

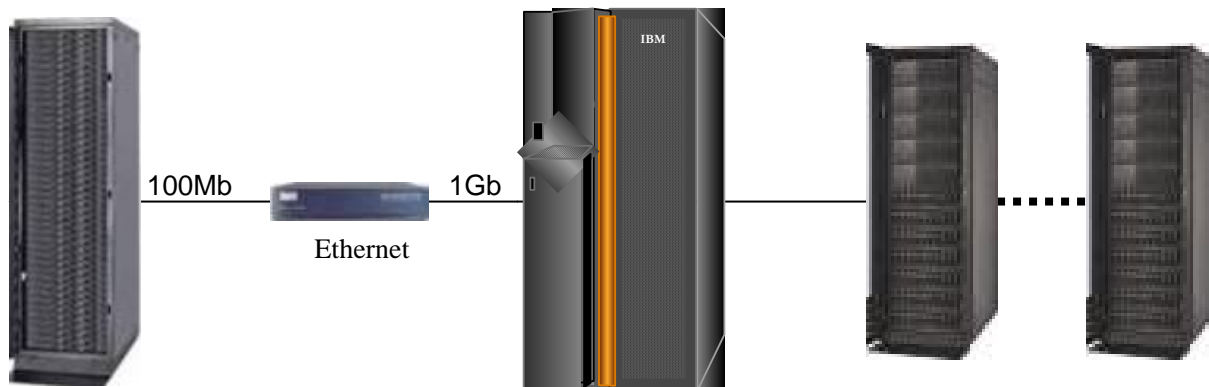
**IBM eServer p5 570  
Model 9117-570**

TPC-C Rev. 5.3

Report Date: July 12, 2004

<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price/Performance</b>	<b>Availability Date</b>	
<b>\$4,004,491 USD</b>	<b>809,144.09</b>	<b>\$4.95 USD</b>	<b>September 30, 2004</b>	
<b>Processor Chips/Cores/Threads</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>	<b>No. Users</b>
8/16/32	DB2 UDB 8.1	AIX 5L V5.3	Microsoft COM+	640,000

**SUT**



32 Clients  
 IBM eServer™ x335  
 2x3.2GHz Intel® Xeon™  
 1MB L3 Cache  
 2GB Memory  
 1 80GB Internal Drive  
 2 Integrated 10/100/1000

IBM® eServer™ p5 570  
 8 Processor chips with  
 16x 1.9GHz POWER5™ Cores  
 36MB L3 Cache per Chip  
 512GB Memory  
 8 Internal Ultra4 SCSI  
 3 36GB Internal SCSI Drives  
 2 72GB Internal SCSI Drives  
 22 IBM FAStT 2Gb FC Adapters  
 8 Integrated Dual port 10/100/1000 Ethernet

Storage  
 11 IBM FAStT 900 Storage Servers  
 124 IBM FAStT 700 Enclosures  
 1600 36.4GB 15K RPM Drives  
 40 73.4GB 15K RPM Drives

System Components	Each of the 32 Clients		Server	
	Quantity	Description	Quantity	Description
<b>Processors</b>	2	3.2GHz 1MB L3 Xeon Processor	16	1.9GHz POWER5™
<b>Memory</b>	4	512 MB	16	32GB
<b>Disk Controllers</b>	1	EIDE	8 22 11	Integrated Ultra4SCSI FAStT 2Gb FC IBM FAStT900 Controllers
<b>Disk Drives</b>	1	80 GB	1600 40 3 2	36.4GB 15K RPM FC 73.4GB 15K RPM FC 36.4GB 10K RPM SCSI 73.4GB 10K RPM SCSI
<b>Total Storage</b>		2560 GB		614,320 GB
<b>Terminals</b>	1	System Console	1	System Console



