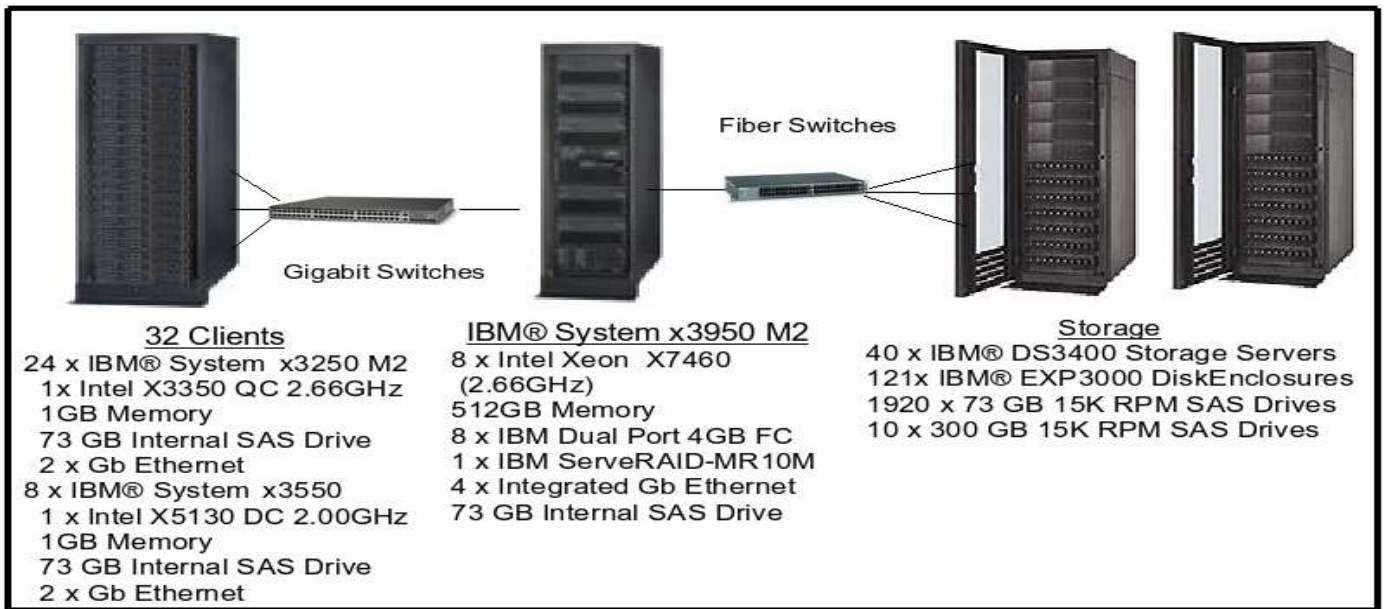


**IBM System x3950 M2
DB2® 9.5**

TPC-C Rev. 5.10

**Report Date:
August 19, 2008**

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$2,386,768 USD	1,200,632	\$1.99 USD	December 10, 2008	
Database Processors/Cores/Threads	Database Manager	Operating System	Other Software	No. Users
8/48/48 2.66 GHz Intel Xeon X7460	DB2 9.5	RHEL 5	Microsoft Visual C++ Microsoft COM+	960,000



System Components	Each of the 32 Clients		Server	
	Quantity	Description	Quantity	Description
Processors/Cores/Threads	1/4/4 1/2/2	2.66GHz 12MB L2 Xeon X3350 or 2.0GHz 4MB L2 Xeon X5130	8/48/48	2.66 GHz Intel Xeon X7460 3 x 3MB L2 1 x 16MB L3
Memory	1	1 GB	64	8 GB
Disk Controllers	1	SAS	1 1 8 40	Integrated SAS ServeRAID-MR10M 4Gb dual-port FC Adapters IBM DS3400 Controllers for Data
Disk Drives	1	73 GB	1921 10	73 GB 15K RPM SAS 300 GB 15K RPM SAS
Total Storage		2336 GB		143,233 GB
Terminals	1	System Console	1	System Console

