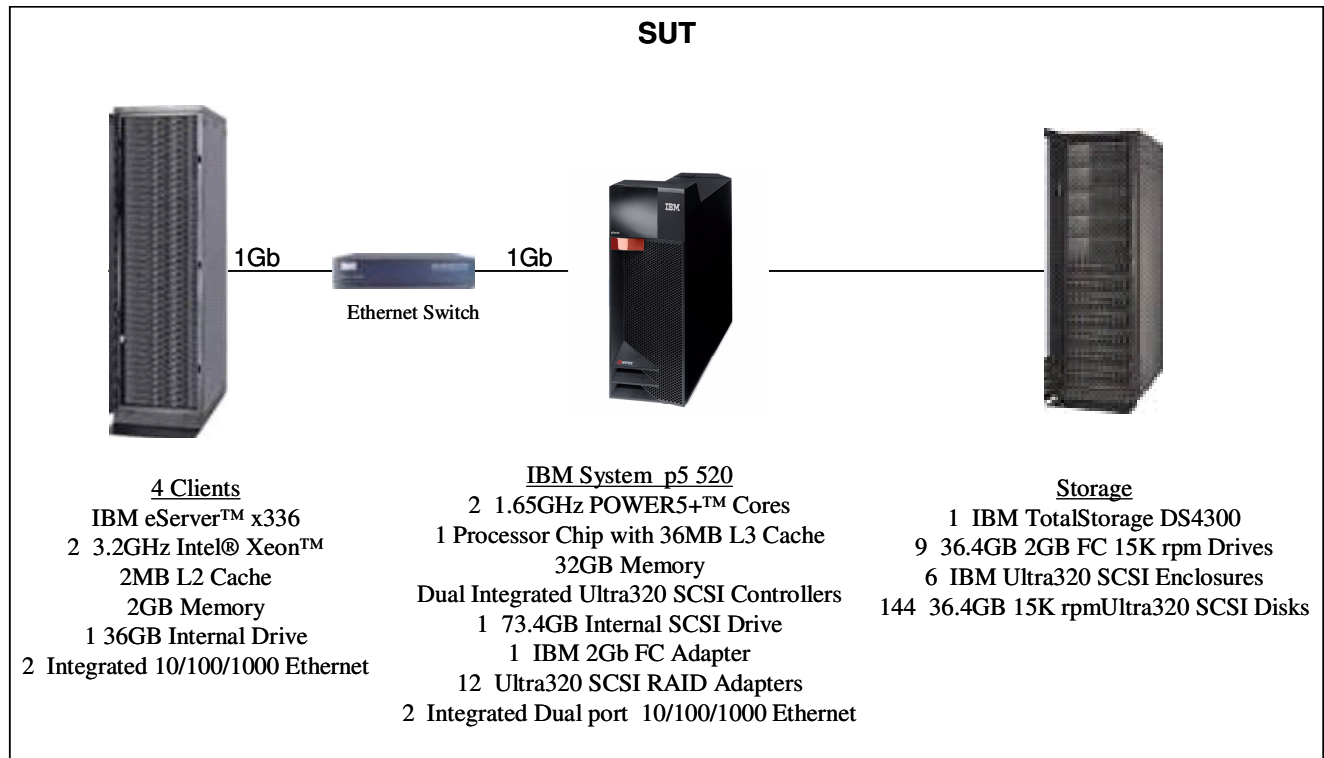


**IBM System p5 520
Model 9131-520**

TPC-C Rev. 5.7

Report Date: June 22, 2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$243,218 USD	81,439.30	\$2.99 USD	December 22, 2006	
Database Server Processor Chip/Core/Thread	Database Manager	Operating System	Other Software	No. Users
1/2/4	Sybase ASE	SUSE Linux 9	Microsoft COM+	65,920



