



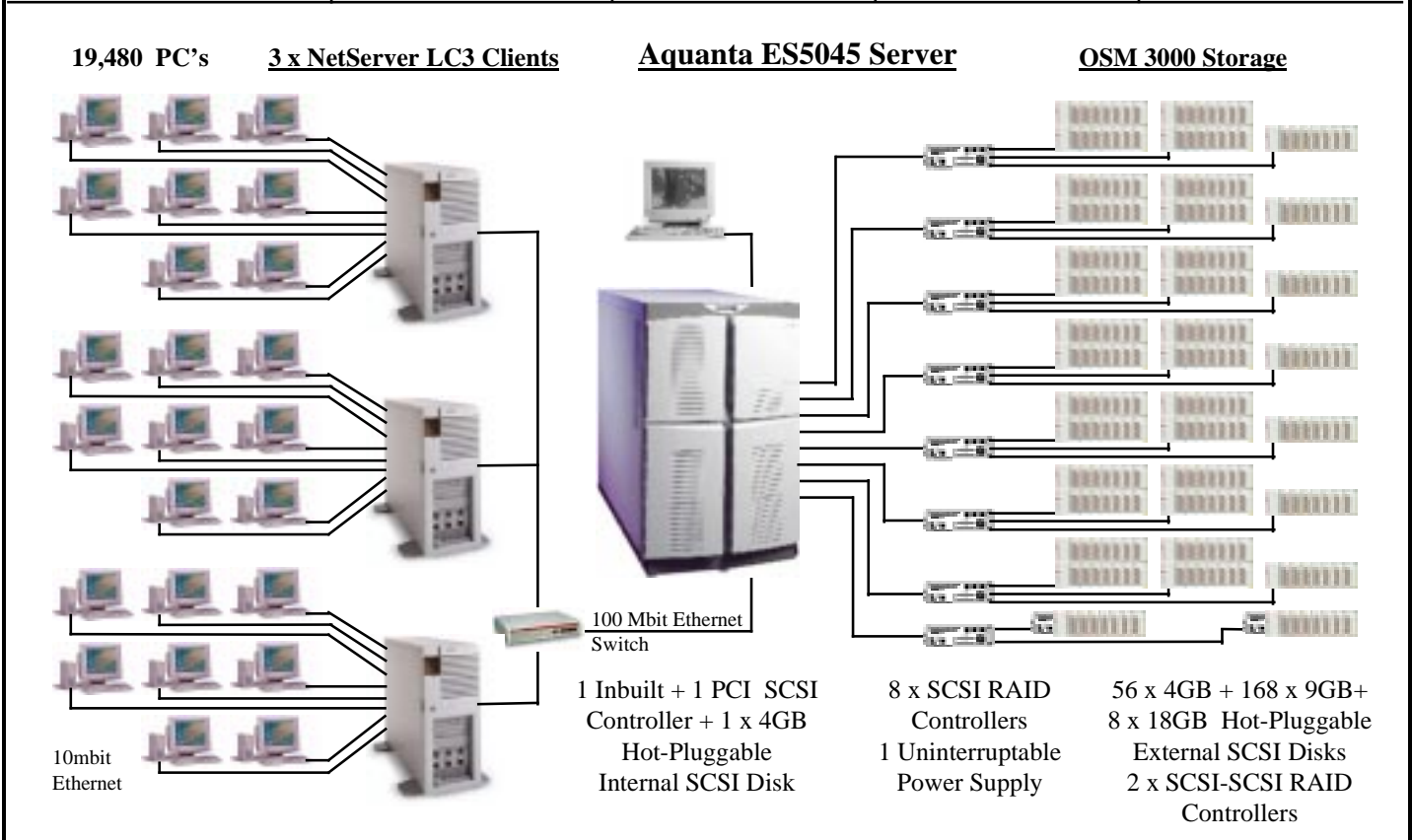
## Aquanta ES5045 Server (4P 500MHz/2MB)

TPC-C Rev. 3.4

Report Date: 17-Mar-1999

Reprice Date: 11-Aug-1999

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>\$477,440</b>	<b>24,328.67 tpmC</b>	<b>\$19.62 per tpmC</b>	<b>17-Mar-1999</b>
Processors	Database Manager	Operating System	Other Software
4 Pentium® III Xeon 500 MHz 2MB L2 cache	Microsoft SQL Server Enterprise Edition 7.0	Microsoft NT Server 4.0 Enterprise Edition	Microsoft IIS 3.0 Tuxedo 6.3 CFS
<b>Number of Users</b>			
<b>19,480</b>			



