



# PowerEdge 2650

Client/Server w/1 PE1600SC Front End

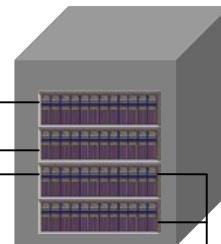
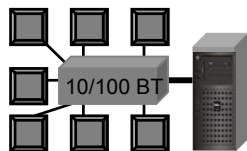
TPC-C Rev 5.2  
 Report Date  
**July 13, 2003**  
 Revised Date  
**March 17, 2004**

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
<b>\$41,250</b>	<b>20,108 tpmC</b>	<b>\$2.06 / tpmC</b>	<b>JAN 14, 2004</b>	
Processors	Database Manager	OS	Other Software	Number of Users
1 x Intel Xeon™ Processors 3.06 GHz 1MB L3 Cache	Microsoft SQL Server 2000 Standard Edition	Microsoft Windows 2003 Server	Windows 2003 Server w/ COM+ Internet Information Server 5.0 Microsoft Visual C++	<b>16,200</b>

## PE2650

w/ 1 3.06 GHz Intel Xeon CPUs  
 w/ 1MB L3 cache,  
 2.5GB RAM,  
 2 PERC3-DC Controllers, and  
 1 On-board Adaptec AIC-7899 RAID Controller  
 4 36GB 10K RPM U320 SCSI disks  
 2 Gigabit Ethernet adapters

4 PV220S Disk Pods  
 56 18GB 15K RPM U320 SCSI Disks



### 1 PowerEdge 1600SC Client

2 Intel Xeon @ 2.4GHz  
 w/ 512 KB L2  
 1024 MB RAM  
 1 36 GB Disk  
 2 Intel Pro100+ Ethernet NICs

System Component	Server		Each Client	
Processors	1	Intel Xeon @ 3.06GHz	2	Intel Xeon w/ 512 KB L2
Cache		1MB cache		Client @ 2.4 GHz
Memory		2560 MB		1024 MB
Disk Controllers	2	PERC3-DC	1	Adaptec On-Board
	1	Adaptec AIC-7899 On-Board		
Disk Drives	56	18 GB SCSI	1	36 GB
	4	36 GB SCSI		
	1	36GB SCSI		
Total Storage		1100 GB		36 GB
Other	2	2GB NIC	2	10/100MB BT NIC
	1	CD-ROM		
	1	DAT		

Dell		PowerEdge 2650			TPC-C REV 5.2 EXECUTIVE SUMMARY PAGE 2 OF 2		
				Client/Server			Report Date: 13-July-03
Description	Part Number	Third Party		Unit Price	Qty	Extended Price	3 yr. Maint. Price
		Brand	Pricing				
<b>Server Hardware</b>							
Dell PowerEdge 2650 3.06GHz/1MB	221-3298			1,332	1	1,332	290
5 Bay (2+3) Hard Drive Split Backplane	340-3933			299	1	299	
PERC3/Di 128MB (2 int. ch)	340-3943			299	1	299	
2GB SDRAM,4X512MB DIMMs	311-1619			1,049	1	1,049	
512MB RAM, 2x256MB DIMMs	311-2729			470	1	470	
36GB,U320M,SCSI,1 in,10K HD	340-7919			249	1	249	
PV100T,DDS4,20/40G,TBU,NC,INT	340-7297			699	1	699	
Dell E551,15 in Gray (13.8 VIS	320-0960			129	1	129	
PERC3-DC 2-ch SCSI	340-2489			879	2	1,758	
						<b>Subtotal</b>	<b>290</b>
<b>PowerVault Disk Subsystem</b>							
PV220S, U3, PS, Tower	220-4477, etc.			2,054	4	8,216	1,604
2 SCSI Cables	310-0679			99	2	198	
18GB U320M SCSI 15K RPM Hard Drive	340-9472			249	56	13,944	
36GB U320M SCSI 10K RPM Hard Drive	340-9370			249	4	996	
						<b>Subtotal</b>	<b>1,604</b>
<b>Server Software</b>							
SQL Server 2000 St. Edition, Per processor licensing **	228-01079	Microsoft	1	4,999	1	4,999	5,850
Windows 2003 Standard Server **	P73-00295	Microsoft	1	738	1	738	
						<b>Subtotal</b>	<b>5,850</b>
<b>Client Hardware</b>							
Dell PowerEdge 1600SC, 2.4 GHz I / 512KB L2/400 FSB	221-2207			277	1	277	290
Additional processor , 2.4 GHz I / 512KB	311-2456			599	1	599	
1025MB RAM, 2 DIMMs	311-1940			598	1	598	
36GB U160M SCSI 10K RPM Hard Drive	340-7087			249	1	249	
Non-Redundant Power	310-0540			199	1	199	
IntelPro 100S	430-0206			59	1	59	
Dell 15" Monitor	320-0960			129	1	129	
						<b>Subtotal</b>	<b>290</b>
<b>Client Software</b>							
Windows 2003 Standard Server **	P73-00295	Microsoft	1	738	1	738	
Visual C++ ** .NET	254-00170	Microsoft	1	109	1	109	
						<b>Subtotal</b>	<b>847</b>
<b>User Connectivity</b>							
7ft Crossover cable	CBLC5C7	LanAdapter	2	1	3	3	
						<b>Subtotal</b>	<b>3</b>
						<b>Other Discounts</b>	<b>(\$5,119)</b>
						<b>Total</b>	<b>\$33,216</b>
							<b>\$8,034</b>
Notes: * Maint. included in PowerVault 210S disk pod or PV650F/630F fibre channel disk pod				<b>Three-Year Cost of Ownership:</b>		<b>\$41,250</b>	
** 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 - Microsoft 2 - LanAdapter						<b>tpmC Rating: 20108</b>	
<b>Audited by Tom Sawyer, Performance Metrics Inc.</b>						<b>\$ / tpmC: 2.06</b>	
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 <a href="mailto:pricing@tpc.org">pricing@tpc.org</a> .							

**MQTh**, computed Maximum Qualified Throughput

20,108  
tpmC

**Response Times** (in seconds)

	Average	90 <sup>th</sup>	Max
- Neworder	0.60	0.88	5.52
- Payment	0.29	0.50	4.65
- Delivery (interactive portion)	0.11	0.12	0.70
- Stock-Level	3.24	5.39	12.82
- Order Status	0.44	0.68	5.68
- Delivery (deferred portion)	1.15	1.61	2.67
- Menu	0.11	0.12	0.93

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	43.02 %
- Delivery	4.04 %
- Stock-Level	4.05 %
- Order-Status	4.04 %

**Keying/Think Times** (in seconds),

	Min		Average		Max	
- New-Order	18.02	0.0	18.02	12.04	18.03	120.41
- Payment	3.01	0.0	3.02	12.03	3.03	120.41
- Delivery	2.01	0.0	2.02	5.04	2.03	50.40
- Stock-Level	2.01	0.0	2.02	5.05	2.03	50.40
- Order-Status	2.01	0.0	2.02	10.04	2.03	100.40

**Test Duration**

- Ramp-up time	5 minutes
- Measurement interval	120 minutes
- Number of checkpoints	4
- Checkpoint interval	30 minutes
- Number of transactions (all types) completed in measurement interval	5,596,797