System Components	Each of the 4 Clients		Server	
	Quantity	Description	Quantity	Description
Processors Chip/Core/Threads	2/2/4	3.2GHz 2MB L2 Xeon Processor	1/2/4	1.65GHz POWER5+™
Memory	2	1024 MB	4	8192 GB
Disk Controllers	1	Ultra320 SCSI	2 1 1 12	Integrated Ultra320 SCSI 2Gb FC Adapters IBM DS4300 Controller Ultra320 SCSI RAID Adapters
Disk Drives	1	36GB	1 9 144	73.4GB 15K RPM SCSI 36.4GB 15K RPM FC 36.4GB 15K RPM SCSI
Total Storage		1,476 GB		5642.6GB
Terminals	1	System Console	1	System Console

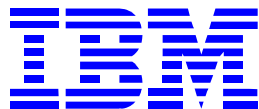


IBM System p5 520 Model 9131-520

TPC-C Rev. 5.7

Report Date: June 22, 2006

Description	Part No.	Src	Unit Price	Qty	Ext Price	Maint Price
Server Hardware						
IBM eServer p5 520	9131-52A	1	1,100	1	1,100	1,080
2 Gigabit Single-Port Fibre Channel Adapter	1977	1	1,399	1	1,399	
8192 (2x4096) DIMMs	1934	1	12,375	4	49,500	
73.4 GB 15K RPM Ultra320 SCSI Disk Drive Assembly	1971	1	518	1	518	
IDE Slimline DVD-ROM Drive	1994	1	207	1	207	
AC Power Supply, 850W	5159	1	417	1	417	
Power Cable - Drawer to IBM PDU, 14-foot, 250v/10A	6458	1	14	1	14	
Ultra320 SCSI 4-Pack	6574	1	244	1	244	299
IBM Deskside Cover Set	7184	1	150	1	150	
One Processor Entitlement for Processor Feature # 8323	7309	1	898	1	898	
Media Backplane Card	7877	1	120	1	120	
2-way 1.65 GHz POWER5 Processor Card, 36MB L3 Cache	8323	1	3,592	1	3,592	
Quiet Touch Keyboard - USB, Business Black, US English, #103P	8800	1	83	1	83	
Mouse - Business Black w/ Keyboard Attachment Cable	8841	1	62	1	62	
PCI-X Dual Channel Ultra320 SCSI RAID Adapter	5737	1	1,999	12	23,988	
I/O Drawer: 7311 Model D20	7311-D20	1	4,270	3	12,810	20,271
Remote I/O-2 (RIO-2) Cable, 3.5M	3147	1	550	4	2,200	
SPCN 3m Cable	6006	1	40	3	120	
RIO-2 Ports to I/O Planar Riser Card	6417	1	800	3	2,400	
HMC 1:7310-C04 Desktop Hardw.Mgmt.Console	7310-C04	1	1,830	1	1,830	
IBM T541H /L150p 15 inch TFT Color Monitor	3637	1	508	1	508	
Power Cord (6-foot), To Wall (125V, 15A)	6470	1	18	2	36	
Ethernet Cable, 6M, HMC to System Unit	7801	1	15	1	15	
			Subtotal		102,211	21,650
Storage						
DS4300 Midrange Disk (60U)	1722-60U	1	14,999	1	14,999	2,499
(19K1271) Short Wave SFP GBIC (LC)	2210	1	499	2	998	
(32P0768) 2Gb FC, 36.4GB/15K Drive Module	5212	1	1,115	9	10,035	
(19K1248) 5M Fibre Optic Cable (LC-LC)	5605	1	129	1	129	
(25R0091) DS4300 Linux for Power Host Kit	9202	1	4,000	1	4,000	
I/O Enclosure: IBM 7031 Ultra 320 SCSI Disk Storage Enclosure	7031-D24	1	2,999	6	17,994	10,626
36.4GB 15K rpm Ultra320 SCSI Disk Drive Assembly	3277	1	452	144	65,088	
Single Bus Ultra 320 SCSI Repeater Card	5741	1	499	24	11,976	
Single Bus Ultra 320 SCSI Repeater Card (10% spares)	5741	1	499	3	1,497	5,760
Ultra320 SCSI Cable 3 Meter	2125	1	140	24	3,360	
Power Supply for 7031 Model D24/T24 I/O Enclosure	6261	1	700	12	8,400	
Power Cord (14-foot) , 250V, 14A, IEC320/C13, IEC320/C14	6458	1	14	12	168	
			Subtotal		138,644	18,885