System Components	Server		Clients	
	Quantity	Type	Quantity	Type
Processors	4	500 MHz Pentium® III Xeon with 2MB Level 2 Cache	3	2 x 450MHz Pentium® II with 512KB Level 2 Cache
Memory	1	4096MB	3	512MB
Disk Controllers	8 + 2 1 + 1	SCSI RAID Inbuilt + PCI SCSI	3	Inbuilt SCSI
Disk Drives	56 168 8	4.27 GB + 1 4.24 GB 8.54 GB 17.09 GB	3	3.97 GB
Total Storage		1815.07 GB		11.91 GB
CD-ROM / Tape	1	SCSI CD-ROM Drive	3	CD-ROM Drive

Unisys Corporation		Aquanta ES5045 Server (4P 500MHz/2MB)				TPC-C Rev 3.4 11-Aug-1999		
Description	Style	Third Party		Unit	Qty.	Extended	5 Years	
		Brand	Pricing	Price		Price	Maint.	
<b>Server Hardware</b>								
SYS: Aquanta ES5045, w/ CDRom, 0 Proc, 0MB Mem	ES504151-GZN			1	\$6,041	1	\$6,041	\$3,456
PROC: 500MHz Pentium III Xeon /2MB Cache	XEO3500-2MB			1	\$5,893	4	\$23,572	\$9,888
ACC:Voltage Regulator Module	XEO24001-VRM			1	\$44	6	\$264	\$0
MEM:ECC Memory Board, 0MB Mem	MEM241-MBD			1	\$398	1	\$398	\$132
MEM: 128 MB Memory Upgrade	DIM5072-128			1	\$398	32	\$12,736	\$8,448
DISK: 4GB Drive, Ultra SCSI SCA	HDS417-CX1			1	\$406	1	\$406	\$264
ETHERNET: 100Mbit/sec, PCI 32-bit	ETH1010051-PCI			1	\$99	1	\$99	
ACC: HBA, SCSI w/ VHD Connector	PCI300-SUW			1	\$273	1	\$273	\$132
ACC: Value Add Software	ESS504010-N			1	\$368	1	\$368	\$144
MONITOR:15-inch Color	EVG2100-P			1	\$221	1	\$221	
KEYBD: 104 Key Spacesaver	PCK104-SKB			1	\$26	1	\$26	
MOUSE: 2 Button PS2	PWM1-PS2			1	\$15	1	\$15	
CTRL: RAID 3-Ch PCI w/ 16MB Mem +10% spares	AMI 438-H	AMI		2	\$1,395	10	\$13,950	\$620
<b>Subtotal</b>							<b>\$58,369</b>	<b>\$23,084</b>
<b>Storage Hardware</b>								
DISK: 4GB Drive, 10K Cheetah2, SCA + 10% spares	OSD4205-W45			1	\$588	62	\$36,456	spared
DISK: 9GB Drive, 10K Cheetah2, SCA + 10% spares	OSD9205-W45			1	\$618	185	\$114,330	spared
DISK: 18GB Drive, 10K Cheetah2, SCA + 10% spares	OSD18205-W45			1	\$1,153	10	\$11,530	spared
CAB: Disk, 7 SCA w/ 050 I/F & Cat-Cbl, 0 Disks, 3U	OSM310050-U05			1	\$1,345	14	\$18,830	\$10,752
CAB: Disk, 7 SCA w/ 057 I/F, 0 Disks, 3U	OSM310057-U05			1	\$1,353	21	\$28,413	\$16,128
CAB: Disk, 7 SCA w/ 100 I/F, 0MB, 0 Disks, 3U	OSM310100-U05			1	\$2,735	2	\$5,470	\$3,456
MEM: 32MB OSM cache	OSM1032-MEM			1	\$187	2	\$374	\$216
PWR: 2nd Power Supply Upgrade, OSM Cabinet	OSM3000-BPF			1	\$392	2	\$784	\$264
PWR:3000 VA UPS, 3U	UPD30001-SXR			1	\$1,897	1	\$1,897	\$936
PWR: Distribution Unit, 6 OSM Cabinets	RM1-PDU			1	\$379	6	\$2,274	\$3,600
CBL: SCSI 68-pin HD->VHD Conn's	CBL2210-OSM			1	\$96	23	\$2,208	
CAB: Rackmount Kit for Disk Cages	OSM3000-RMK			1	\$84	37	\$3,108	
CAB: Rack Cabinet, w/ fill pnls, 36U	CAB361-SXR			1	\$1,694	3	\$5,082	
CAB: Bezel kit 36U	BEZ3611-CAB			1	\$295	3	\$885	
CAB: Stabilizer kit 0U	WGT39581-SXR			1	\$206	2	\$412	
PNL: L&R side panels 36U	PAN3621-SXR			1	\$283	3	\$849	
CAB: Rack Cabinet, w/ fill pnls, 19U	CAB191-SXR			1	\$1,621	1	\$1,621	
CAB: Bezel kit 19U	BEZ1911-CAB			1	\$239	1	\$239	
PNL: L&R side panels 19U	PAN1921-SXR			1	\$210	1	\$210	
<b>Subtotal</b>							<b>\$234,972</b>	<b>\$35,352</b>
<b>Server Software</b>								
Microsoft NT Server Enterprise Edition 4.0, incl 25 CALs		Microsoft		3	\$3,999	1	\$3,999	\$0
Microsoft SQL Server Enterprise Edition 7.0, unlimited user license		Microsoft		3	\$28,999	1	\$28,999	\$10,475
<b>Subtotal</b>							<b>\$32,998</b>	<b>\$10,475</b>
<b>Client Hardware</b>								
SYS: NetServer LC3, w/1 450MHz Proc & CDROM, 0MB Mem	D7029-AV			1	\$1,660	3	\$4,980	\$3,600
PROC:1x450MHz Pentium II/512KB Cache UPG	D7032-AV			1	\$993	3	\$2,979	\$1,512
MEM: 128 MB SDRAM Memory Upgrade	D6098-AV			1	\$255	12	\$3,060	
DISK: 4GB SCSI 3.5 Internal	D4910-AV			1	\$303	3	\$909	\$1,764
ETHERNET: 10/100TX Mbit/sec, PCI 32-bit	D5013-AV			1	\$68	15	\$1,020	
ETHERNET: 100Mbit/sec, PCI 32-bit, Quad	SF1001-ET4			1	\$958	3	\$2,874	\$1,188
MONITOR:15-inch Color	EVG2100-P			1	\$221	3	\$663	
<b>Subtotal</b>							<b>\$16,485</b>	<b>\$8,064</b>
<b>Client Software</b>								
Microsoft Windows NT Server 4.0, incl 5 CALs		Microsoft		3	\$809	3	\$2,427	\$0
Microsoft Visual C++ Professional 5.0		Microsoft		3	\$499	1	\$499	\$0
TUXEDO Core Functional Services 6.3 for NT		BEA		4	\$3,000	3	\$9,000	\$7,200
<b>Subtotal</b>							<b>\$11,926</b>	<b>\$7,200</b>
<b>User Connectivity</b>								
Ethernet Switch, 4-Port 100TX TrueFast + 10% spares	NX-SW8	Netlux		5	\$229	3	\$687	spared
Ethernet Hub, 8-Port 10Base-T (8+1 ports) + 10% spares	Z85094	General		6	\$28	2682	\$75,096	spared
<b>Subtotal</b>							<b>\$75,783</b>	<b>\$0</b>
<b>Total</b>							<b>\$430,533</b>	<b>\$84,175</b>
Unisys Service Pre-Pay Discount								(\$7,680)
Western Micro discount						1	(\$29,588)	
<b>Notes:</b>								
1. HW Maintenance - First 36 months that are included in Unisys warranty are upgraded to service level: Standard Performance-Gold. Last 24 months are also at service level: Standard Performance-Gold.						<b>Five Year Cost of Ownership</b> <b>\$477,440</b> <b>TPC-C Throughput</b> <b>24,328.67</b> <b>\$/tpmC</b> <b>\$19.62</b>		
2. All Microsoft maintenance is covered by the maintenance cost of Microsoft SQL Server.								
3. 10% or minimum 2 spares are added in place of onsite service (products have a five year return-to-vendor warranty)								
4. Pricing: 1 = Western Micro, 2 = AMI, 3 = Microsoft, 4 = BEA, 5 = Netlux, 6 = Software House Int'l								
<b>The benchmark results and test methodology were audited by Tom Sawyer of 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 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.								