IBM Corporation	IBM System x3950 M2 c/s				TPC-C Revision 5.10		
	with DB2 9.5				Report Date: August 19, 2008		
Description	Part Number	Brand	Price Source	Unit Price	Quantity	Extended Price	3-Yr. Maint. Price
Server Hardware							
x3950 M2 (2 x Intel Xeon Processor X7460 2.66GHz/9MB L2 Cache/16MB L3 Cache) with 4 memory cards and 8 x 1GB DIMM	72336SU	IBM	1a*	24,999	2	49,998	
Intel Xeon Processor X7460 (2.66GHz)	44E4473	IBM	1a*	7,999	4	31,996	
16GB (2x8GB) 667MHz PC2-5300 ECC DDR2 SDRAM DIMM	43V7356	IBM	1	6,999	32	223,968	
IBM 73.4GB 10K 2.5 inch SAS Drive	40K1052	IBM	1	259	1	259	
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	
ServicePac for 3-Year 24x7x4 Support (x3950 M2)	10N3059	IBM	1	1,695	2		3,390
ServicePac for 3-Year 24x7x4 Support (Display)	30L9183	IBM	1	90	1		90
						306,478	3,480
Server Storage							
IBM 4-Gbps FC Dual-Port PCI-E HBA	39R6527	IBM	1	1,424	8	11,392	
ServeRAID-MR10M SAS/SATA Controller	43W4339	IBM	1	899	1	899	
IBM System Storage DS3400 Express	1726-42E	IBM	1	6,702	40	268,080	
IBM 3M SAS cable	39R6531	IBM	1	135	242	32,670	
IBM System Storage EXP3000	1727-01X	IBM	1	3,199	121	387,079	
IBM EXP3000 Environmental Services Module (ESM)	39R6515	IBM	1a	999	121	120,879	
IBM Hot-Swap 3.5 inch 73.4GB 15K SAS HDD	43W7523	IBM	1	329	1920	631,680	
300GB 15K 3.5" Hot-Swap SAS	43X0802	IBM	1	779	10	7,790	
IBM S2 42U Standard Rack	93074RX	IBM	1	1,489	8	11,912	
ServicePac for 3-Year 24x7x4 Support (DS3400)	44J8073	IBM	1	1,300	40		52,000
ServicePac for 3-Year 24x7x4 Support (EXP3000)	41L2768	IBM	1	760	121		91,960
ServicePac for 3-Year 24x7x4 Support (Rack)	41L2760	IBM	1	300	8		2,400
					Subtotal	1,472,381	146,360
Server Software							
DB2 ESE 9.5 SW License and Maintenance 12 Months		IBM	2	278.52	2400	668,448	
SW Maintenance Renewal - 1 Year		IBM	2	13.27	4800		63,696
Red Hat Enterprise Linux Advanced Platform, Premium (Unlimited Sockets)		Red Hat	3	6,747	1	6,747	
					Subtotal	675,195	63,696
Client Hardware							
IBM System x3550 with Microsoft Windows Server 2003 and 3yr 24x7x4 Maintenance & Warranty	7978MC1	IBM	1a	1,933	8	15,464	
2.0GHz Dual-Core X5130 2 x 512MB	1308	IBM	1a	64	8	512	
3.5" Hot Swap SAS Enabled System	2465	IBM	1a	598	8	4,784	
IBM System x3250 M2 with Microsoft Windows Server 2003 and 3yr 24x7x4 Maintenance & Warranty	4194MC1	IBM	1a - S	2,270	24	54,480	
2.66 Quad-Core X3350 2 x 512MB RAM	3652	IBM	1a -S	354	1	354	
					Subtotal	75,594	0
Client Software							
Visual Studio Standard 2005	127-00012	Microsoft	5	250	1	250	
Microsoft Problem Resolution Services		Microsoft	5	245	1		245
					Subtotal	250	245
Third Party Components							
Linksys ProConnect KVM Switch - 2 ports (2 spares)	430446	cdw	4	42	3	126	
D-LINK DGS-1024D 24-Port 10/100/1000 Switch (2 spares)	DGS1024D	cdw	4	210	8	1,680	
Qlogic SANbox 5600 16-Port 4Gb Fabric Switch (2 spares)	sb5600-16A	SANdirect	6	4,390	10	43,900	
UPS - powercom KIN-1500AP 1500VA 900Watts (2 spares)	N82E16842106115	newegg	7	135	3	405	
					Subtotal	46,111	0
					Total	2,576,009	213,781
IBM Large Purchase Discount (See Note 1.)	23.36%		1			403,022	
Pricing: 1 - IBM - 1-888-SHOP-IBM, ext. 5821; 2 - IBM; 3 -Red Hat; 4 - CDW.com; 5- Microsoft; 6 - SANdirect.com; 7 - newegg.com					Three-Year Cost of Ownership USD:		\$2,386,768
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.					tpmC:		1,200,632
* These components are not immediately orderable. See the FDR for more information.					\$ USD/tpmC:		\$1.99
S - One or more components of the measured configuration have been substituted in the Priced Configuration. See the FDR for details							
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.							

Numerical Quantities Summary for the IBM System x3950 M2

MQTH, computed Maximum Qualified Throughput: 1,200,632 tpmC

<u>Response Times (in seconds)</u>	<u>90th %</u>	<u>Average</u>	<u>Maximum</u>
New Order	0.920	0.409	9.297
Payment	0.900	0.389	9.282
Order-Status	0.920	0.404	9.281
Delivery (interactive)	0.300	0.154	8.984
Delivery (deferred)	0.31	0.21	2.41
Stock-Level	1.020	0.484	9.407
Menu	0.282	0.153	9.468

Response time delay added for emulated components was 0.1 seconds

<u>Transaction Mix, in percent of total transactions</u>	<u>Percent</u>
New Order	44.951%
Payment	43.020%
Order-Status	4.010%
Delivery	4.009%
Stock-Level	4.009%

<u>Keying/Think Times (in seconds)</u>	<u>Min.</u>	<u>Average</u>	<u>Max.</u>
New Order	18.00/0.00	18.00/12.036	18.016/120.313
Payment	3.00/0.00	3.00/12.036	3.016/120.313
Order-Status	2.00/0.00	2.00/10.036	2.016/100.313
Delivery	2.00/0.00	2.00/5.038	2.016/50.313
Stock-Level	2.00/0.00	2.00/5.038	2.016/50.313

Test Duration

Ramp-up Time	18 minutes
Measurement interval	2 hours 10 minutes
Transactions during measurement interval (all types)	347,229,652

Checkpoints

Number of checkpoints	N/A
Checkpoint interval	N/A