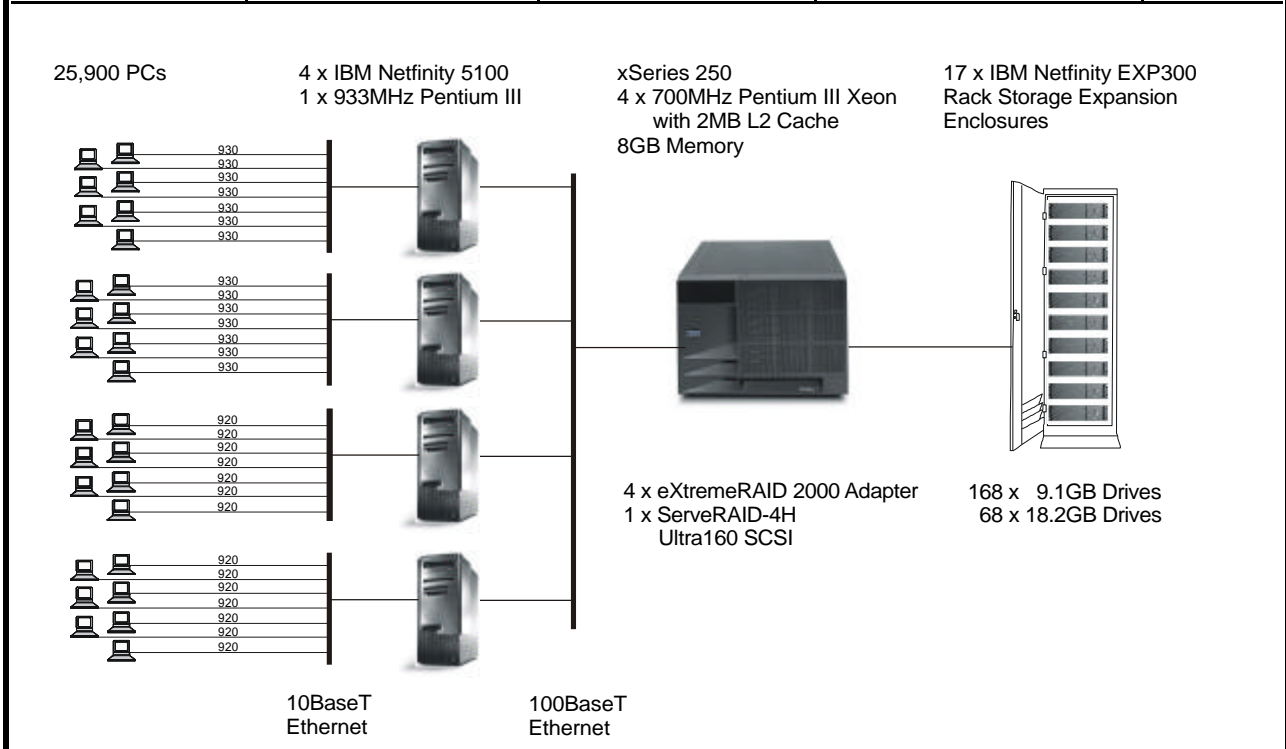


**IBM @server xSeries 250 c/s
with
Microsoft SQL Server 2000**

TPC-C Rev. 5.0
Upgrade from Rev. 3.5
Report Date: April 9, 2001
(Original: October 25, 2000)

Total System Cost		TPC-C Throughput	Price/Performance	Availability Date
\$245,460		32,377.17 tpmC	\$7.58 / tpmC	Oct. 25, 2000
Processors	Database Manager	Operating System	Other Software	Number of Users
4: Database 4: Client	Microsoft[®] SQL Server 2000 Enterprise Edition	Microsoft Windows[®] 2000 Advanced Server	Microsoft Visual C++ 6.0 Win32 Microsoft COM+	25,900



System Component	Qty	Server	Qty	Each of Four Clients
Processors	4	700MHz Pentium III	1	933MHz Pentium III
Cache		Xeon w/2MB L2 Cache		w/256KB L2 Cache
Memory	16	512MB	2	128MB
Disk Controllers	4	Mylex eXtremeRAID 2000	1	Ultra160 SCSI Onboard
Disk Drives	1	ServeRAID-4H Ultra160	1	9.1GB Hard Disk
	168	9.1GB (10000 rpm)		
	68	18.2GB (10000 rpm)		
Total Storage		2766.4GB		
Tape Drive	1	20/40GB SCSI Tape Drive		

