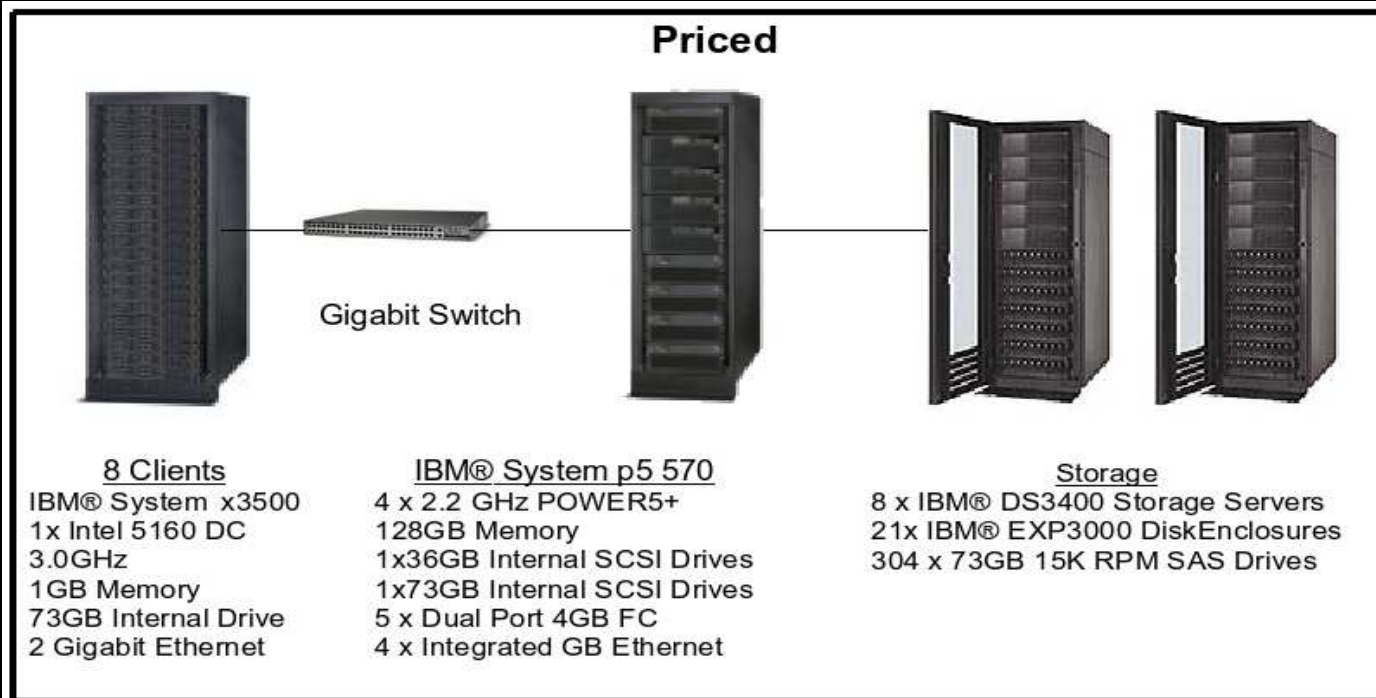
	IBM Power 570 Oracle 10g Release 2 Enterprise Edition		TPC-C Rev. 5.8	
			Report Date: October 4, 2007 Revised: July 16, 2008	
Total System Cost	TPC-C Throughput	Price/Performance		Availability Date
\$574,615 USD	236,271	\$2.43 USD		April 4, 2008
Database Processors/Cores/Threads	Database Manager	Operating System	Other Software	No. Users
4/4/8 2.2 GHz POWER5+	Oracle 10g R2	RHEL 5	Microsoft Visual C++ Microsoft COM+	189,440



