



**PowerEdge 2900 Server with Oracle Database 11g Standard Edition One**

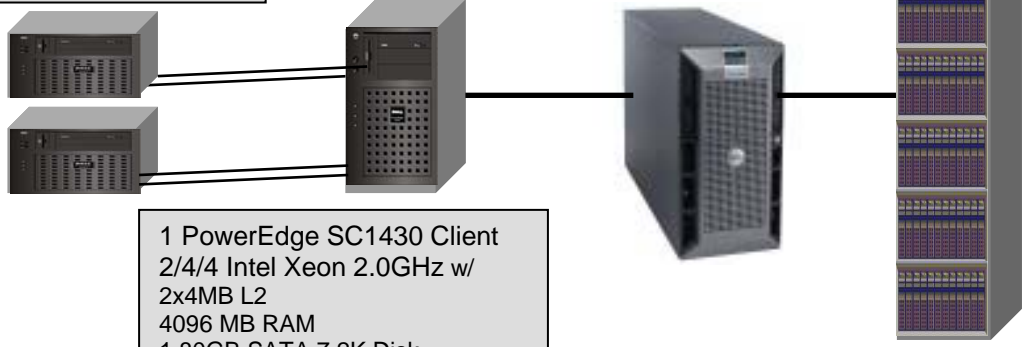
TPC-C Rev 5.9  
Original Report Date  
**June 16 ,2008**

Total System Cost		TPC-C Throughput	Price/Performance	Availability Date
<b>\$65,910</b>		<b>97,083 tpmC</b>	<b>\$.68 / tpmC</b>	June 16, 2008
Processors	Database Manager	OS	Other Software	Number of Users
1/4/4 Quad Core Intel® Xeon® 5440,2X6MB Cache, 2.83GHZ 1333MHZ FSB	Oracle Database 11g Standard Edition One	Microsoft Windows Server 2003 Standard x64 Edition SP1	Windows Server 2003 Standard Edition w/ COM+ Internet Information Server 6.0 Microsoft Visual C++	76,700

76,700 Emulated Users  
Running on 1 PE1600 and 1 R805 RTE Machines Connected Through Cross-over cables

PowerEdge 2900  
1/4/4 Quad Core Intel® Xeon® 5440, 2x6MB Cache, 2.83GHZ, 32GB 667MHz FBD  
3 Dell PERC6/E SAS RAID Controller, 1 Integrated PERC5i SAS RAID Controller.  
8 73GB, 3GBPS, SAS, 3.5IN, 15K  
2 On Board Broadcom ports

6 PowerVault MD1000 SAS Disk Pods  
90 73GB 15K RPM SAS Disks



1 PowerEdge SC1430 Client  
2/4/4 Intel Xeon 2.0GHz w/ 2x4MB L2  
4096 MB RAM  
1 80GB SATA 7.2K Disk  
1 Intel Pro 1000 Dual port NIC  
2 onboard Broadcom ports

System Component	Server		Each Client	
Processor/Core/Cache	1	1/4/4 Quad Core Intel® Xeon® 5440, 2x6MB Cache, 2.83GHZ, 1333	2	2/4/4 Intel® Xeon® w/ 2x4MB L2, 2.0 GHz
Memory		32GB 667 FB-DIMM		4 GB
Disk Controllers	3 1	Dell PERC6/E RAID Integrated PERC5i RAID	1	Onboard SATA
Disk Drives	38 60	73GB SAS 15K 36GB SAS 15K	1	80GB 7.2K SATA
Total Storage	98	4011 GB SAS	1	80GB SATA
Other	2 1	Broadcom NetXtreme II GigE ports CD-ROM	2 1 1	Broadcom on-board ports Dual port Intel Pro 1000 NIC CD-ROM



