

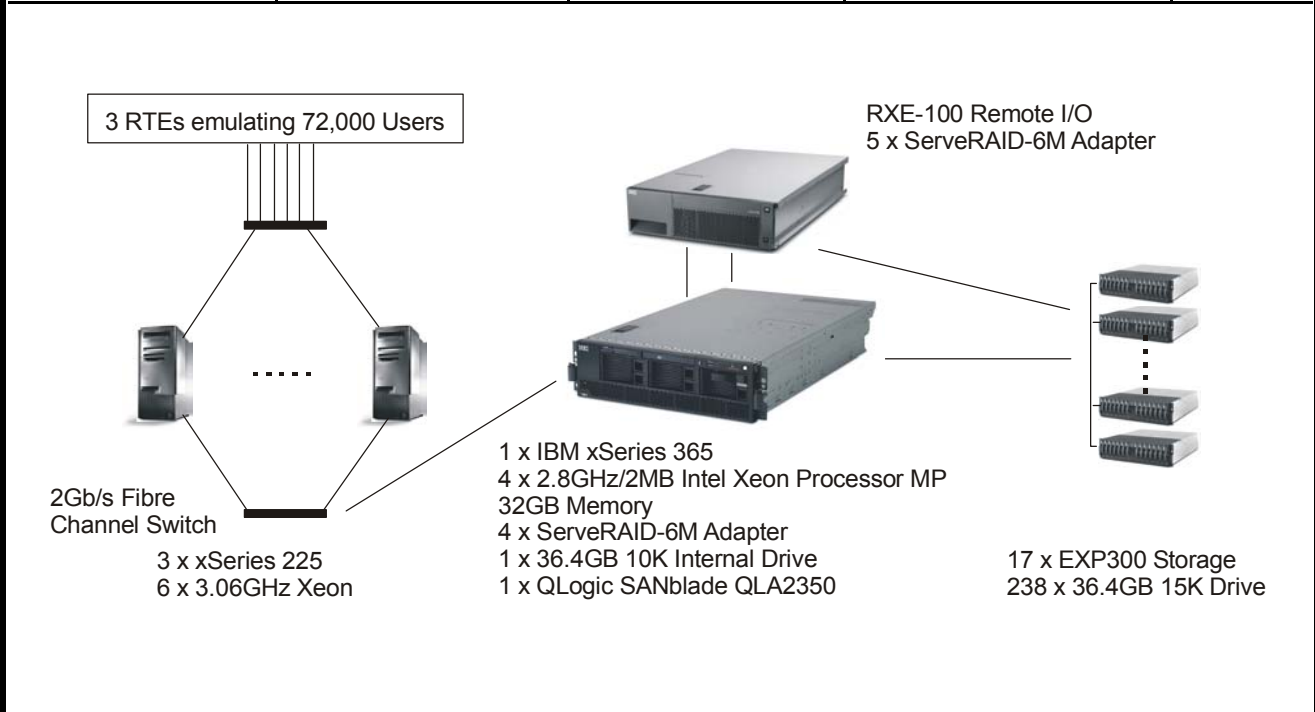
**IBM®@server®xSeries® 365 c/s**  
**with**  
**Microsoft® SQL Server 2000**

TPC-C Rev. 5.1

Report Date: Dec.8, 2003

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>\$333,788</b>	<b>89,616.32 tpmC</b>	<b>\$3.72 / tpmC</b>	<b>Feb. 27, 2004</b>

Database Server	Database Manager	Operating System	Other Software	Number of Users
<b>Processors/Cores/Threads: 4/4/8</b> <b>Intel Xeon Processor MP 2.8GHz</b>	<b>Microsoft SQL Server 2000 Enterprise Edition SP3 with QFE</b>	<b>Microsoft Windows® Server 2003 Enterprise Edition</b>	<b>Microsoft Visual C++ 6.0</b> <b>Microsoft COM+</b>	<b>72,000</b>



<b>System Component</b>	<b>Qty</b>	<b>Server:</b>	<b>Qty</b>	<b>Each of Three Clients:</b>
<b>Processors/Cores/Threads</b>	<b>4/4/8</b>	<b>2.8GHz Xeon Processor</b>	<b>2/2/4</b>	<b>3.06GHz Xeon</b>
<b>Cache</b>		<b>MP w/2MB L3 Cache</b>		<b>512KB L2 Cache</b>
<b>Memory</b>	<b>16</b>	<b>2GB ECC RDIMM</b>	<b>4</b>	<b>512MB</b>
<b>Disk Controllers</b>	<b>9</b>	<b>ServeRAID-6M Adapter</b>	<b>1</b>	<b>Ultra320 SCSI Interface</b>
<b>Disk Drives</b>	<b>1</b>	<b>36.4GB (10000 rpm)</b>		
<b>Total Storage</b>	<b>238</b>	<b>36.4GB (15000 rpm)</b>	<b>1</b>	<b>36.4GB Hard Disk</b>
<b>Tape Drive</b>	<b>1</b>	<b>8102.43GB</b> <b>20/40GB SCSI Tape Drive</b>		

