



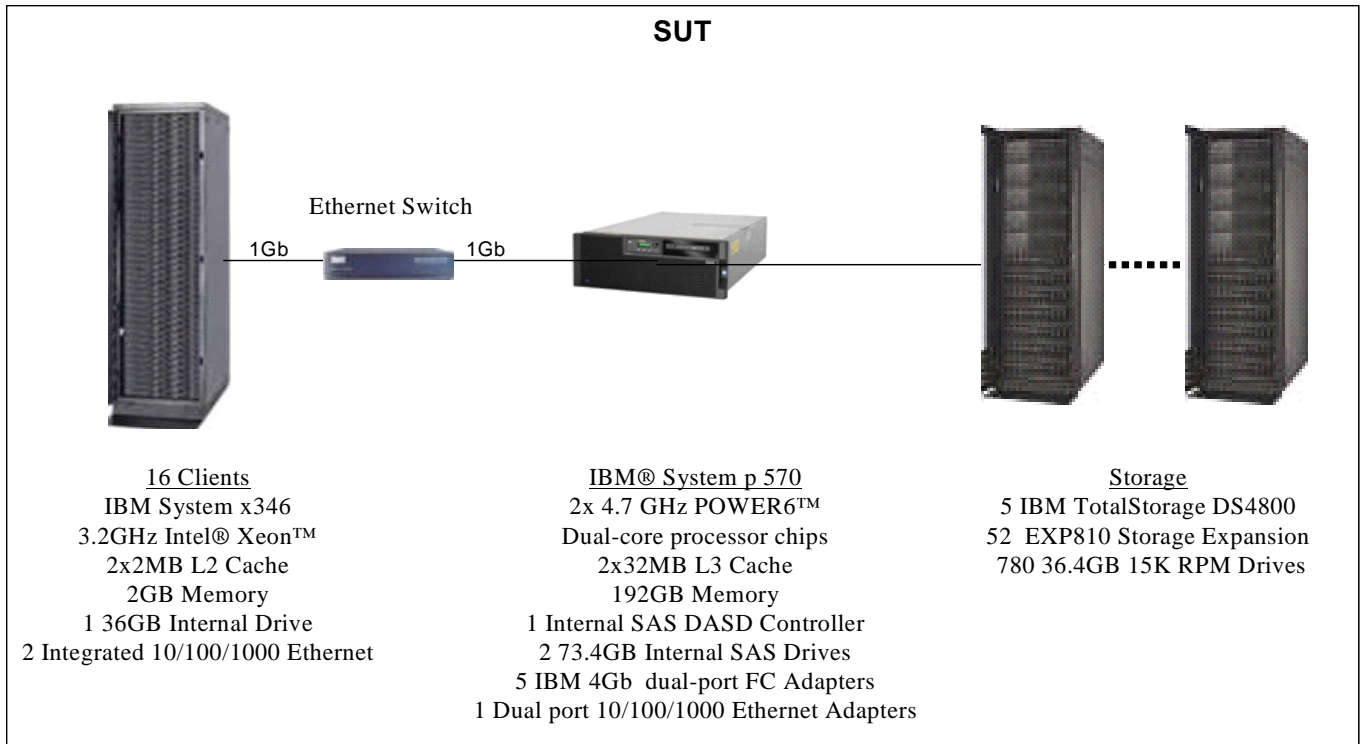
**IBM System p 570
Model 9117-MMA**

TPC-C Rev. 5.8

Report Date: August 6, 2007

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
1,417,121 USD	404,462.54	\$3.50 USD	November 26, 2007	
Processor Chips/Cores/Threads	Database Manager	Operating System	Other Software	No. Users
2/4/8 Power6 4.7GHz	Oracle Database 10g Enterprise Edition	AIX 5L V5.3	Microsoft Visual C++ Microsoft COM+	321,280

SUT



System Components	Server		Each of the 16 clients	
	Quantity	Description	Quantity	Description
Processor Chips/Cores/Threads	2/4/8	4.7GHz POWER6™	2/2/4	3.2GHz , 800MHz bus speed, 2MB L2 cache Xeon Processor
Memory	6	32GB	4	512 MB
Disk Controllers	1 5 5	Integrated SAS 4Gb Dual-port FC Adapters IBM System Storage DS4800	1	Ultra320 SCSI
Disk Drives	780 2	36.4GB 15K RPM 4Gb FC 73.4GB 15K RPM SAS	1	36 GB
Total Storage		25,603 GB		576 GB
Terminals	1	System Console	1	System Console



