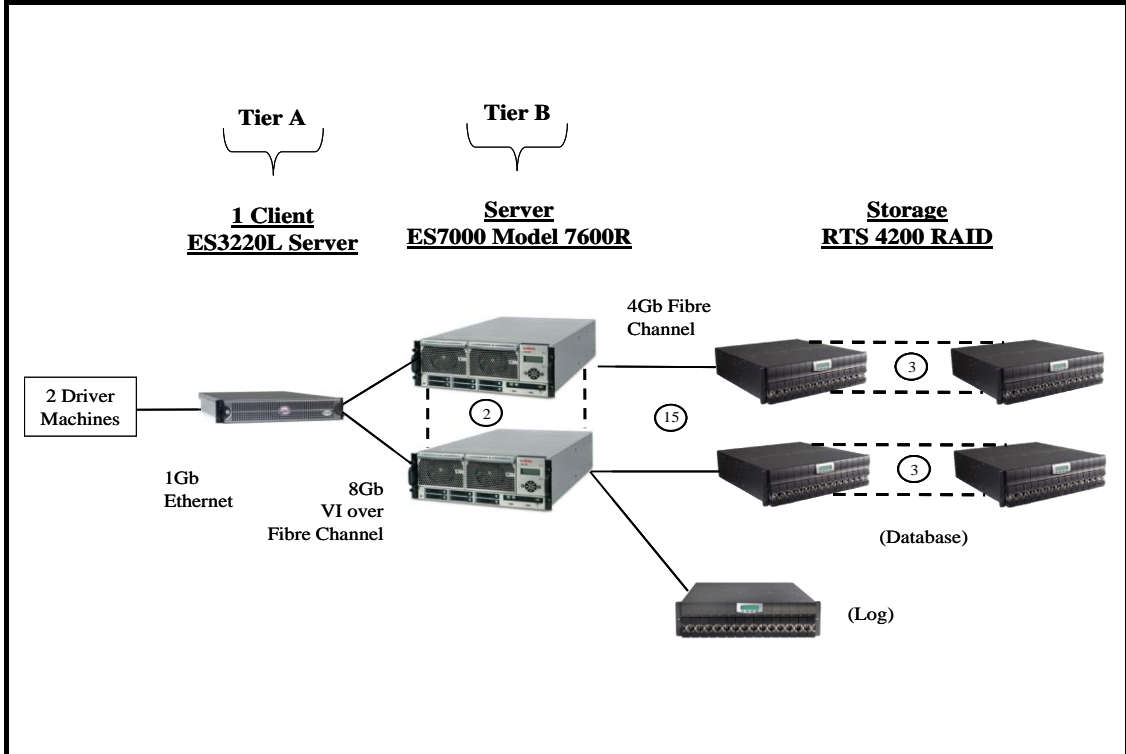


UNISYS	ES7000 Model 7600R Enterprise Server (8s)		TPC-E 1.7.0 TPC Pricing 1.4.0
			Report Date April 13, 2009
TPC-E Throughput	Price/Performance	Availability Date	Total System Cost
1165.56 tpsE	\$783.56 USD per tpsE	April 13, 2009	\$913,284 USD

Database Server Configuration			
Operating System	Database Manager	Processors/Cores/ Threads	Memory
Microsoft Windows Server 2008 Enterprise Edition (x64)	Microsoft SQL Server 2008 Enterprise x64 Edition	8/48/48	256GB



Client ES3220L Server 2 x 2.00GHz Intel® Quad-core Xeon™ w/ 4MB L2 cache, 4 GB memory, 1 x 73GB internal disk, 1x PCI VI-over-FC cntrls, 2 Inbuilt 1Gb Eth. cntrls.	Server ES7000 Model 7600R 8 x Intel® Hex-core Xeon™ X7460 2.66GHz w/ 16MB L3 cache 256 GB memory, 2 x 36GB SAS disk, internal , 1 x PCI SAS RAID cntrl, internal, 8 x PCI Fibre Channel cntrls, 1x PCI VI-over-FC cntrls, 4 Inbuilt 1Gb Eth. cntrls. (0 used).	Storage RTS 4200 RAID Storage 675 x 73GB 6 x 146GB External Fibre Channel disks, 17 x FC RAID controllers
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Initial Database Size	Redundancy Level: 1	Database Storage
4,568 GB	RAID-10	675 x 73GB 15K rpm 6 x 146GB 15K rpm