IBM Corporation	IBM @server xSeries 250 c/s with Microsoft SQL Server 2000			TPC-C Rev. 5.0 Upgrade from Rev. 3.5				
					Report Date: April 9, 2001 (Original: October 25, 2000)			
Description	Order Number	Third-Party Brand	Pricing	Unit Price	Qty	Ext. Price	3-Yr. Maint.*	
Server Hardware								
xSeries 250 / 700MHz/2MB Pentium III Xeon*	86657RY		1	\$6,879	1	\$6,879	\$2,495	
700MHz/2MB L2 Cache Processor Upgrade	10K2332		1	2,879	3	8,637	0	
512MB ECC SDRAM RDIMM Memory Kit	33L3117		1	749	15	11,235	0	
Mylex eXtremeRAID 2000 Adapter***	E20004-32NB	Mylex	3	1,872	6	11,232	0	
Netfinity ServeRAID-4H Ultra160 Adapter	37L6889		1	2,439	1	2,439	0	
Netfinity 4.2M Ultra2 SCSI Cable	03K9311		1	105	18	1,890	0	
10/100 Ethernet Server Adapter	06P3601		1	99	1	99	0	
E54 14" (13.8" Viewable) Color Monitor*	6331N2N		1	159	1	159	90	
20/40GB Internal SCSI Tape Drive	00N7991		1	769	1	769	0	
Netfinity Rack*	9306900		1	1,725	2	3,450	600	
Side Panel Kit	94G6669		1	195	1	195	0	
Storage Hardware								
Netfinity EXP300 Rack Storage Enclosure*	35311RU		1	3,179	17	54,043	3,400	
9.1GB 10K-4 Ultra160 SCSI Drive	37L7204		1	275	168	46,200	0	
18.2GB 10K-4 Ultra160 SCSI Drive	37L7205		1	329	68	22,372	0	
						Subtotal	\$169,599	\$6,585
Server Software								
Microsoft SQL Server 2000 Enterprise Edition	810-00846	Microsoft	2	16,541	4	\$66,164	\$0	
Microsoft Windows 2000 Advanced Server	C10-00475	Microsoft	2	2,399	1	2,399	0	
Three-Year Maintenance for Software		Microsoft	2	2,095	3		6,285	
						Subtotal	\$68,563	\$6,285
Client Hardware								
Netfinity 5100 / 933MHz/256KB Pentium III*	865851Y		1	1,719	4	\$6,876	\$5,980	
9.1GB 10K Ultra160 SCSI Drive	37L7204		1	275	4	1,100	0	
128MB 133MHz ECC SDRAM RDIMM	33L3123		1	119	4	476	0	
10/100 Ethernet Server Adapter	06P3601		1	99	4	396	0	
E54 15" (13.8" Viewable) Color Monitor*	6331N2N		1	159	4	636	360	
						Subtotal	\$9,484	\$6,340
Client Software								
Microsoft Windows 2000 Server with COM+	C11-00821	Microsoft	2	738	4	2,952	0	
Microsoft Visual C++ Professional 6.0 Win32	048-00317	Microsoft	2	549	1	549	0	
						Subtotal	\$3,501	\$0
User Connectivity								
8-Port 10/100Mbps Nway Fast Ethernet Switch** NX-DSS8			4	25	7	175	0	
						Subtotal	\$175	\$0
						Total	\$251,322	\$19,210
Large volume discount of 14% on IBM hardware; prices vary if purchased separately.			1	14%		(25,072)	\$0	
Notes: * The standard 3-year warranty on IBM hardware has been upgraded to 7x24, 4-hour response time coverage. ** Five-year warranty. *** 10% or minimum 2 spares are added in place of on-site service (products have a 5-year return-to-vendor-warranty) Pricing: 1 - IBM Corp.; 2 - Microsoft Corp.; 3 - Mylex; 4 - Software House International Audited by Bradley J. Askins of InfoSizing, Inc.				Five-Year Cost of Ownership:		\$245,460		
				tpmC Rating:		32,377.17		
				\$ / tpmC:		\$7.58		
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 specification. If you find stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.								

Numerical Quantities Summary			
MQTh, Computed Maximum Qualified Throughput: % throughput difference, reported and reproducibility runs:			32,377.17 tpmC 0.08%
Response Times (in seconds)	90%	Average	Maximum
New-Order	0.74	0.41	5.11
Payment	0.64	0.32	4.18
Order-Status	0.66	0.34	5.06
Delivery (Interactive)	0.12	0.12	1.20
Delivery (Deferred)	0.40	0.23	0.91
Stock-Level	1.95	1.36	4.68
Menu	0.12	0.12	1.56
Transaction Mix (in percent of total transactions)		Total Occurrences	Percent
New-Order		971,315	44.85
Payment		931,527	43.01
Order-Status		87,600	4.05
Delivery		87,496	4.04
Stock-Level		87,668	4.05
Emulation Delay (in seconds)		Response Time	Menu
New-Order		0.1	0.1
Payment		0.1	0.1
Order-Status		0.1	0.1
Delivery		0.1	0.1
Stock-Level		0.1	0.1
Keying/Think Times (in seconds)	Minimum	Average	Maximum
New-Order	18.00 / 0.00	18.01 / 12.04	18.03 / 120.50
Payment	3.00 / 0.00	3.02 / 12.03	3.03 / 120.50
Order Status	2.00 / 0.00	2.01 / 10.05	2.02 / 100.50
Delivery	2.00 / 0.00	2.01 / 5.06	2.02 / 50.50
Stock-Level	2.00 / 0.00	2.01 / 5.04	2.03 / 50.49
Test Duration			
Ramp-up time			9 minutes
Measurement interval			30 minutes
Number of transactions (all types) completed in measurement interval			2,253,103
Ramp-down time			38 minutes
Number of checkpoints in measurement interval			1
Checkpoint interval			30 minutes