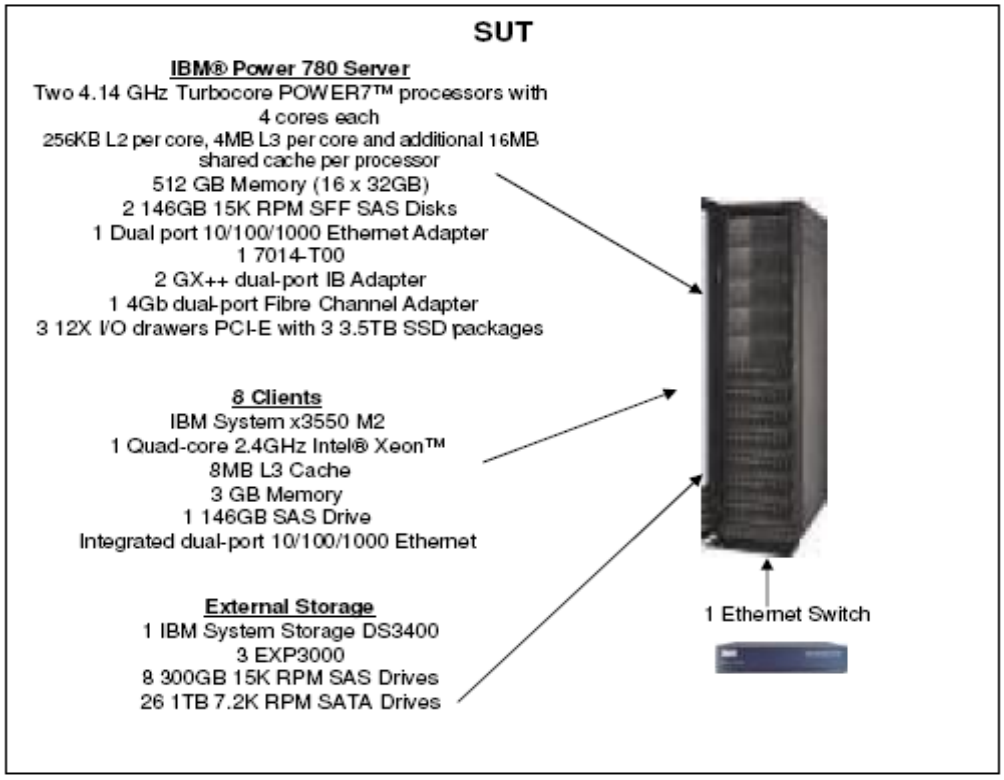
IBM	IBM Power 780 Model 9179-MHB	TPC-C Rev. 5.10.1 Report Date: April 13, 2010

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
$825,004 USD	**1,200,011**	$0.69 USD	**October 13, 2010**

Database Server Processors/Cores/Threads	Database Manager	Operating System	Other Software	No. Users
2/8/32 POWER7 4.14GHz	DB2 9.5	AIX V6.1	Microsoft Visual C++ Microsoft COM+	962,370



System Components	Server		Each of the 8 Clients	
	Quantity	Description	Quantity	Description
Processors /Cores/Threads	2/8/32	4.14GHz POWER7	1/4/8	2.4GHz Intel Xeon
Memory	16	32GB	3	1 GB
Disk Controllers	1	4 Gb FC Adapter	1	SAS Controller
Disk Drives	3 8 26 2	3.5TB SSD Package 300GB 15K RPM SAS 1TB 7.2K RPM SATA 146GB 15K RPM SFF SAS	1	146GB 10K RPM SAS
Total Storage		37,609GB		136.61GB
Terminals	1	System Console	1	System Console

