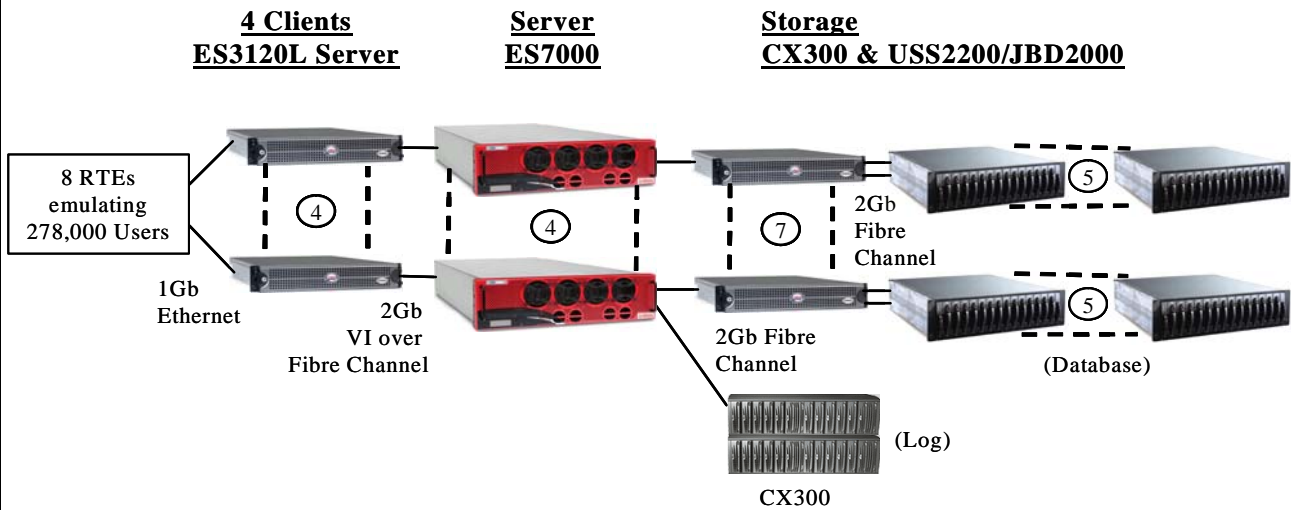


<b>UNISYS</b>	<b>ES7000</b>		TPC-C Rev. 5.6
	<b>Enterprise Server (8P)</b>		Report Date February 22, 2006
<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price Performance</b>	<b>Availability Date</b>
<b>\$1,138,016 USD</b>	<b>347,854 tpmC</b>	<b>\$3.28 USD/tpmC</b>	<b>May 5, 2006</b>
<b>Processors/ Cores/Threads</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>
8/16/32 Database 8/8/16 Clients	Microsoft SQL Server 2005 Enterprise x64 Edition	Microsoft Windows Server 2003, Datacenter x64 Edition	Windows Server 2003 w/ IIS 6.0 and COM+ Microsoft Visual C++
<b>278,000</b>			



System Components	Server		Each Client (4)	
	Qty.		Qty.	
Processors/Cores/Threads Cache	8/16/32	Intel® Dual-Core Xeon® Processor 7041 3.0GHz, 2x2MB Lvl 2 Cache	2/2/4	Intel® 64-bit Xeon® Processor 3.4GHz , 2MB Lvl 2 Cache
Memory	1	256GB (4GB DIMMs)	1	2GB (1GB DIMMs)
Disk Controllers	8 1	PCI Fibre Channel PCI SAS RAID (boot)	1	Inbuilt SCSI
Disk Drives	490 20 2	36GB FC 15K rpm 146GB FC 10K rpm 36GB SAS 10K rpm (boot media)	1	36GB SCSI 15K rpm
Total Storage		19.0 TB		34.3 GB
Other	2 2 1	Inbuilt 1Gb 2-Port NIC (0 used) PCI VI-over-FC Controller IDE DVD-R/RW; CD-R/RW	2 1 1	Inbuilt 1Gb NIC (1 used) PCI VI-over-FC Controller IDE CD-ROM



