



PowerEdge 2650

Client/Server w/1 PE1500 Front End

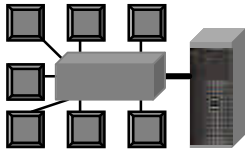
TPC-C Rev 5.0
Report Date
Sep 12, 2002

Total System Cost		TPC-C Throughput	Price/Performance	Availability Date
\$46,502		16,756.52 tpmC	\$2.78 / tpmC	SEP 12, 2002
Processors	Database Manager	OS	Other Software	Number of Users
1 x Intel Xeon™ Processors 2.4 GHz 512KB L2 Cache	Microsoft SQL Server 2000 Standard Edition	Microsoft Windows 2000 Server	Windows 2000 Server w/ COM+ Internet Information Server 5.0 Microsoft Visual C++	13,440

PE2650

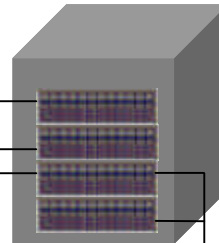
w/ 1 2.4 GHz Intel Xeon CPUs
w/ 512KB L2 cache,
2.25GB RAM,
3 Mylex AcceleRAID 352 RAID
Controllers, and
1 On-board Adaptec AIC-7899 RAID
Controller
4 36GB 10K RPM U160 SCSI disks
2 Gigabit Ethernet adapters

4 PV220S Disk Pods
54 18GB 10K RPM U160 SCSI Disks



1 PowerEdge 1500SC Client

1 Pentium® III @ 1.13GHz
w/ 512 KB L2
512 MB RAM
1 9 GB Disk
2 Intel Pro100+ Ethernet NICs



System Component	Server		Each Client	
Processors Cache	1	Intel Xeon MP @ 2.4GHz 512 KB cache	1	Pentium® III w/ 512 KB L2 Client @ 1.13 GHz
Memory		2304 MB		512 MB
Disk Controllers	3 1	Mylex AcceleRAID 352 Adaptec AIC-7899 On-Board	1	Adaptec On-Board
Disk Drives	54 4 1	18 GB SCSI 36 GB SCSI 9 GB SCSI	1	9 GB
Total Storage		1066 GB		9 GB
Other	2 1 1	1GB NIC CD-ROM DAT	2	10/100MB BT NIC

Dell		PowerEdge 2650			TPC-C REV 5.0 EXECUTIVE SUMMARY PAGE 2 OF 2		
		Client/Server			Report Date: 12-Sept-02		
Description	Part Number	Third Party	Unit Price	Qty	Extended Price	3 yr. Maint. Price	
Server Hardware							
		Brand	Pricing				
Dell PowerEdge 2650	220-0234			1	1,846	599	
2.0 GB,DDR, 4 x 512MB DIMMS	311-1619			1	1,499	-	
256MB,DDR, 2 x 128MB DIMMS	311-1927			1	204	-	
PERC3/Di 128MB (2 int ch)	340-3943			1	299	-	
5 Bay (2+3) Hard Drive Split Backplane	340-3933			1	299	-	
18 GB U160M SCSI 10K RPM Hard Drive	340-3079			1	249	-	
Tape Backup Unit	340-9890			1	699	-	
Dell 15" Monitor	320-0960			1	149	-	
AcceleRAID 352 PCI SCSI 2 Channel RAID controller***	08P2420	Mylex		3	585	-	
				5	2,925	-	
					Subtotal	599	
					8,169		
PowerVault Disk Subsystem							
PV220S, U3 SCSI, PS, Tower	220-4477, etc.			1	2,450	2,400	
SCSI Cables	310-0679			1	99	-	
18 GB SCSI 10K RPM Hard Drive *	340-3079			1	249	-	
36 GB SCSI 10K RPM Hard Drive *	340-3575			1	399	-	
				54	13,446	-	
				4	1,596	-	
					Subtotal	2,400	
					25,040		
Server Software							
SQL Server 2000 Standard Edition, Per processor licensing **	228-01079	Microsoft		2	4,999	5,850	
Windows 2000 Server **	C11-00821	Microsoft		2	738	-	
				1	738	-	
					Subtotal	5,850	
					5,737		
Client Hardware							
Dell PowerEdge 1500SC, 1.13 GHz Pentium III w/ 256KB L2	220-0888			1	599	748	
512MB RAM, 4 DIMMs	311-1194			1	408	-	
Non-Redundant Power	310-0540			1	199	-	
18GB,U160,10K, SCSI Hard Drive,	340-1964			1	249	-	
Ether Express PRO 100+ Ethernet Adapter	430-1970	Intel		1	59	-	
Dell 15" Monitor	320-0960			1	149	-	
					Subtotal	748	
					1,663		
Client Software							
Windows 2000 Server, 5 Client Licenses **	C11-00821	Microsoft		2	738	-	
Visual C++ Professional 6.0 Win32 **	048-00317	Microsoft		2	549	-	
				1	549	-	
					Subtotal	-	
					1,287		
User Connectivity							
Crossover cable	CBLC5C14	LanAdapters		4	2	3	
						6	
					Subtotal	6	
					6		
					Other Discounts	-	
					(4,997)		
					Total	9,597	
					36,905		
Notes: * Maint. included in PowerVault 220S disk pod or PV650F/630F fibre channel disk pod					Three-Year Cost of Ownership: \$46,502		
** All Microsoft maintenance is covered by the maintenance costs of Microsoft SQL Server							
*** 10% or minimum 2 spares are added in place of onsite service (products have a five year return-to-vendor warranty) Pricing: 1 - Dell 2 - Microsoft 3 - Computer Giants 4- LanAdapters					tpmC Rating: 16756.52		
**** Discount based upon total system cost as purchased by a regular customer. Pricing may be verified by calling 1-800-BUY-DELL referencing quote numbers 89530521 as complex quotes.							
Audited by Lorna Livingtree, Performance Metrics Inc.					\$ / tpmC: 2.78		
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 items, please inform the TPC at pricing@tpc.org.							

MQTh, computed Maximum Qualified Throughput 16,756.52
tpmC

Response Times (in seconds)	Average	90th	Max
- Neworder	0.45	0.69	5.88
- Payment	0.21	0.33	2.38
- Order Status	0.29	0.43	5.79
- Delivery (interactive portion)	0.11	0.11	0.92
- Delivery (deferred portion)	0.75	1.22	3.41
- Stock-Level	3.40	5.30	14.90
- Menu	0.11	0.12	0.95

Response time delay added for emulated components Menu 0.1
Resp 0.1

Transaction Mix, in percent of total transactions

- New-Order	44.88%
- Payment	43.01 %
- Order-Status	4.03 %
- Delivery	4.03 %
- Stock-Level	4.05 %

Keying/Think Times (in seconds),	Min		Average		Max	
- New-Order	18.01	0.0	18.03	12.05	18.05	120.41
- Payment	3.01	0.0	3.03	12.03	3.05	120.41
- Order-Status	2.01	0.0	2.03	10.07	2.04	100.41
- Delivery	2.01	0.0	2.03	5.04	2.04	50.40
- Stock-Level	2.01	0.0	2.03	5.06	2.04	50.41

Test Duration

- Ramp-up time	4 minutes
- Measurement interval	120 minutes
- Number of checkpoints	4
- Checkpoint interval	30 minutes
- Number of transactions (all types) completed in measurement interval	4,660,924