PowerEdge 2900

TPC-C 5.9  
 TPC Pricing 1.2  
 Report Date  
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Description	Part Number	Price Source	Unit Price	Qty	Extended Price	3 yr. Maint. Price
<b>Server Hardware</b>						
PE2900,QC XEON X5440,2X6MB,2.83GZ & 2 Broadcom NICs	223-4506	1	1,253.00	1	\$1,253.00	\$578.00
32GB 667MHz(8x4GB),2R	311-6327	1	3,118.00	1	\$3,118.00	
PERC6/i,Integrated	341-5699	1	\$299.00	1	\$299.00	
PERC6/E SAS RAID, 2X4 EXTERNAL	341-5842	1	\$799.00	3	\$2,397.00	
DELL E157FP,15 IN,15.0 VIS	320-5090	1	\$189.00	1	\$189.00	
				<b>Subtotal</b>	<b>\$7,256.00</b>	<b>\$578.00</b>
<b>Server Storage</b>						
PV MD1000,RACK,3U,15 BAY,LBZL	222-2299	1	2,480.00	6	\$14,880.00	\$9,888.00
SINGLE ENCL MGT MODULES, SAS/SATA	420-5927	1	\$345.83	6	\$2,074.98	
SAS Cable, 1M, MD1000	310-7082	1	\$30.00	6	\$180.00	
73GB,3GBPS,SAS,3.5IN,15K	341-3023	1	\$299.00	98	\$29,302.00	
42U Rack,CUST	340-4896	1	\$239.99	1	\$239.99	
				<b>Subtotal</b>	<b>\$46,676.97</b>	<b>\$9,888.00</b>
<b>Server Software</b>						
Oracle Database 11g Standard Edition One,Per Processor Unlimited Users, 3 years		2	\$2,498.00	1	\$2,498.00	
Windows Server 2003 Standard x64 Server	420-7118	1	\$799.00	1	\$799.00	
Microsoft Problem Resolution Services		3	\$245.00	1		\$245.00
Oracle Premium Support, 3 years		2	\$1,099.00	3		\$3,297.00
				<b>Subtotal</b>	<b>\$3,297.00</b>	<b>\$3,542.00</b>
<b>Client Hardware</b>						
Dell PowerEdge SC 1430, E5335 2.0GZ/2x4MB 1333FSB	223-1438	1	760.00	1	\$760.00	\$472.00
Additional processor	311-7416	1	599.00	1	\$599.00	
4GB 667MHz(2x2GB),2R	311-6254	1	448.00	1	\$448.00	
Broadcom OnBoard NIC	430-1764	1	0.00	1	\$0.00	
Broadcom 5722 NIC	430-2608	1	59.00	1	\$59.00	
80GB,SATA,1IN,7.2K	341-3757	1	\$99.00	1	\$99.00	
DELL E157FP,15 IN,15.0 VIS	320-5090	1	\$149.00	1	\$149.00	
				<b>Subtotal</b>	<b>\$2,114.00</b>	<b>\$472.00</b>
<b>Client Software</b>						
Windows Server 2003 Standard x64 Server	420-7118	1	\$799.00	1	\$799.00	
Microsoft Visual Studio Standard 2005	127-00012	3	\$250.00	1	\$250.00	
				<b>Subtotal</b>	<b>\$1,049.00</b>	<b>\$0.00</b>
<b>User Connectivity</b>						
5 ft Xover cable	CBLC5C7	4	\$1.31	3	\$3.93	
				<b>Subtotal</b>	<b>\$3.93</b>	<b>\$0.00</b>
All hardware items from Dell(1) are discounted 16% based on total dollar volume.					<b>16% discount</b>	<b>(\$8,967.52)</b>
					<b>Total</b>	<b>\$51,429.38</b>
						<b>\$14,480.00</b>

Notes:						
*All hardware items from Dell(1) are discounted 16% based on total dollar volume of this configuration.				<b>Three-Year Cost of Ownership:</b>	<b>\$65,910</b>	<b>USD</b>
Price Source: 1=Dell, 2=Oracle,3=Microsoft,4=Kalron				<b>TPC-C Throughput:</b>	<b>97,083.53</b>	<b>tpmC</b>
Pricing may be verified by calling 1-800-BUY-DELL and referencing quote # 432979497 as a complex quote.				<b>Price/Performance:</b>	<b>\$0.68</b>	<b>tpmC/USD</b>
<b>Audited by Lorna Livingtree, Performance Metrics Inc.</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 [pricing@tpc.org](mailto:pricing@tpc.org).

**MQTh**, computed Maximum Qualified Throughput

97,083 tpmC

**Response Times** (in seconds)

	Average	90 <sup>th</sup>	Max
- Neworder	0.16	0.20	1.49
- Payment	0.14	0.20	1.41
- Delivery (interactive portion)	0.11	0.12	1.08
- Stock-Level	0.68	1.00	2.14
- Order Status	0.15	0.30	1.40
- Delivery (deferred portion)	0.04	0.06	0.95
- Menu	0.11	0.12	1.41

Response time delay added for emulated components

Menu 0.1  
Resp 0.1

**Transaction Mix**, in percent of total transactions

- New-Order	44.92%
- Payment	43.00%
- Delivery	4.02%
- Stock-Level	4.01%
- Order-Status	4.02%

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

	Min		Average		Max	
- New-Order	18.00	0.0	18.01	12.03	18.03	120.32
- Payment	3.00	0.0	3.00	12.03	3.03	120.32
- Delivery	2.00	0.0	2.00	5.04	2.03	50.31
- Stock-Level	2.00	0.0	2.00	5.04	2.04	50.31
- Order-Status	2.00	0.0	2.00	10.04	2.03	100.32

**Test Duration**

- Ramp-up time	25 minutes
- Measurement interval	120 minutes
- Number of checkpoints	4
- Checkpoint interval	29.08 minutes
- Number of transactions (all types)	25,932,675