ES7000 Model 7600R Enterprise Server (8s)

**TPC-E 1.7.0
TPC Pricing 1.4.0**

Report Date
April 13, 2009

Description	Part Number	Price Source	Unit Price	Qty.	Extended Price	3-yr. Maint. Price
Server Hardware:						
ES7/7600R 8x X7460, 16GB	ES7763083-100	1	\$66,729	1	\$66,729	\$3,384
Snap-in 1U Filler	RCK4219421-1UP	1	\$20	7	\$140	
Snap-In 3U Filler	RCK4219421-3UP	1	\$22	9	\$198	
42U Shipping Config	RCK4219421-SC1	1	\$115	1	\$115	
Power Strip	PWR4243001-SD	1	\$392	1	\$392	
Power Strip	PWR4243001-SVD	1	\$403	1	\$403	
42U Rack	RCK4219421-FSS	1	\$2,769	1	\$2,769	
Rack Trim Kit	RCK4219421-OTK	1	\$350	1	\$350	
2 x 36GB Hard Drive	FAC7760361-IDK	1	\$2,083	1	\$2,083	
Initial Memory - 8GB	FAC7102403-ICA	1	\$1,378	2	\$2,756	
Memory Expansion - 8GB	FAC7102403-8GB	1	\$585	28	\$16,380	
Emulex LPe12002 - Disk HBA and VI	FCH9540231-PCE	1	\$3,986	10	\$39,860	
Subtotal					\$132,175	\$3,384
Server Software:						
Windows Server 2008 Enterprise Edition (x64)	P72-03168	2	\$2,310	1	\$2,310	
SQL Server 2008 Enterprise x64 Edition	810-07507	2	\$23,432	8	\$187,456	
SRVC: Microsoft Problem Resolution Services		2		1		\$245
Subtotal					\$189,766	\$245
Storage Hardware:						
Rack Mount Kit	RTS400012-RK	1	\$220	16	\$3,520	
Disk Enclosure with (15) 73GB Disk - 30 Pack	RTS4307315-30P	S	\$333,144	1	\$333,144	
Disk for RAID Controller	RTS4307315-4FH	S	\$484	210	\$101,640	
Dual RAID Controller for Log	RTS422880-T2	1	\$15,840	1	\$15,840	
UPS for Log Disk	UPS120	5	\$1,000	1	\$1,000	
SAN Manager Software	RTS44101-SAN	1	\$2,246	1	\$2,246	
146 GB Disk Drive	RTS4314615-4FH	1	\$660	6	\$3,960	
RAID Controller 1x1 - 15 Pack	RTS4228801-P15	1	\$104,277	1	\$104,277	
AC Power Cord	RTS400740-CBL	1	\$11	34	\$374	
Subtotal					\$566,001	
Infrastructure						
8 port KVM switch	KVM9083101-SWC	1	\$1,300	1	\$1,300	
16 Port Ethernet Switch (Netgear)	FS116	4	\$65	1	\$65	
Rack mount LCD w/1U Drawer	MON2145-LCD	1	\$2,700	1	\$2,700	
Rack mount keyboard, w/touchpad, USB	KBR210501-USB	1	\$275	1	\$275	
42U Rack - No Doors	RM421940-FRM	1	\$1,286	5	\$6,429	
8 Outlet Power Strip	SFR9-PWR	1	\$170	20	\$3,400	
Power Cord	USE1936-LC6	1	\$90	20	\$1,800	
Fiber Channel Cable	GCFAZLLM20-M	3	\$35	17	\$590	
Ethernet Cable	GCP088865U-BL	3	\$12	17	\$202	
Subtotal					\$16,760	
Client Hardware:						
ESL3220 Quad Core Server 2.0 GHz	ESL3220611-200	1	\$787	1	\$787	\$1,203
ESL:3220 Brand Kit	ESL322001-UNI	1	\$19	1	\$19	
VersaRail Mount Kit	ESL322001-RVR	1	\$249	1	\$249	
Processor Upgrade	CPL3220612-200	1	\$369	1	\$369	
Hard Drive - 73GB 15K SAS	HDP73115-SAS	1	\$299	1	\$299	
Memory - 4GB (8 x 512 DIMMs)	DIM3220083-4GB	1	\$628	1	\$628	
Bezel	ESL322001-BZL	1	\$19	1	\$19	
SAS RAID Controller	RAD322004-P6I	1	\$299	1	\$299	
CD/DVD Drive	DVW322001-INT	1	\$99	1	\$99	
CD/DVD Drive Cable	CBL322001-CD	1	\$20	1	\$20	
USB to Cat5 KVM Adapter	KVM9002301-CNV	1	\$250	1	\$250	
Subtotal					\$3,038	\$1,203
Client Software:						
Windows Server 2008 Standard Edition (x64)	P73-04165	2	\$711	1	\$711	
Subtotal					\$711	\$0
Unisys Product Pricing (List Pricing) - Michael Heifner (215)-986-4757 where Price Source = 1 or S					Total USD	\$908,451
Benchmark results and test methodology audited by Lorna Livingtree of Performance Metrics, Inc.						\$4,832