ORACLE

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Description	Part No.	Source	Unit Price	Qty	Ext Price	Maint Price
Server Hardware						
Server 1:9117 Model MMA	9117-MMA					
GX Dual Port- 12X Channel Attach	1802	1	1,499	1	1,499	
Op Panel (MMA)	1845	1	199	1	199	
73.4GB SAS DASD, 15K RPM	3646	1	659	2	1,318	
One Processor Activation for Processor Feature #7380	5403	1	23,000	4	92,000	15,840
P6 Processor Power Regulator	5625	1	1,500	3	4,500	
System CEC Enclosure with Bezel	5626	1	500	1	500	
AC Power Supply, 200-240v, 1500 Watt	5628	1	1,502	2	3,004	
Media Enclosure and Backplane	5629	1	185	1	185	
I/O Riser, 2x Serial, 2x p5IO2C E'net (Evans)	5636	1	399	1	399	
Service Processor Interface	5648	1	1,000	1	1,000	
Processor Enclosure and Backplane	5663	1	2,000	1	2,000	
I/O Backplane	5666	1	4,500	1	4,500	
System Midplane	5667	1	1,000	1	1,000	
SAS DASD Backplane, 6-pk	5668	1	1,051	1	1,051	
Activation of 1GB DDR2- P6 Memory	5680	1	1,515	192	290,880	
0/32GB DDR2 Memory (4X8GB) DIMMS- 400 MHz- POWER6 Memory	5696	1	26,886	6	161,316	
System Ship Group	5699	1	20	1	20	
IDE Slimline DVD-ROM Drive	5756	1	275	1	275	
2-Port 10/100/1000 Base-TX Ethernet PCI	5767	1	699	1	699	
Line Cord, DRWR TO IBM PDU, 14', 200-240V/10A,	6458	1	19	2	38	
Rack Mount kit for IBM 19" rack	7164	1	222	1	222	
4.7GHz POWER6 -2 Core Processor Card, 0-core active	7380	1	11,500	2	23,000	8,592
Power Distribution Backplane	7870	1	265	1	265	
IO Drawer 7314-G30	7314-G30	1	2,850	1	2,850	5,081
1.5M 12X ENHANCED IB CABLE	1830	1	400	2	800	
4 Gb Dual-Port Fibre Channel PCI-X 2.0 DDR	5759	1	2,499	5	12,495	
POWER CONTROL CABLE, 3M, (SPCN)	6006	1	40	2	80	
AC Power Supply 300 Watt	6270	1	300	2	600	
Dual Port 12X Channel Adapter	6446	1	575	1	575	
Line cord	6458	1	14	2	28	
Planer and Tray Assembly	6590	1	1,300	1	1,300	
Power Control SPCN	6631	1	250	1	250	
I/O Drawer Mounting Enclosure	7314	1	525	1	525	
Rack Model T00	7014-T00	1	2,920	1	2,920	768
Front Trim Kit For 1.8 Meter Rack (Black)	6246	1	158	1	158	
Side Panel (Black)	6098	1	150	2	300	
PDU to 14', 200-240V/24A, UTG0247, PT#12	6654	1	240	1	240	
HMC 1:7310-C05 Desktop Hardw.Mgmt.Console	7310-C05	1	1,830	1	1,830	1,344
IBM ThinkVision C170 17-inch Color Monitor	3631	1	250	1	250	
Power Cord (6-foot), To Wall Plug Type #4	6470	1	18	2	36	
Ethernet Cable, 6M, HMC to System Unit	7801	1	15	1	15	
Keyboard - English, #103P	8800	1	104	1	104	
Mouse - Attachment Cable	8841	1	78	1	78	
				Subtotal	625,499	38,771
Storage						
DS4800 Disk System Model 82	1815-82A	1	53,995	5	269,975	
DS4800 8-Storage Partitions	8870	1	10,000	5	50,000	
(22R4255) DS4800 AIX Host Kit	7711	1	7,000	5	35,000	
DS4000 EXP810 Enclosure	1812-81A	1	6,000	52	312,000	
36GB/15K Drive 4Gb FC disks	5412	1	892	780	695,760	
Short Wave SFP	2410	1	998	52	51,896	
Fiber Cable 25m	5625	1	189	10	1,890	
Fiber Cable 1m	5601	1	79	104	8,216	
3 Year Warranty Service Upgrade 1812-81A 24x7x4		1	960	52		49,920
3 Year Warranty Service Upgrade 1815-82A 24x7x4		1	3,200	5		16,000
				Subtotal	1,424,737	65,920



