IBM	IBM @server xSeries 250 c/s with Microsoft SQL Server 2000	TPC-C Rev. 5.0 Upgrade from Rev. 3.5
		Report Date: April 12, 2001 (Original: October 25, 2000)

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
$297,277	**32,377.17 tpmC**	**$9.18 / tpmC**	**Oct. 25, 2000**

Processors	Database Manager	Operating System	Other Software	Number of Users
4 Intel® Pentium® III Xeon 700MHz 2MB L2 Cache	**Microsoft® SQL Server 2000 Enterprise Edition**	**Microsoft Windows® 2000 Advanced Server**	**Microsoft Visual C++ 6.0 Win32 Microsoft COM+**	**25,900**

25,900 PCs

4 x IBM Netfinity 5100
1 x 733MHz Pentium III

xSeries 250
4 x 700MHz Pentium III Xeon with 2MB L2 Cache
8GB Memory

17 x IBM Netfinity EXP300 Rack Storage Expansion Enclosures

4 x eXtremeRAID 2000 Adapter
1 x ServeRAID-4H Ultra160 SCSI

168 x 9.1GB Drives
68 x 18.2GB Drives

10BaseT   100BaseT
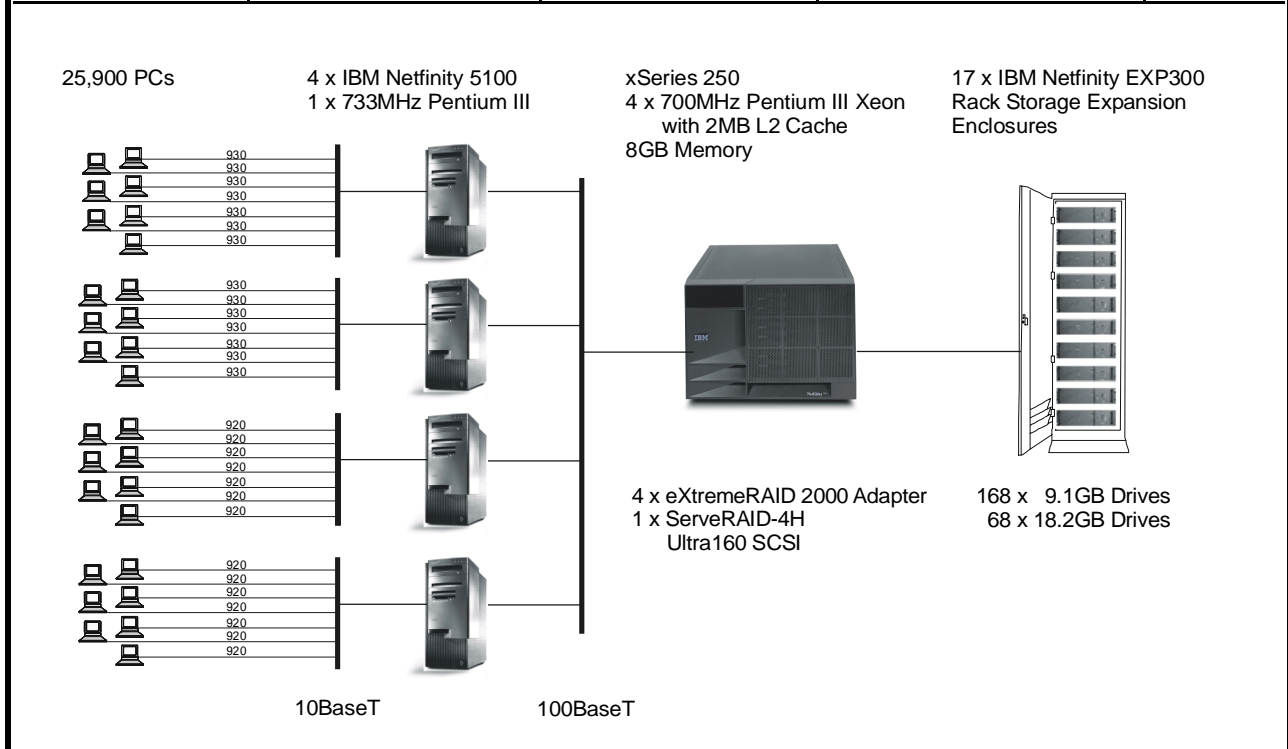
System Component	Qty	Server	Qty	Each of Four Clients
Processors **Cache**	**4**	**700MHz Pentium III Xeon w/2MB L2 Cache**	**1**	**733MHz Pentium III w/256KB L2 Cache**
Memory	**16**	**512MB**	**2**	**128MB**
Disk Controllers	**4**	**Mylex eXtremeRAID 2000**	**1**	**Ultra160 SCSI Onboard**
	1	**ServeRAID-4H Ultra160**		
Disk Drives			**1**	**9.1GB Hard Disk**
	168	**9.1GB (10000 rpm)**		
	68	**18.2GB (10000 rpm)**		
Total Storage				
Tape Drive		**2766.4GB**		
	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
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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	$8,203	1	$8,203	$2,495
700MHz/2MB L2 Cache Processor Upgrade	10K2332		1	3,625	3	10,875	0
512MB ECC SDRAM RDIMM Memory Kit	33L3117		1	1,277	15	19,155	0
Mylex eXtremeRAID 2000 Adapter***	E2000-4-32NB	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	168	1	168	90
20/40GB Internal SCSI Tape Drive	00N7991		1	879	1	879	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	299	168	50,232	0
18.2GB 10K-4 Ultra160 SCSI Drive	37L7205		1	467	68	31,756	0
					Subtotal	$194,616	$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							
IBM Netfinity 5100 / 733MHz/256KB Pentium III*	86582RY		1	2,052	4	$8,208	$5,980
9.1GB 10K Ultra160 SCSI Drive	37L7204		1	299	4	1,196	0
128MB 133MHz ECC SDRAM RDIMM	33L3123		1	185	4	740	0
10/100 Ethernet Server Adapter	06P3601		1	99	4	396	0
E54 15" (13.8" Viewable) Color Monitor*	6331N2N		1	168	4	672	360
					Subtotal	$11,212	$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	$278,067	$19,210

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:	$297,277
tpmC Rating:	32,377.17
$ / tpmC:	$9.18

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 that 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