

**IBM® eServer™ Series® 460 c/s  
and  
DB2® UDB 8.2**

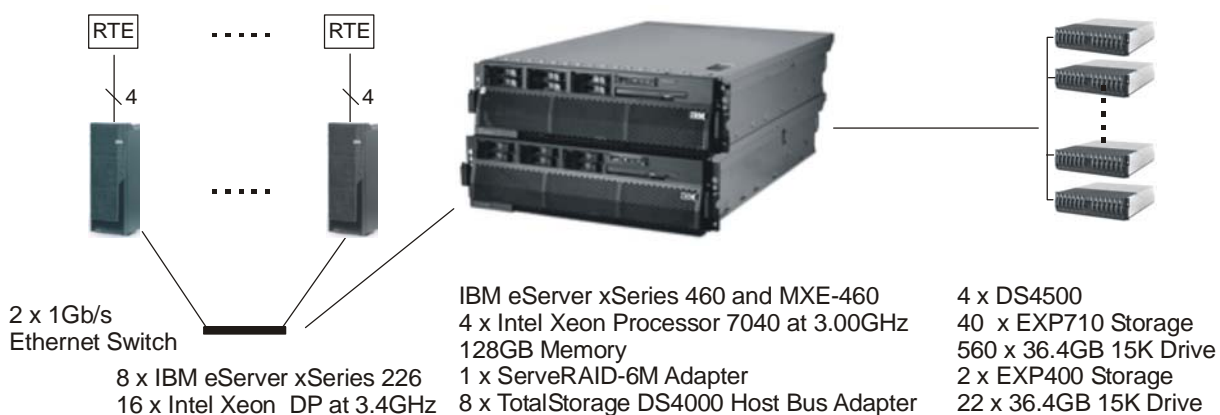
TPC-C Rev. 5.6

Report Date: Mar. 7, 2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>\$1,273,691 USD</b>	<b>273,520 tpmC</b>	<b>\$4.66 USD / tpmC</b>	<b>May 1, 2006</b>

Database Server Processors/Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
<b>4/8/16 Intel® Xeon® Processor 7040 3.00GHz</b>	<b>DB2 UDB 8.2</b>	<b>Microsoft® Windows® Server 2003 Enterprise x64 Edition</b>	<b>Microsoft Visual C++ Standard Edition Microsoft COM+</b>	<b>217,600</b>

8 RTEs emulating 217,600 users



<b>System Component</b>	<b>Qty</b>	<b>Server:</b>	<b>Qty</b>	<b>Each of Eight Clients:</b>
<b>Processors/Cores/Threads</b>	<b>4/8/16</b>	<b>Intel Xeon Processor 7040 at 3.00GHz</b>	<b>2/2/4</b>	<b>Intel Xeon Processor at 3.4GHz</b>
<b>Cache</b>		<b>2x2MB L2 Cache</b>		<b>2MB L2 Cache</b>
<b>Memory</b>	<b>32</b>	<b>4GB ECC RDIMM</b>	<b>4</b>	<b>512MB</b>
<b>Disk Controllers</b>	<b>1</b>	<b>ServeRAID-6M Adapter</b>	<b>1</b>	<b>Ultra320 SCSI Interface</b>
	<b>8</b>	<b>TotalStorage DS4000 HBA</b>		
<b>Disk Drives</b>	<b>4</b>	<b>TotalStorage DS4500</b>		
	<b>560</b>	<b>36.4GB 2Gbps FC (15K)</b>	<b>1</b>	<b>36.4GB (15000 rpm)</b>
	<b>22</b>	<b>36.4GB Ultra320 (15K)</b>		
<b>Total Storage</b>		<b>19077GB</b>		