IBM Corporation	IBM @server xSeries 365 c/s with Microsoft SQL Server 2000				TPC-C Revision 5.1				
	Report Date: Dec. 8, 2003								
Description	Part Number	Brand	Third Party	Pricing	Unit Price	Quantity	Extended Price	3-Yr. Maint. Price	
<b>Server Hardware</b>									
xSeries 365 with:	8862-3RX	IBM			1	16,299	16,299	1,000	
2 x 2.8GHz/2MB Xeon Processor MP									
4 x 512MB PC2100 DDR ECC SDRAM RDIMM									
2.8GHz/2MB Xeon Processor MP Upgrade	73P7075	IBM			1	5,749	11,498		
2GB PC2100 DDR ECC SDRAM RDIMM	33L5040	IBM			1	2,399	38,384		
36.4GB 10K Ultra320 SCSI Hot-Swap Drive	32P0726	IBM			1	275	275		
IBM Preferred Pro Full-Size Keyboard PS/2	31P7415	IBM			1	29	29		
IBM Sleek 2-Button Mouse	28L3673	IBM			1	15	15		
IBM ServeRAID-6M Ultra230 SCSI Adapter	32P0033	IBM			1	999	8,991		
QLLogic SANBlade QLA2350 FC-VI Adapter (2 spares)	QLA2350-BK	QLLogic			1	1,995	5,985		
E54 15" (13.8" Viewable) Color Monitor	633147N	IBM			1	119	119	90	
						<b>Subtotal</b>	<b>81,595</b>	<b>1,090</b>	
<b>Server Storage</b>									
IBM RXE-100 Remote Expansion Enclosure	8684-1RX	IBM			1	4,569	4,569	2,027	
IBM EXP300 Rack Storage Exp. Enclosure	35311RU	IBM			1	3,179	54,043	3,400	
36.4GB 15K Ultra160 SCSI Hot-Swap Drive	06P5768	IBM			1	495	117,810		
Netfinity 4.2M Ultra2 SCSI Cable	03K9311	IBM			1	105	1,890		
NetBAY42S Standard Rack	9306421	IBM			1	1,439	2,878	336	
IBM UPS 500	34L3477	IBM			1	99	99		
IBM NetBAY Tape Enclosure	0034B0X	IBM			1	849	849	120	
20/40GB DDS/4 Tape AutoLoader	00N7991	IBM			1	699	699		
						<b>Subtotal</b>	<b>182,837</b>	<b>5,883</b>	
<b>Server Software</b>									
Microsoft SQL Server 2000 Enterprise Edition	810-00846	Microsoft			2	16,541	66,164		
Database Software Support Package (Includes OS)	PRO-PRORS-16U-01	Microsoft			2	1,950		5,850	
Microsoft Windows Server 2003 Enterprise Edition	P7200264	Microsoft			2	2,399	2,399		
						<b>Subtotal</b>	<b>68,563</b>	<b>5,850</b>	
<b>Client Hardware</b>									
x225 w/3.06GHz/512KB Xeon DP, one 36GB Drive	8647-62X	IBM			1	1,775	5,325	3,000	
3.06GHz/512KB Xeon DP Processor Upgrade	24P8122	IBM			1	999	2,997		
512MB PC2100 ECC SDRAM RDIMM	33L5038	IBM			1	275	3,300		
QLLogic SANblade QLA 2350 FC-VI Adapter	QLA2350-BK	QLLogic			1	1,995	5,985		
NetXtreme 1000T Dual-Port Ethernet Adapter	31P6401	NetXtreme			1	269	1,614		
Adaptec Quartet64 4-Port Adapter	ANA64044	Adaptec			1	550	1,650		
E54 15" (13.8" Viewable) Color Monitor	633147N	IBM			1	119	357	270	
						<b>Subtotal</b>	<b>21,228</b>	<b>3,270</b>	
<b>Client Software</b>									
Microsoft Windows 2000 Server with COM+	C11-00821	Microsoft			2	738	2,214		
Microsoft Visual C++ Professional 6.0	254-00170	Microsoft			2	109	109		
						<b>Subtotal</b>	<b>2,323</b>		
<b>Network Components</b>									
SAN Fibre Channel 8-Port Switch	3534F08	IBM			1	5,725	5,725	2,300	
IBM 5M LC-LC Fibre Channel Cable	19K1248	IBM			1	129	516		
						<b>Subtotal</b>	<b>6,241</b>	<b>2,300</b>	
						<b>Total</b>	<b>362,787</b>	<b>18,393</b>	
Compsat Technology discount.							<b>Discount</b>	45,887	1,505
1 - Compsat Technology; 2 - Microsoft					<b>Three-Year Cost of Ownership:</b>			\$333,788	
Audited by Brad Askins, InfoSizing, Inc.					tpmC:			89,616.32	
					\$/tpmC:			\$3.72	
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: **89,616.32 tpmC**

Response Times (in seconds)	90th Percentile	Average	Maximum
New-Order	0.59	0.40	5.94
Payment	0.53	0.35	3.05
Delivery	0.39	0.22	1.35
Stock Level	1.17	0.89	2.34
Order Status	0.56	0.37	4.31
Delivery (Deferred)	0.18	0.13	1.16
Menu	0.39	0.23	3.26
<b>Response Time Delay Added for Emulated Components: 0.1 Seconds</b>			
Transaction Mix (in percent of total transactions)			Percent
New-Order			44.94
Payment			43.03
Delivery			4.01
Stock-Level			4.01
Order Status			4.00
Keying/Think Times (in seconds)	Minimum	Average	Maximum
New Order	18.00 / 0.00	18.01 / 12.05	18.04 / 120.52
Payment	3.00 / 0.00	3.01 / 12.05	3.04 / 120.52
Delivery	2.00 / 0.00	2.01 / 5.05	2.04 / 50.52
Stock Level	2.00 / 0.00	2.01 / 5.05	2.04 / 50.51
Order Status	2.00 / 0.00	2.01 / 10.05	2.04 / 100.51
<b>Test Duration</b>			
Ramp-up time			51 minutes 25 seconds
Measurement interval			120 minutes
Number of checkpoints			4
Checkpoint interval			30 minutes
Number of transactions (all types) completed in measurement interval			24,889,428