**NUMERICAL QUANTITIES SUMMARY**  
for  
**Unisys Aquanta ES5045 Server**

**MQTh, Computed Maximum Qualified Throughput:** **24,328.67**  
 % throughput difference, reported & reproducibility runs: 0.04%

**Transaction Mix**

New Order	44.92%
Payment	43.02%
Delivery	4.00%
Stock-Level	4.03%
Order-Status	4.03%

**Response Times**

Transaction	Average	Maximum	90th %ile
New-Order	0.45	5.23	0.73
Payment	0.32	3.64	0.59
Delivery	0.11	0.72	0.12
Stock-Level	2.25	4.67	2.95
Order Status	0.36	5.34	0.63
Menu	0.11	3.62	0.11
Delivery (Deferred)	0.50	1.91	0.75

**Response time delay added for emulated components (seconds)**

RT Response time	0.1
Menu Response time	0.1

**Keying/Think Time Times (seconds)**

Transaction	Minimum	Average	Maximum
New-Order	18.00/0	18.01/12.02	18.03/120.3
Payment	3.00/0	3/12.04	3.02/120.3
Delivery	2.00/0	2/5.05	2.01/50.6
Stock-Level	2.00/0	2/5.06	2.02/50.6
Order-Status	2.00/0	2/10.1	2.02/100.71

**Test Duration**

Ramp up time	41 minutes
Measurement interval (M)	30 minutes
Transactions (all types) completed during measurement interval	1,624,809
Ramp-down time	365 minutes

**Checkpointing:**

Number of checkpoints	1
Checkpoint interval	30 minutes