System Components	Each of the 8 Clients		Server	
	Quantity	Description	Quantity	Description
Processors/Cores/ Threads	1/2/2	3.0GHz 2MB L2 Xeon 5160 Dual Core	4/4/8	2.2 GHz POWER5+
Memory	1	1GB	8	16 GB
Disk Controllers	1	SAS	2 5 7 1	Ultra 320 integrated SCSI 4Gb dual-port FC Adapters IBM DS3400 Controllers for Data IBM DS3400 Controller for Log
Disk Drives	1	73 GB	304 1 1	73GB 15K RPM SAS 36GB 15K RPM SCSI 73GB 15K RPM SCSI
Total Storage		288 GB		22,301 GB
Terminals	1	System Console	1	System Console

IBM Corporation	IBM Power 570				TPC-C Revision 5.8			
	Oracle 10g Release 2 Enterprise Edition				Report Date: October 4, 2007			
					Revised Date: July 16, 2008			
Description	Part Number	Brand	Pricing Source	Unit Price	Quantity	Extended Price	3-Yr. Maint.	
Server Hardware								
IBM System p5 570	9117-570	IBM	1	3,867	1	3,867	36,333	
2-Way 2.2GHz POWER5+ Processor Card, 0-way active, 8 DDR2	8338	IBM	1	6,850	4	27,400		
One way Processor Activation for Processor FC 8338	7618	IBM	1	13,700	4	54,800		
Op Panel	1846	IBM	1	199	1	199		
Processor Cable	1847	IBM	1	2,647	1	2,647		
SP Flex Cable	1857	IBM	1	1,324	1	1,324		
16GB (4x4GB) DIMMS, 276 PIN, 533MHz, DDR2 SDRAM	4497	IBM	1	30,310	8	242,480		
73.4GB 15K RPM Ultra320 SCSI Disk Drive	3278	IBM	1	659	2	1,318		
4Gb Dual Port Fibre Channel	5759	IBM	1	3,308	5	16,540		
IDE Slimline DVD-ROM Drive	2640	IBM	1	274	1	274		
Processor Power Regulator	7768	IBM	1	675	6	4,050		
CEC Backplane	7865	IBM	1	1,588	2	3,176		
I/O Backplane	7866	IBM	1	5,426	2	10,852		
Midplane	7867	IBM	1	662	2	1,324		
DASD Backplane	7868	IBM	1	1,588	2	3,176		
Media Backplane	7869	IBM	1	185	1	185		
Power Midplane	7870	IBM	1	265	2	530		
System Port Riser Card	7878	IBM	1	132	2	264		
AC Power Supply, 240V, 1400W	7888	IBM	1	1,059	4	4,236		
FSP Service Processor Card	7997	IBM	1	860	1	860		
Power Cord, Drawer to IBM PDU 250V/10A	6671	IBM	1	19	4	76		
IBM Rack-mount Drawer Rail Kit	7164	IBM	1	222	2	444		
System Drawer Enclosure w/Bezel	7300	IBM	1	463	2	926		
Desktop Hardware Management Console	7310-C05	IBM	1	1,830	1	1,830		
IBM T541H/L150P 15" TFT Display	3637	IBM	1	508	1	508		
IBM Full Width USB Keyboard	5951	IBM	1	104	1	104		
IBM 3-Button Optical Mouse - Black - USB	8841	IBM	1	78	1	78		
					Subtotal	383,468	36,333	
Server Storage								
IBM System Storage EXP3000	1727-HC1	IBM	1	3,199	21	67,179		
IBM 3M SAS cable	39R6531	IBM	1	135	42	5,670		
IBM EXP3000 Environmental Services Module (ESM)	39R6515	IBM	1	999	21	20,979		
IBM System Storage DS3400 Dual Controller Express	1726-42E	IBM	1	6,702	8	53,616		
IBM Hot-Swap 3.5 inch 73.4GB 15K SAS HDD	40K1043	IBM	1	309	304	93,936		
IBM S2 42U Standard Rack	93074RX	IBM	1	1,489	2	2,978		
D-LINK DGS-1024D 24-Port 10/100/1000 Switch (2 spares)	DGS1024D	compuplus	5	200	3	600		
ServicePac for 3-Year 24x7x4 Support (DS3400)	44J8073	IBM	1	1,300	8		10,400	
ServicePac for 3-Year 24x7x4 Support (EXP3000)	41L2768	IBM	1	760	21		15,960	
ServicePac for 3-Year 24x7x4 Support (Rack)	41L2760	IBM	1	300	2		600	
					Subtotal	244,958	26,960	
Server Software								
Oracle Database 10g Release 2 Enterprise Edition, Per Processor, Unlimited Users 3 years		Oracle	2	23,750	*3	71,250		
Oracle Database Server Support Package for 3 years		Oracle	2	2,300	3		6,900	
Oracle Mandatory E-Business Discount		Oracle	2			(7,815)		
Red Hat Enterprise Linux Advanced Platform, Premium		Redhat	3	6,747	1	6,747		
					Subtotal	70,182	6,900	
Client Hardware								
x3500 (Dual-Core Intel Xeon 5160 3.00GHz, 2x512MB RAM)	797792U	IBM	S 1	2,999	8	23,992		
73GB 15K SAS Hot-Swap Drive	40K1043	IBM	S 1	309	8	2,472		
ServicePac for 3-Year 24x7x4 Support (x3500)	96P2250	IBM	S 1	586	8		4,688	
					Subtotal	26,464	4,688	
Client Software								
Microsoft Windows Server 2003 Web Edition with COM+	P70-00275	CDW	6	400	8	3,200		
Visual Studio Standard 2005	127-00012	Microsoft	4	250	1	250		
Microsoft Problem Resolution Services		Microsoft	4	245	1		245	
					Subtotal	3,450	245	
					Total	728,522	75,126	
						Total IBM Discounts*	\$229,033	
						Three-Year Cost of Ownership USD:	\$574,615	
						tpmC:	236,271	
						\$ USD/tpmC:	\$2.43	
For pricing details and contact information please see appendix D.								
1) IBM 2) Oracle: MaryBeth Pierantoni, mary.beth.pierantoni@oracle.com, 916-315-5081								
* 3 = 0.75 * 4. Explanation: For the purposes of counting the number of processors which require licensing, a multicore chip with "n" cores shall be determined by multiplying "n" cores by a factor of .75.								
3) Redhat, 4) Microsoft.com, 5) compuplus.com, 6) CDW.com								
Substitution Notes: Eight x335s were substituted for the priced clients. 73GB drives were substituted for 36GB drives. See FDR.								
*Discounts are based on US list prices for similar quantities & configurations including pre-payment for maintenance.								
The discount of 35% applies to the totality of all items with price source of "1".								
Audited by Francois Raab, InfoSizing, Inc. (www.sizing.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 stated prices are not available according to these terms, please inform the TPC at pricing @ tpc.org.								