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Server Software

AIX 5.3 (media only)	5692-A5L	1	50	1	50	
AIX Software per Processor	5765-G03	1	1,225	4	4,900	
Software Maintenance for AIX, 3 Year	5773-SM3	1				
F5 3 Yr SWMA for AIX per Processor	466	1	1,958	4		7,832
F5 3 yr Services 7x24 Support per Processor	468	1	496	4		1,984
Partition Load Manager SW Maint: 3 year	5773-PLM	1				
F5 3 Yr SWMA for AIX per Processor	627	1	55	4		220
F5 3 yr Services 7x24 Support per Processor	628	1	14	4		56
VIO Software Maintenance (3Y)	5773-VIO	1				
Per Processor F5 VIO 3 Yr Maintenance	573	1	245	4		980
Per Processor F5 VIO 3 Yr Maint 24x7 Support	574	1	64	4		256
Initial Software Support 3 Year	5773-RS3					
Per Processor Software Support 3 Year	569	1	675	1		675
Per Processor 24x7 Software Support 3 Year	570	1	236	1		236
C for AIX user Lic+SW maint 12 MO	D5A1DLL	1	515	1	515	
C for AIX user annual SW maint renewal	E1A1FLL	1	103	2		206
Oracle Database 10g Enterprise Edition, Per Processor, Unlimited Users, 3 years		4	20,000	3	60,000	
Oracle Database Server Support Package for 3 years		4	2,000	3		6,000
			Subtotal		65,465	18,445

Client Hardware and Software

Base or packages: x346 Base w/3.2GHz,DVD,IO,POWER	8840AC1	1	1,803	16	28,848	9,600
Additional processors: Additional 3.2GHz 800MHz 2MB L2 Cache	1356	1	699	16	11,184	
Memory: 512MB DDR-II SDRAM DIMM	541	1	135	64	8,640	
36GB 15K Hot Swap SCSI	5168	1	249	16	3,984	
NetBAY S2 42U Standard Rack Cabinet	93074RX	1	1,489	4	5,956	
Optical 3-Button Mouse - USB	40K9201	1	19	1	19	
Preferred Pro Full Size PS/2 Keyboard	40K9584	1	29	1	29	
IBM C117 17" CRT Monitor	49387NU	1	149	1	149	
			Subtotal		58,809	9,600

Third Party Hardware/Software

Visual C++ Standard Edition	254-00170	2	109	1	109	
Microsoft Windows 2003 Server	P73-00295	2	719	16	11,504	
Microsoft Problem Resolution Services		2	245	1	245	245
3Com Baseline Switch 2824 24-port unmanaged Gigabit	512294	3	290	3	870	
			Subtotal		12,728	245

Total 2,187,238 132,981
Oracle Mandatory E-Business Discount -6,600
Total IBM Discounts* -896,498

Three-Year Cost of Ownership 1,417,121

Notes:

For pricing details and contact information please see appendix E

Pricing Sources: 1) IBM 2) Microsoft 3) CDW 4) Oracle

*Discounts are based on US list prices for similar quantities & configurations including pre-payment for maintenance. The discount of 40% applies to the totality of all items with price source of "1".

tpmC 404,462
\$/tpmC 3.50

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 p 570 Model 9117-MMA

MQTH, computed Maximum Qualified Throughput: 404,462.54 tpmC

<u>Response Times (in seconds)</u>	<u>90th %</u>	<u>Average</u>	<u>Maximum</u>
New Order	0.69	0.34	15.02
Payment	0.68	0.33	6.39
Order-Status	0.69	0.34	5.67
Delivery (interactive)	0.10	0.10	4.91
Delivery (deferred)	0.03	0.02	0.4
Stock-Level	0.68	0.33	7.74
Menu	0.10	0.10	8.26

Response time delay added for emulated components 0.1 seconds

<u>Transaction Mix, in percent of total transactions</u>	<u>Percent</u>
New Order	44.96%
Payment	43.01%
Order-Status	4.00%
Delivery	4.00%
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	18.04/120.10
Payment	3.00/0.01	3.01/12.01	3.04/120.10
Order-Status	2.00/0.01	2.01/10.02	2.03/100.10
Delivery	2.00/0.01	2.01/5.01	2.03/50.10
Stock-Level	2.00/0.01	2.01/5.01	2.03/50.10

Test Duration

Ramp-up Time	1 hour 2 minutes
Measurement interval	2 hours 00 minutes
Transactions during measurement interval (all types)	107,950,507
Ramp-down time	15 minutes

Checkpoints

Number of checkpoints	4
Checkpoint interval	28.05 minutes