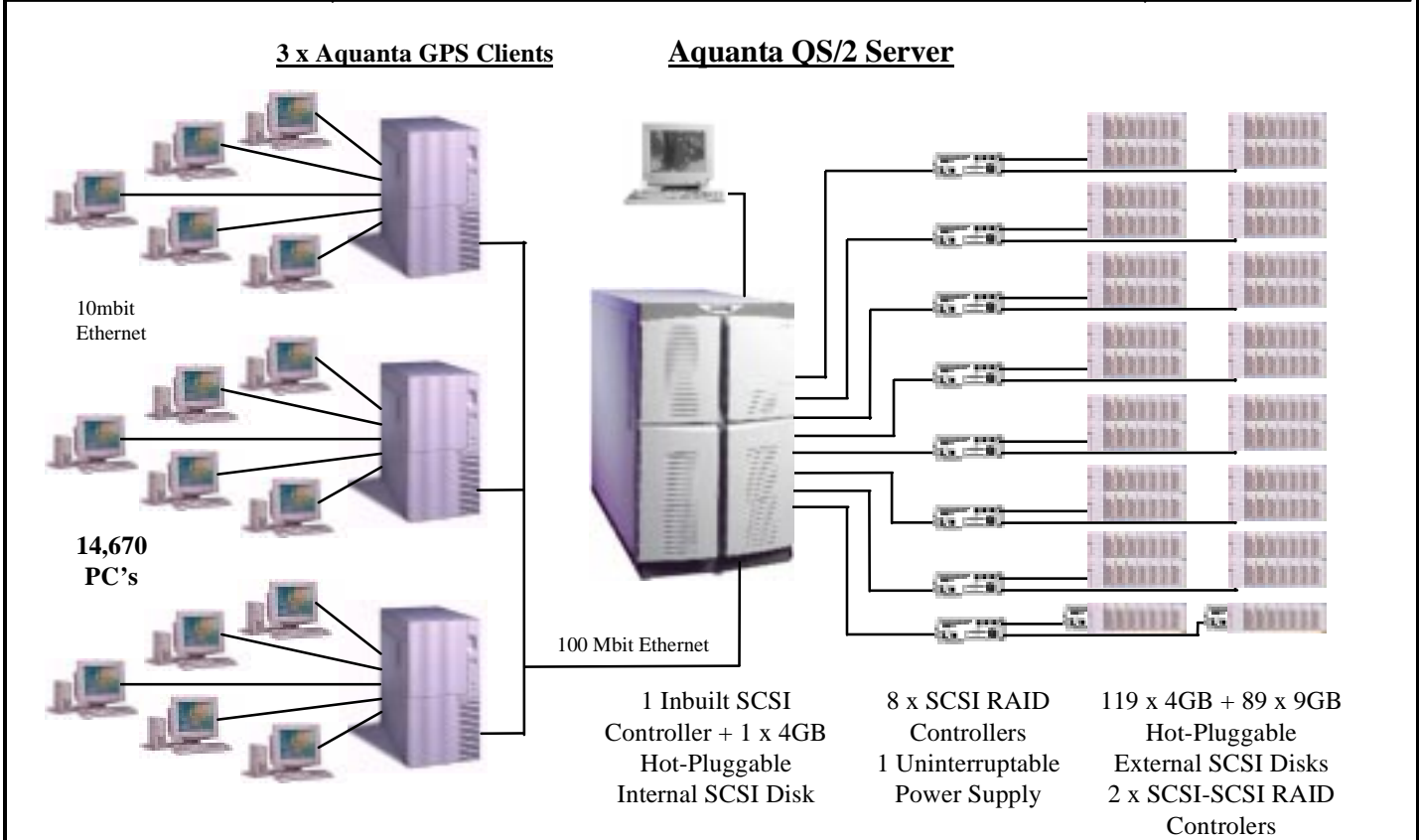


UNISYS	Aquanta QS/2 Server C/S		TPC-C Rev. 3.3
			Report Date: 16-Jul-1998
Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
\$462,803	18,154.00 tpmC	\$25.49 per tpmC	29-Dec-1998 *
Processors	Database Manager	Operating System	Other Software
4 Pentium® II Xeon 400 MHz 1MB L2 cache	Microsoft SQL Server Enterprise Edition 7.0	Microsoft NT Server 4.0 Enterprise Edition	Microsoft IIS 3.0 Tuxedo 6.3 CFS
			Number of Users
			14,670



System Components	Server		Clients	
	Quantity	Type	Quantity	Type
Processors	4	400 MHz Pentium® II Xeon with 1MB Level 2 Cache	3	2 x 300MHz Pentium® II with 512KB Level 2 Cache
Memory	1	4096MB	3	256MB
Disk Controllers	8 + 2	SCSI RAID	3	Inbuilt SCSI
	1	Inbuilt SCSI		
Disk Drives	119	4.24 GB	3	2.02 GB
	89	8.48 GB		
	1	4.23 GB		
Total Storage		1263.15 GB		6.06 GB
CD-ROM / Tape	1	CD-ROM Drive	3	CD-ROM Drive