# IBM eServer p5 570 Model 9117-570

TPC-C Rev. 5.3

Report Date: July 12, 2004

Description	Part No.	Source	Unit Price	Qty	Ext Price	Maint Price
<b>Server Hardware</b>						
IBM eServer p5 570 Acnhor Card VPD	9117-570	1	1,000	1	1,000	92,010
Headless Enclosure	7879	1	350	4	1,400	
I/O Backplane	7866	1	4,100	4	16,400	
System Midplane	7867	1	500	4	2,000	
SCSI disk backplane	7868	1	1,200	4	4,800	
Power Distribution Backplane	7870	1	200	4	800	
Serial Port Riser Card	7878	1	100	4	400	
Power Supply	7888	1	800	8	6,400	
L4 1.9 Processor 0/2Way	7832	1	10,900	8	87,200	
1-way Activation for 7832	7898	1	21,800	8	174,400	
1-way Activation for 7832 - \$0 Priced Value Pack	8454	1		8		
Media Backplane	7869	1	140	1	140	
CEC Backplane	7865	1	1,200	4	4,800	
L4 CPU Regulator	7875	1	1,100	12	13,200	
L4 FSP Card	7881	1	650	1	650	
IDE DVDROM, Slim Line	2640	1	378	1	378	
32GB (4x8000MB)	4492	1	103,000	16	1,648,000	
DASD 73.4 10K rpm	3274	1	1,400	2	2,800	
DASD 36.4 10K rpm	3273	1	750	3	2,250	
Line Cords	6458	1	14	8	112	
Op Panel	1846	1	150	1	150	
SMP Flex Cable - 4 encl	1849	1	13,500	1	13,500	
FSP Flex Cable - 4 encl	1859	1	5,600	1	5,600	
Hardware Management Console	7315-C03	1	2,535	1	2,535	144
HMC Cable	8121	1	62	1	62	
Quiet Touch Keyboard	8800	1	83	1	83	
Mouse	8841	1	62	1	62	
Model D20 I/O Drawer	7311-D11	1	4,461	4	17,844	11,136
Remote I/O Cable, 1.2M	3146	1	417	4	1,668	
SPCN 2m Cable: Drawer to Drawer	6001	1	25	5	125	
AC Power Supply, 250W	6278	1	375	8	3,000	
RIO-2 Ports to I/O Planar Riser Card	6431	1	900	4	3,600	
Rack Mount enclosure	7311	1	417	2	834	
2 Gigabit Fibre Channel PCI-X Adapter	5716	1	2,267	22	49,874	
Rack Model T00 - 6098, 6107	7014-T00	1	3,370	1	3,370	768
				<b>Subtotal</b>	<b>2,069,437</b>	<b>104,058</b>
<b>Storage</b>						
FAST EXP 700	1740-1RU	1	6,000	124	744,000	
Short Wave SFP	2210	1	499	518	258,482	
2Gb FC, 36.4GB/15K Drive	5212	1	1,115	1,600	1,784,000	
2Gb FC, 73.4GB/15K Disk Module	5213	1	2,099	40	83,960	
FAST900 Storage Server	1742-90U	1	66,500	11	731,500	
Fiber Cable 25m	5625	1	189	22	4,158	
Fiber Cable 1m	5601	1	79	228	18,012	
Fiber Cable 5m	5605	1	129	20	2,580	
2Gb Mini HUB	3507	1	899	22	19,778	
FAST Storage Manager V8.4 upgrade	1742-7109	1	2,999	1	2,999	
3 Year Warranty Service Upgrade 1740-1RU 24x7x4	694225B1813	1	760	124		94,240
3 Year Warranty Service Upgrade 1742-90U 24x7x4	694225B1915	1	1,087	22		23,914
				<b>Subtotal</b>	<b>3,649,469</b>	<b>118,154</b>



**IBM eServer p5 570  
Model 9117-570**

**TPC-C Rev. 5.3**

**Report Date: July 12, 2004**

**Server Software**

AIX 5.3 (media only)	5962-A5L	1	50	1	50	
AIX Software	5765-AIX	1	1,225	16	19,600	
AIX Software Maintenance (3Y)	5773-SM3	1	1,958	16		31,328
AIX Software Maintenance 24x7 Upgrade (3Y)	0468	1	496	16		7,936
HMC Software SUB	5639-SB1	1	275	3	33	825
HMC Software Support	5639-ST1	1	525	3		1,575
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
DB2 Enterprise Server Edition Proc Lic/1 yr Maint.	D518GLL	1	19,755	16	316,080	
DB2 Enterprise Server Ed Proc Maint Renew	E00BILL	1	940	32		30,080
			<b>Subtotal</b>		<b>336,278</b>	<b>71,950</b>