Numerical Quantities Summary for the IBM Power 570

MQTH, computed Maximum Qualified Throughput: 236,271 tpmC

<u>Response Times (in seconds)</u>	<u>90th %</u>	<u>Average</u>	<u>Maximum</u>
New Order	1.27	0.44	7.36
Payment	1.29	0.43	7.01
Order-Status	1.28	0.44	7.04
Delivery (interactive)	0.47	0.18	5.52
Delivery (deferred)	0.08	0.04	1.70
Stock-Level	1.25	0.42	4.22
Menu	0.48	0.18	6.86

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	44.91%
Payment	43.03%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.01%

<u>Keying/Think Times (in seconds)</u>	<u>Min.</u>	<u>Average</u>	<u>Max.</u>
New Order	18.00/0.01	18.01/12.02	18.02/120.20
Payment	3.00/0.01	3.01/12.01	3.02/120.20
Order-Status	2.00/0.01	2.01/10.01	2.02/100.10
Delivery	2.00/0.01	2.01/5.02	2.02/50.20
Stock-Level	2.00/0.01	2.01/5.02	2.02/50.20

Test Duration

Ramp-up Time	1 hour 24 minutes
Measurement interval	2 hours 30 minutes
Transactions during measurement interval (all types)	78,913,123

Checkpoints

Number of checkpoints	5
Checkpoint interval	29 minutes 36 seconds