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Description	Part No.	Source	Unit Price	Qty	Ext Price	Maint Price
Server Hardware						
Server 1:9179-MHB Base MTM	9179-MHB	1	10,195	1	10,195	8,315
IBM MMB DRWR, IBM BEZEL +CHASSIS/IBM LABELS+	5597	1	12,000	1	12,000	
AC POWER SUPPLY, 200-240V, 1725 WATT	5632	1	1,502	2	3,004	
FSP1 FLEXIBLE SERVICE PROCESSOR CARD	5664	1	4,000	1	4,000	
QUAD (2X RJ45 1GB / 2X SFP+ 10GB) HEA	1803	1	699	1	699	
GX++ DUAL-PORT IB ADPTR	1808	1	1,499	2	2,998	
1.5 Meter 12X DDR Cable	1862	1	524	8	4,192	
SAS Cable (X) Adapter to SAS Enclosure	3661	1	197	1	197	
PWR CBL, DRWR TO IBM PDU, 9' 200-240V/10A	6671	1	19	8	152	
IBM/OEM Rack MTG RAIL kit, ADJUSTABLE DEPTH	7164	1	222	2	444	
OPERATOR PANEL + SHIP GROUP, P7 MR	1853	1	1,000	1	1,000	
3.8 / 4.1GHZ, 0/16w Core POWER7, 16 DDR3 Memory Slots	4982	1	57,429	1	57,429	6,072
1W PROCESSOR ACTIVATION FOR FC 4982	5469	1	8,375	8	67,000	23,040
0/128GB(4X32GB) SDRAM DDR3 DIMMS, 1066MHZ	5602	1	15,440	4	61,760	
1GB DDR3 MEMORY ACTIVATION	8212	1	245	512	125,440	
146GB 15K RPM SFF SAS DISK	1886	1	1,045	2	2,090	
System AC Power Supply, 1725 w	5632	1	1,652	2	3,304	
DISK/MEDIA BACK PLANE, 6X SFF DISK BAYS, 1X SA	5652	1	4,000	1	4,000	
SATA Slimeline DVD-RAM Drive	5762	1	392	1	392	
12X I/O DRAWER PCIE, SFF Disk	5802	1	14,277	3	42,831	23,400
4 Gigabit Fibre Channel dual-port PCI-X Adapter (Jack)	5759	1	3,308	1	3,308	
IBM 2-port 10/100/1000 Base-TX PCI Express Adapter	5767	1	692	1	692	
Power Control Cable (SPCN) - 3 Meter	6006	1	52	4	208	
Dual Port 12X Channel Attach - Short Run	6446	1	755	1	755	
I/O Drawer Mounting Enclosure	7314	1	687	1	687	
Front Door OEM (Black)	6246	1	970	1	970	
Side Panel (Black)	6098	1	150	2	300	
PDU to 14', 200-240V/24A, UTG0247, PT#12	6654	1	240	2	480	
Power Dist Unit-Side Mount, Universal UTG0247	7188	1	1,000	2	2,000	
HMC 1:7042-C07 Desktop Hardw.Mgmt.Console	7042-C07	1	1,830	1	1,830	1,344
IBM T117 FLAT PANEL MONITOR	3645	1	875	1	875	
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	5951	1	107	1	107	
USB Mouse	8845	1	39	1	39	
3.5 TB SSD Package	FC4367	1	98,114	3	294,342	50,400
IBM 36U Enterprise Rack	7014-T00	1	2,920	1	2,920	768
DPI Single-phase 30A/208V C19 Enterprise PDU (US)	6062	1	669	2	1,338	
				Subtotal	714,029	113,339
Storage						
DS3400	1726-42E	1	9,292	1	9,292	1,300
EXP3000	1727-01X-2676	1	3,199	3	9,597	2,280
1 TB 7.2K rpm SATA 1000GB	1727-01X-5561	1	1,199	26	31,174	
300GB HS 15K SAS HDD	5532	1	699	8	5,592	
SAS Cables 0.6 Meters	3688	1	119	4	476	
Fiber Cable 1m	5601	1	79	2	158	
				Subtotal	56,289	3,580
Server Software						
AIX V6 (media only)	5692-A6P	1	50	1	50	
AIX 6 for POWER V6.1	5765-G62	1	2,600	8	20,800	
AIX per processor SWMA Large Power 7 (3Y)	5773-SM3-1260	1	1,755	8		14,040
AIX per processor SWMA Large Power 7 24x7 Upgrade (3Y)	5773-SM3-1261	1	718	8		5,744
HMC Software SUB (3Y)	5773-0570	1	461	1		461
HMC Software Support (3Y)	5773-0569	1	675	1		675
C for AIX user Lic+SW maint 12 MO	D5A1DLL	1	1,140	1	1,140	
C for AIX user annual SW maint renewal	E1A1FLL	1	228	2		456
DB2 9.5 Enterprise Proc Lic/1 year Maintenance		1	405	960	388,800	
DB2 9.5 Enterprise Edition Proc Maint Renew		1	81	1,920		155,520
				Subtotal	410,790	176,896