**IBM System p5 520
Model 9131-520**

TPC-C Rev. 5.7

Report Date: June 22, 2006

Server Software

HMC initial Software Support 3 Year	5639-RS3	1	N/C	1		
HMC Per Processor Software Support 3 Year	569	1	675	1		675
HMC Per Processor 24x7 Software Support 3 Year	570	1	236	1		236
SLES 9 with 3 year Subscription (1-2 Processors)	5639-SLP-3710	1	1,200	1	1,200	
3YR IBM SUPPORT PER CPU 24X7 for Linux	5773-LNX-0879	1	1,898	2		3,796
			Subtotal		1,200	4,707

Client Hardware and Software

xSeries 226 Express Model	86485AU	1	1,299	4	5,196	2,344
2GB (2x1GB Kit) PC2-3200 CL3 ECC DDR2 SDRAM RDIMM	39M5809	1	359	4	1,436	
36GB Hot-Swap 3.5" 15K RPM Ultra 320 SCSI HDD	90P1380	1	249	4	996	
3.2 GHz 800 MHz 2MB L2 Cache Xeon Processor	25R8901	1	649	4	2,596	
NetBay42 Standard Rack	93074SX	1	1,489	2	2,978	
Optical 3-Button Mouse - USB	90P0744	1	15	1	15	
Preferred Pro Full Size PS/2 Keyboard	25R6968	1	29	1	29	
IBM C117 17" CRT Monitor	49387NU	1	149	1	149	
			Subtotal		13,395	2,344

Third Party Hardware/Software

Sybase Adaptive Server Enterprise		2	4,995	2	9,990	7,770
Sybase Software Developer Kit(SDK)		2	1,495	1	1,495	987
Visual C++ Standard Edition	254-00170	3	109	1	109	
Microsoft Windows 2000 Server	C11-00821	3	738	4	2,952	
Microsoft Problem Resolution Services		3	245	1		245
3Com OfficeConnect Gigabit Switch 5	732835	4	53	3	159	
			Subtotal		14,705	9,002
			Total		270,155	56,588

IBM Total System Discounts* -83,525

Notes:

For pricing details and contact information please see appendix E
Pricing Sources: 1) IBM 2) Sybase 3) Microsoft 4)CDW

Three-Year Cost of Ownership 243,218
tpmC 81,439
\$/tpmC 2.99

*Discounts are based on US list prices for similar quantities & configurations including pre-payment for maintenance. The discount applies to the totality of all items with price source of "1"

Audited by: Francois Raab, Info Sizing (www.infosizing.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 the 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 p5 520 Model 9131-52A

MQTH, computed Maximum Qualified Throughput: 81,439.30 tpmC

<u>Response Times (in seconds)</u>	<u>90th %</u>	<u>Average</u>	<u>Maximum</u>
New Order	1.06	0.73	3.22
Payment	1.05	0.71	3.15
Order-Status	1.15	0.79	2.64
Delivery (interactive)	0.15	0.15	0.50
Delivery (deferred)	0.25	0.21	1.12
Stock-Level	1.45	0.96	2.50
Menu	0.14	0.12	0.55

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	44.94%
Payment	43.00%
Order-Status	4.02%
Delivery	4.01%
Stock-Level	4.00%

<u>Keying/Think Times (in seconds)</u>	<u>Min.</u>	<u>Average</u>	<u>Max.</u>
New Order	18.00/0.01	18.01/12.01	18.05/120.12
Payment	3.00/0.01	3.01/12.02	3.04/120.20
Order-Status	2.00/0.01	2.01/10.02	2.02/100.30
Delivery	2.00/0.01	2.01/5.02	2.04/50.20
Stock-Level	2.00/0.01	2.01/5.03	2.03/50.20

Test Duration

Ramp-up Time	28 minutes 30 seconds
Measurement interval	2 hours
Transactions during measurement interval (all types)	21,743,556
Ramp-down time	17 minutes

Checkpoints

Number of checkpoints	4
Checkpoint interval	29 minutes 50 seconds