# ES7000 Enterprise Server (8P)

TPC-C Rev. 5.6  
TPC Pricing 1.0.1

Report Date  
February 22, 2006

Description	Part Number	Price Source	Unit Price	Qty.	Extended Price	3-yr.Maint. Price
<b>Server Hardware:</b>						
SYS: ES7000/one, 8x 7041/3.0GHz, 256GB Mem. eService Processor & Server Mngmt SW	ES7112083-600 Included	1	\$417,050	1	\$417,050	\$3,096
CTRL: Fibre Channel HBA, 2-Port, 64-bit PCI	FC76222-P64	1	\$2,850	8	\$22,800	
CTRL: VI-over-FC HBA, 2Gb 2-Port, 64-bit PCI	FCH752323-PCX	1	\$2,138	2	\$4,276	
KIT: 1x RAID Controller, 1x 36GB Disk (boot media)	FAC7600361-IDK	1	\$618	1	\$618	
DISK: 1x 36GB 10Krpm SAS (boot media)	HDF4036100-X25	1	\$428	1	\$428	
I/F: Monitor, 17-inch LCD, Kybrd, Mse & Cable	ES70006-UIF	1	\$546	1	\$546	
<b>Subtotal</b>					<b>\$445,718</b>	<b>\$3,096</b>
<b>Server Software:</b>						
O/S: Windows 2003 Srvr, DC x64 Edtn, 8P, 1yr Lsub.	WNX6408-TSP	1	\$17,556	1	\$17,556	\$10,908
O/S: Windows 2003 Server, DC Lmtd Sbscrptn, 1yr.	DUS200308-TSP	1	\$1,596	2	\$3,192	
APP: Microsoft SQL Server 2005 Enterprise x64 Edtn.	810-03134	2	\$23,432	8	\$187,456	** Inc. below
SRVC: Microsoft Problem Resolution Services **		2	\$245	1	\$245	\$245
<b>Subtotal</b>					<b>\$208,204</b>	<b>\$11,153</b>
<b>Storage Hardware:</b>						
DISK: 3.0TB Pkg, 84x 36GB, 15Krpm *	JBD203615-P84	1	\$36,086	6	\$216,516	Spared
DISK: 1.0TB Pkg, 28x 36GB, 15Krpm *	JBD203615-P28	1	\$16,641	1	\$16,641	Spared
DISK: 36GB Drive, 15Krpm, 2Gb FC, SCA *	JBD203615-2F	1	\$646	7	\$4,522	Spared
DISK: 146GB, 10Krpm, 2Gb FC	CXR14610-2GF	1	\$1,406	20	\$28,120	
CTRL: DPE, 2 RAID Cntrl, 1GB Cache ea., 0 Disk	CX300-DPE	1	\$13,300	1	\$13,300	\$1,260
RCK: DAE Storage Enclosure, FC 2Gb Optical I/F	CXP2-FD	1	\$5,890	1	\$5,890	
SYS MGT: Storage, Navisphere Manager	CXN300-WRK	1	\$2,138	1	\$2,138	\$900
RCK: Storage Enclosure, FC 2Gb Copper/Copper I/F	JBD2002-SA	1	\$3,197	21	\$67,137	\$10,584
RCK: Storage Enclosure, FC 2Gb Optical/Copper I/F	JBD2011-SA	1	\$3,413	14	\$47,782	\$7,560
CTRL: Symmetric Disk Virt. 2xCPU, 512MB Mem	RMM20103-ELS	1	\$4,559	7	\$31,913	\$8,484
CTRL: USS, Fibre Channel HBA, 1-Port, 64-bit PCI	RMM20701-TAR	1	\$1,805	21	\$37,905	\$10,080
APP: Unisys Storage Sentinel 2200 SDV Software	USS10300-SW	1	\$5,472	1	\$5,472	\$4,068
APP: Storage Sentinel SDV SW, 20TB License	USS20320-LIC	1	\$37,484	1	\$37,484	
CBL: FC, Copper, HSDC2 Conn's, 0.3m	JBD20003-CCL	1	\$53	21	\$1,113	
CBL: FC, Optical, LC->LC Conn's, 10m *	GCFAZLL20	3	\$38	25	\$950	Spared
RCK: Rack Mount Kit, Disk Enclosure	JBD2001-RMK	1	\$190	35	\$6,650	
SWTCH: KVM 16-Port PS/2-Cat5	KVM9163101-SWC	1	\$1,805	1	\$1,805	
I/F: Monitor, 17-inch LCD, Kybrd, Mse & Cable	ES70004-UIF	1	\$665	1	\$665	
ADPTR: Cat5 to PS/2	KVM9001301-CNV	1	\$114	11	\$1,254	
CBL: Ethernet, Cat5e, RJ45 Conn's, 10ft *	GCPO888910	3	\$2	14	\$28	Spared
PWR: Distribution Strip, 9-Plug, 220V	SFR9-PWR	1	\$162	15	\$2,430	
CBL: Power, U.S. (Domestic), C20 - L6-20P	USE1936-LC6	1	\$86	15	\$1,290	
CAB: 36U x 19" x 41" Open Front Cabinet	HRT361941-OFT	1	\$1,425	5	\$7,125	
<b>Subtotal</b>					<b>\$538,130</b>	<b>\$42,936</b>
<b>Client Hardware:</b>						
SYS: ES3120L w/ 1x 3.4GHz Proc., 0MB Mem	ESL312002-340	1	\$1,859	4	\$7,436	\$2,592
PROC: 1x 3.4GHz Intel Xeon/2MB Cache	CPL3120342-2MB	1	\$1,063	4	\$4,252	
MEM: 2GB, 2x 1GB DIMMs DDR SDRAM	DIM3120021-2GB	1	\$864	4	\$3,456	
DISK: 36GB 15Krpm U320 3.5 Internal	HDP36115-DC4	1	\$332	4	\$1,328	
RCK: ES3120L HSBP Modul & SCSI Cable	HBP3120101-MOD	1	\$264	4	\$1,056	
RCK: ES3120L Universal Rack Kit	ESL3120-VRL	1	\$331	4	\$1,324	
CTRL: VI-over-FC HBA, 2Gb 2-Port, 64-bit PCI	FCH752323-PCX	1	\$2,138	4	\$8,552	
CDR: 24x Slimline CD-ROM & Cable	CDR12243-AIS	1	\$41	4	\$164	
<b>Subtotal</b>					<b>\$27,568</b>	<b>\$2,592</b>
<b>Client Software:</b>						
O/S: Windows Server 2003, Standard Edition	P73-00295	2	\$719	4	\$2,876	** Inc. above
ACC: Microsoft Visual C++ Standard Edition	254-00170	2	\$109	1	\$109	** Inc. above
<b>Subtotal</b>					<b>\$2,985</b>	<b>\$0</b>
Computer Resolutions Inc. 14% Volume Cash Discount (Ext.Price where Price Source=1)					(144,366)	
<b>Total USD</b>					<b>\$1,078,239</b>	<b>\$59,777</b>