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Client Hardware and Software						
IBM System x3550 M2 (Quad-core Xeon 2.4GHz)	7946AC1	1	3,316	8	26,528	
1 GB memory	3963	1	85	24	2,040	
146GB 10K RPM SAS SFF	5537	1	269	8	2,152	
Optical 3-Button Mouse - USB	8913	1	19	1	19	
Preferred Pro Full Size PS/2 Keyboard	40K9584	1	29	1	29	
ServicePac for 3-Year 24x7x4 Support	6756298	1	450	8		3,600
IBM T115 15" TFT Monitor	494215U	1	209	1	209	
				Subtotal	**30,977**	**3,600**
Third Party Hardware/Software						
Microsoft Visual Studio 2008 Professional	127-00166	2	799	1	799	
Windows Web Server 2008 R2	LWA-00984	2	469	8	3,752	
Microsoft Problem Resolution Services		2	259	1	259	245
3Com Baseline Switch 2824 24-port unmanaged Gigabit	1931828	3	297	1	297	
				Subtotal	**5,107**	**245**
Total					**1,217,192**	**297,660**
Total IBM Discounts*						**-689,848**
Three-Year Cost of Ownership						**825,004**
tpmC						**1,200,011**
$/tpmC						**0.69**

Notes:
For pricing details and contact information please see appendix D.
Pricing Sources: 1)IBM 2)Microsoft 3)CDW
*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 sources 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 Power 780 Server Model 9179-MHB

MQTH, computed Maximum Qualified Throughput: 1,200,011 tpmC

Response Times (in seconds)	90th %	Average	Maximum
New Order	0.694	0.403	12.522
Payment	0.689	0.397	12.229
Order-Status	0.684	0.395	9.244
Delivery (interactive)	0.459	0.234	8.912
Delivery (deferred)	0.48	0.26	10.42
Stock-Level	0.719	0.421	9.801
Menu	0.464	0.236	12.411

Response time delay added for emulated components was 0.1 seconds

Transaction Mix, in percent of total transactions	Percent
New Order	44.963%
Payment	43.007%
Order-Status	4.012%
Delivery	4.008%
Stock-Level	4.010%

Keying/Think Times (in seconds)	Min.	Average	Max.
New Order	18.01/0.01	18.01/12.02	18.03/120.21
Payment	3.01/0.01	3.01/12.02	3.03/120.21
Order-Status	2.01/0.01	2.01/10.01	2.03/100.10
Delivery	2.01/0.01	2.01/5.02	2.03/50.20
Stock-Level	2.01/0.01	2.01/5.02	2.03/50.21

Test Duration	
Ramp-up Time	1 hour 11 minutes 39 secs
Measurement interval	2 hours 0 minutes
Transactions during measurement interval (all types)	320,264,245
Ramp-down time	30 minutes

Checkpoints	
Number of checkpoints	N/A
Checkpoint interval	N/A