		1			861,741	
Microsoft Open Program Discount Schedule (See Note 2.)	9.74%		2			11,293	

Pricing: 1 - IBM - 1-888-SHOP-IBM, ext. 5821; 2 - Microsoft; 3- newegg.com	Three-Year Cost of Ownership USD:	\$1,763,438
Note 1: Discount based on IBM Direct guidance applies to all line items where Pricing=1.		
Pricing is for this system or one of similar size.		
Note 2: Discount applies to all line items where Pricing=2.		
* These components are not immediately orderable. See the FDR for more information.	tpmC:	684,508
S - One or more components of the measured configuration have been substituted in the Priced Configuration. See the FDR for details.	\$ USD/tpmC:	\$2.58
Audited by Francois Raab, InfoSizing, Inc. (www.sizing.com)		

Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.

IBM Corporation	IBM® System x3850 M2 Microsoft® SQL Server 2005 (SP2)	TPC-C Rev. 5.10	
		Report Date 9/15/08	
Numerical Quantities Summary			
MQTh, Computed Maximum Qualified Throughput: 684,508 tpmC			
Response Times (in seconds)	90th Percentile	Average	Maximum
New Order	0.44	0.26	8.05
Payment	0.42	0.25	8.00
Delivery	0.14	0.13	6.95
Stock Level	0.80	0.55	8.49
Order Status	0.44	0.27	9.27
Delivery (Deferred)	0.13	0.10	4.94
Menu	0.13	0.13	6.95
Response Time Delay Added for Emulated Components: 0.1 Seconds			
Transaction Mix (in percent of total transactions)			Percent
New Order			44.95%
Payment			43.03%
Delivery			4.01%
Stock Level			4.01%
Order Status			4.01%
Keying/Think Times (in seconds)	Minimum	Average	Maximum
New Order	18.00 / 0.00	18.00 / 12.04	18.02 / 120.31
Payment	3.00 / 0.00	3.00 / 12.04	3.02 / 120.31
Delivery	2.00 / 0.00	2.00 / 5.03	2.02 / 50.31
Stock Level	2.00 / 0.00	2.00 / 5.04	2.02 / 50.31
Order Status	2.00 / 0.00	2.00 / 10.04	2.02 / 100.31
Test Duration			
Ramp-up Time			52 minutes 52 seconds
Measurement Interval			120 minutes
Number of Checkpoints			4
Checkpoint Interval			30 minutes
Number of transactions (all types) completed in measurement interval			190,066,699