IBM Corporation	IBM @server 460 c/s			TPC-C Revision 5.6			
	with DB2 UDB			Report Date: Mar. 7, 2006			
Description	Part Number	Third Party Brand	Pricing	Unit Price	Quantity	Extended Price	3-Yr. Maint. Price
<b>Server Hardware</b>							
xSeries 460 with 2 x Intel Xeon Processor 7040 3.00GHz/2x2MB L2	8872-6RU*	IBM	1a	25,999	1	25,999	
Intel Xeon Processor 7040 3.00GHz/2x2MB L2	25R8942	IBM	1	5,699	2	11,398	
MXE-460 (0 Processors, 0 Memory, 2 Memory Cards)	8874-1RU	IBM	1a	6,999	1	6,999	
Scalability Cable 2.3.M	13M7414	IBM	1	299	2	598	
8GB (2x4GB) PC2-3200 CL3 2RX4 ECC DDR2 SDRAM RDIMM	30R5145	IBM	1	5,299	16	84,784	
Active Memory 4-Slot Memory Expansion Card	13M7409	IBM	1	499	4	1,996	
ServeRAID-6M Ultra320 SCSI Adapter	32P0033	IBM	1	879	1	879	
E54 15" (13.8" Viewable) Color Monitor	633147N	IBM	1	139	1	139	
ThinkPlus Enhanced Performance USB Keyboard	73P2620	IBM	1	39	1	39	
ScrollPoint 800 DPI Optical Mouse - USB & PS/2	90P0742	IBM	1	25	1	25	
ServicePac for 3-Year 24x7x4 Support (x460 and MXE-460)	96P2688	IBM	1	3,390	2		6,780
ServicePac for 3-Year 24x7x4 Support (Monitor)	30L9183	IBM	1	90	1		90
					<b>Subtotal</b>	<b>132,856</b>	<b>6,870</b>
<b>Server Storage</b>							
IBM TotalStorage DS4000 Host Bus Adapter	24P0960	IBM	1	1,485	8	11,880	
IBM TotalStorage DS4500 Midrange Disk Subsystem	174290U	IBM	1a	49,900	4	199,600	
IBM DS4000 Mini Hub	19K1269	IBM	1	899	8	7,192	
IBM Short Wave SFP Module (4 Pack)	22R0483	IBM	1	550	42	23,100	
IBM 1m LC-LC Fibre Channel Cable	19K1247	IBM	1	79	72	5,688	
IBM 5m LC-LC Fibre Channel Cable	19K1248	IBM	1	129	16	2,064	
IBM TotalStorage DS4000 EXP710 Storage Exp. Unit	1740710	IBM	1a	6,000	40	240,000	
2Gbps FC 36.4GB 15K Hot-Swap HDD	06P5772	IBM	1	1,115	560	624,400	
IBM EXP400 Rack Storage Exp. Enclosure	17331RU	IBM	1a	3,099	2	6,198	
36.4GB 15K Ultra320 SCSI Hot-Swap HDD	90P1380	IBM	1	279	22	6,138	
2M SCSI cable	03K9310	IBM	1	75	2	150	
IBM UPS 750TLV	21301TX	IBM	1	299	1	299	
IBM S2 42U Standard Rack	930745X	IBM	1	1,489	5	7,445	
ServicePac for 3-Year 24x7x4 Support (EXP400)	41L2768	IBM	1	760	2		1,520
ServicePac for 3-Year 24x7x4 Support (EXP710)	41L2768	IBM	1	760	40		30,400
ServicePac for 3-Year 24x7x4 Support (DS4500)	96P2062	IBM	1	1,087	4		4,348
ServicePac for 3-Year 24x7x4 Support (Rack)	41L2760	IBM	1	300	5		1,500
					<b>Subtotal</b>	<b>1,134,154</b>	<b>37,768</b>
<b>Server Software</b>							
DB2 UDB ESE 8.2 for Windows Operating Systems on 64-Bit Extended Systems - SW License and Maintenance 12 Months		IBM	2	23,902	4	95,608	
SW Maintenance Renewal - 1 Year		IBM	2	1,138	8		9,104
Microsoft Windows Server 2003 Enterprise x64 Edition *	P72-00981	Microsoft	3	3,999	1	3,999	
Microsoft Problem Resolution Services		Microsoft	3	245	1		245
					<b>Subtotal</b>	<b>99,607</b>	<b>9,349</b>
<b>Client Hardware</b>							
x226 with 3.4GHz/2MB Xeon DP, 512MB (2x256MB) Memory	8648-6AU	IBM	1a	1,499	8	11,992	
3.4GHz/2MB Xeon DP Processor Upgrade	13N0676	IBM	1	879	8	7,032	
1GB (2x512MB) PC-3200 DDR2 ECC SDRAM RDIMM	73P3522	IBM	1	399	16	6,384	
36.4GB 15K Ultra320 SCSI Drive	90P1380	IBM	1	279	8	2,232	
PRO/1000 GT Dual-Port Server Adapter	73P5101	Intel	1	249	16	3,984	
E54 15" (13.8" Viewable) Color Monitor	633147N	IBM	1	139	8	1,112	
ServicePac for 3-Year 24x7x4 Support (x226)	96P2250	IBM	1	586	8		4,688
ServicePac for 3-Year 24x7x4 Support (Monitor)	30L9183	IBM	1	90	8		720
					<b>Subtotal</b>	<b>32,736</b>	<b>5,408</b>
<b>Client Software</b>							
Microsoft Windows 2000 Server with COM+*	C11-00821	Microsoft	3	738	8	5,904	
Microsoft Visual C++ Standard Edition	254-00170	Microsoft	3	109	1	109	
					<b>Subtotal</b>	<b>6,013</b>	
<b>Network Components</b>							
NetGear 8-Port Ethernet Switch (2 spares)	GS-108		4	76	4	304	
Ethernet Cable 8 Ft. (2 spares)	CC5E-B14B		4	4	12	48	
					<b>Subtotal</b>	<b>352</b>	
					<b>Total</b>	<b>1,405,718</b>	<b>59,395</b>
					<b>Discount</b>	<b>185,417</b>	<b>6,005</b>
Discounts amounts based on unit volume; prices vary if purchased separately (see Note 1).							
Pricing: 1- Compsat Technology; 2 - IBM; 3 - Microsoft; 4 - newegg.com				<b>Three-Year Cost of Ownership USD:</b>		\$1,273,691	
Note 1: All items with pricing 1 - 12% discount; all items with pricing 1a - 18% discount.				<b>tpmC:</b>		273,520	
Audited by Bradley J. Askins, InfoSizing, Inc.				<b>\$ USD/tpmC:</b>		\$4.66	
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.							

## Numerical Quantities Summary

MQTh, Computed Maximum Qualified Throughput: **273,520 tpmC**

Response Times (in seconds)	90th Percentile	Average	Maximum
New-Order	0.30	0.18	1.77
Payment	0.40	0.28	3.34
Delivery	0.30	0.30	1.50
Stock Level	0.42	0.33	2.48
Order Status	0.30	0.22	2.08
Delivery (Deferred)	0.28	0.19	2.05
Menu	0.29	0.20	1.56
<b>Response Time Delay Added for Emulated Components: 0.1 Seconds</b>			
Transaction Mix (in percent of total transactions)			Percent
New-Order			44.95
Payment			43.02
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 / 5.04	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
<b>Test Duration</b>			
Ramp-up time			25 minutes 51 seconds
Measurement interval			120 minutes
Number of checkpoints			NA
Checkpoint interval			NA
Number of transactions (all types) completed in measurement interval			73,016,459