Notes:

1. HW & SW maintenance at 24 x 7 w/ 4 hr. max. response time for spares.
 2. Price Source: 1 = Unisys Product Price, Unisys Maintenance Price
2 = Microsoft 3 = GoCables 4 = NewEgg
5 = IQstor
- S One or more components of the measured configuration have been substituted in the Priced Configuration - see FDR for details

3-Year Cost of Ownership: \$913,284 USD
TPC-E Throughput: 1,165.56 tpsE
Price/Performance: \$783.56 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. Thank You.

UNISYS	ES7000 Model 7600R Enterprise Server (8s)		TPC-E 1.7.0	
			Report Date April 13, 2009	
Numerical Quantities Summary				
Reported Throughput:			1165.56	
Configured Customers:			590,000	
Response Time (in seconds)	Minimum	Average	90 th %tile	Maximum
Broker-Volume	0.01	0.07	0.12	4.79
Customer-Position	0.00	0.03	0.05	2.86
Market-Feed	0.00	0.04	0.10	4.63
Market-Watch	0.00	0.04	0.09	1.13
Security-Detail	0.00	0.02	0.04	1.95
Trade-Lookup	0.00	0.58	0.79	3.88
Trade-Order	0.00	0.07	0.11	4.86
Trade-Result	0.00	0.08	0.13	1.36
Trade-Status	0.00	0.03	0.06	1.69
Trade-Update	0.02	0.69	0.86	2.31
Data-Maintenance	0.01	0.15	N/A	1.05
Transaction Mix (in percent of total transactions)		Transaction Count		Mix
Broker_Volume		4,111,878		4.900%
Customer-Position		10,909,488		13.000%
Market-Feed		839,215		1.000%
Market-Watch		15,104,817		18.000%
Security-Detail		11,748,866		14.001%
Trade-Lookup		6,712,772		7.999%
Trade-Order		8,475,634		10.100%
Trade-Result		8,392,101		10.000%
Trade-Status		15,944,125		19.000%
Trade-Update		1,678,169		2.000%
Data-Maintenance		120		N/A
Test Duration and Timing				
Ramp-up Time (hh:mm:ss)			0:48:42	
Measurement Interval (hh:mm:ss)			2:00:00	
Business Recovery Time (hh:mm:ss)			0:53:36	
Total Number of Transactions Completed in Measurement Interval			83,917,065	