**Client Hardware and Software**

x335 w 3.2GHz/1024KB Xeon DP, one 80GB drive	864762X	1	2,679	32	85,728	14,400
3.2GHz 533 MHz 1MB L3 Cache Xeon Processor	13N0661	1	1,549	32	49,568	
512MB PC2100 CL2.5 ECC DDR SDRAM RDIMM	33L5038	1	219	64	14,016	
Microsoft Windows 2000 Server (Preloaded)	09N9982	1	799	32	25,568	
IBM ServicePac for xSeries	29R5396	1	1,375	32		44,000
NetBay42 Standard Rack	9306-421	1	1,439	12	17,268	2,016
xSeries Cable Chain Technology Cable Kit	06P4792	1	54	1	54	
IBM Sleek 2-Button Mouse - (PS/2)	28L3673	1	15	1	15	
Preferred Pro Full Size PS/2 Keyboard	31P7415	1	29	1	29	
E54 15" monitor/Keyboard/Mouse	W9SP47N	1	119	1	119	
			<b>Subtotal</b>		<b>192,365</b>	<b>60,416</b>

**Third Party Hardware/Software**

Visual Studio .NET Professional	528577	2	1,016	1	1,016	
Netgear FS750 48 ports w/Gigabit ports	500969	2	486	3	1,458	
			<b>Subtotal</b>		<b>2,474</b>	
			<b>IBM Discounts</b>		<b>-2,492,379</b>	<b>-107,732</b>
			<b>Total</b>		<b>3,757,645</b>	<b>246,846</b>

**Three-Year Cost of Ownership 4,004,491**

Audited by: Francois Raab, Info Sizing ([www.infosizing.com](http://www.infosizing.com))

**tpmC 809,144**

Pricing Sources:

**\$/tpmC 4.95**

1 IBM: Bill Casey, eServer pSeries Offering Manager, [wrcasey@us.ibm.com](mailto:wrcasey@us.ibm.com), 512-838-1422

1 IBM DB2: Paul Rivot, Director Database Servers Business Intelligence Software, email [privot@us.ibm.com](mailto:privot@us.ibm.com), phone 914-766-1325

2. CDW.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](mailto:pricing@tpc.org). Thank you

## Numerical Quantities Summary for the IBM eServer p5 570 Model 9117-570

MQTH, computed Maximum Qualified Throughput: 809,144.09 tpmC

<u>Response Times (in seconds)</u>	<u>90<sup>th</sup> %</u>	<u>Average</u>	<u>Maximum</u>
New Order	0.26	0.19	5.66
Payment	0.26	0.19	5.72
Order-Status	0.27	0.19	5.63
Delivery (interactive)	0.14	0.13	5.14
Delivery (deferred)	0.23	0.15	4.72
Stock-Level	0.33	0.22	5.80
Menu	0.15	0.12	5.18

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	44.90%
Payment	43.03%
Order-Status	4.02%
Delivery	4.02%
Stock-Level	4.02%

<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	19.05/120.25
Payment	3.00/0.01	3.01/12.02	3.91/120.30
Order-Status	2.00/0.01	2.01/10.01	2.76/100.15
Delivery	2.00/0.01	2.01/5.03	2.49/50.23
Stock-Level	2.00/0.01	2.01/5.02	2.93/50.23

### Test Duration

Ramp-up Time	44 minutes
Measurement interval	2 hours 30 minutes
Transactions during measurement interval (all types)	270,288,627
Ramp-down time	20 minutes

### Checkpoints

Number of checkpoints	N/A
Checkpoint interval	N/A