**Notes:**

1. \* 10% or minimum 2 spares are added in place of onsite service.
2. HW & SW maintenance at 24 x 7 w/ 4 hr. max. response time for spares.
3. Price Source: 1 = CRI Product Price, Unisys Maintenance Price  
2 = Microsoft 3 = GoCables

**3-Year Cost of Ownership: \$1,138,016 USD**  
**tpmC Rating: 347,854**  
**\$ / tpmC: \$3.28 USD**

Benchmark results and test methodology audited by Lorna Livingtree of Performance Metrics, Inc.

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 assumption 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 benchmarks 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

**MQTh, Computed Maximum Qualified Throughput: 347,854 tpmC**

### Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	0.45	0.30	8.05
Payment	0.43	0.28	5.02
Order-Status	0.45	0.30	8.88
Delivery (interactive portion)	0.36	0.23	1.48
Delivery (deferred portion)	0.19	0.14	3.64
Stock-Level	0.67	0.44	1.84
Menu	0.36	0.23	2.52

### Response time delay added for emulated components, in seconds

RT Response time	0.1
Menu Response time	0.1

### Transaction Mix, in percent of total transactions

New Order	44.93%
Payment	43.02%
Order-Status	4.00%
Delivery (interactive portion)	4.00%
Stock-Level	4.01%

### Keying / Think Time Times, in seconds

Transaction	Minimum	Average	Maximum
New Order	18.01 / 0.00	18.01 / 12.03	18.03 / 120.31
Payment	3.01 / 0.00	3.01 / 12.03	3.03 / 120.31
Order-Status	2.01 / 0.00	2.01 / 10.08	2.03 / 100.70
Delivery (interactive portion)	2.01 / 0.00	2.01 / 5.06	2.03 / 50.61
Stock-Level	2.01 / 0.00	2.01 / 5.06	2.03 / 50.61

### Test Duration

Ramp up time	56 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	92,890,358
Ramp-down time	10 minutes

### Checkpointing:

Number of checkpoints	4
Checkpoint interval	30 minutes