* All Components Except MS SQL Server EE 7.0 Available 7/17/98

Unisys Corporation		Aquanta QS/2 Server C/S				TPC-C Rev 3.3 16-July-1998	
Description	Style	Third Party Brand Pricing	Unit Price	Qty.	Extended Price	5 Years Maint.	
Server Hardware							
SYS: Aquanta QS/2, w/ CDROM, 0 Proc, 0MB Mem	QS2000111-BAS		\$8,125	1	\$8,125	\$864	
PROC: 1x400MHz Pentium II /1MB Cache	XEO2400-1MB		\$4,375	4	\$17,500	\$11,040	
ACC: Voltage Regulator Module, Processor	XEO24001-VRM		\$50	6	\$300	\$288	
MEM:ECC Memory Board, 0MB Mem	MEM241-MBD		\$519	2	\$1,038	\$144	
MEM: 128 MB Memory Upgrade	DIM5072-128		\$1,139	32	\$36,448	\$6,144	
DISK: 4GB Drive, Ultra SCSI SCA	HDS417-CX1		\$680	1	\$680	\$408	
ETHERNET: 100Mbit/sec, PCI 32-bit	ETH1010051-PCI		\$150	1	\$150	\$48	
CDROM: 14-32x Speed, SCSI	CDR1432-SI		\$178	1	\$178	\$120	
MONITOR:15-inch Color	EVG2000-E		\$300	1	\$300		
KEYBD: 104 Key Spacesaver	PCK104-SKB		\$34	1	\$34		
MOUSE: 2 Button PS2	PWM1-PS2		\$25	1	\$25		
CTRL:RAID Tri-SCSI-2 Ultra PCI, 0MB Mem.	RAD9602-PCI		\$2,336	8	\$18,688	\$3,264	
MEM: 16 MB ECC EDO Memory Upgrade	RAD9616-MEM		\$230	8	\$1,840	\$384	
CBL: SCSI 68-pin HD Conn.	CBL2210-OSM		\$110	16	\$1,760		
DISK: 4GB Drive, 10K, SCA + 10% spares	OSD4203-W45		\$685	131	\$89,735	spared	
DISK: 9GB Drive, 10K, SCA + 10% spares	OSD9203-W45		\$968	98	\$94,864	spared	
CAB: Disk, 7 SCA w/ 050 I/F & Cat-Cbl, 0 Disks, 3U	OSM310050-U05		\$1,320	14	\$18,480	\$6,034	
CAB: Disk, 7 SCA w/ 057 I/F, 0 Disks, 3U	OSM310057-U05		\$1,324	14	\$18,536	\$1,680	
CAB: Disk, 7 SCA w/ 100 I/F, 0MB, 0 Disks, 3U	OSM310100-U05		\$2,681	2	\$5,362	\$240	
MEM: 32MB OSM cache	OSM1000-C32		\$145	2	\$290	\$192	
CAB: Rackmount Kit for Disk Cages	OSM3000-RMK		\$82	30	\$2,460		
PWR: 2nd Power Supply Upgrade, OSM Cabinet	OSM3000-APM		\$257	2	\$514	\$816	
PWR:3000 VA UPS, 3U	UPD30001-SXR		\$2,379	1	\$2,379	\$264	
CAB: Rack Cabinet, w/ fill pnls, 36U	CAB361-SXR		\$1,530	3	\$4,590		
CAB: Link kit for 36U cabinets	LNK361-SXR		\$255	2	\$510		
CAB: Bezel kit 36U	BEZ3611-CAB		\$170	3	\$510		
CAB: Stabilizer kit 0U	WGT39581-SXR		\$120	3	\$360		
PNL: L&R side panels 36U	PAN3621-SXR		\$213	1	\$213		
				Subtotal	\$325,869	\$31,930	
Server Software							
Microsoft NT Server Enterprise Edition 4.0, incl 25 CALs	NTE4008-L		\$3,999	1	\$3,999	\$0	
Microsoft SQL Server Enterprise Edition 7.0, incl 25 CALs		Microsoft	\$28,999	1	\$28,999	\$10,475	
				Subtotal	\$32,998	\$10,475	
Client Hardware							
SYS: Aquanta GPS, 0 Proc, 0MB Mem	GPS60071-BAS		\$1,077	3	\$3,231	\$936	
PROC:1x300MHz Pentium II/512KB Cache	GPS2300-512		\$1,100	6	\$6,600	\$1,296	
UPGRD: GPS P-II 2nd CPU Supt.	GPS600071-P2U		\$36	3	\$108	\$144	
MEM: 128 MB Memory Upgrade	DIM672-128		\$1,048	6	\$6,288	\$1,008	
DISK: 2GB Ultra SCSI 3.5 Internal	HDS2000-SW7		\$558	3	\$1,674	\$864	
CDROM: Twelve Speed	CDR1200-SI		\$159	3	\$477	\$360	
ETHERNET: 100Mbit/sec, PCI 32-bit	ETH101007-PCI		\$107	6	\$642		
ETHERNET: 100Mbit/sec, PCI 32-bit, Quad	SF1001-ET4		\$1,011	3	\$3,033	\$720	
MONITOR:15-inch Color	EVG2000-E		\$300	3	\$900		
KEYBD: 104 Key Spacesaver	PCK104-SKB		\$34	3	\$102		
MOUSE: 2 Button PS2	PWM1-PS2		\$25	3	\$75		
				Subtotal	\$23,130	\$5,328	
Client Software							
Microsoft Windows NT Server 4.0, incl 5 CALs		Microsoft	\$809	3	\$2,427	\$0	
Microsoft Visual C++ 32-bit edition (subscription)		Microsoft	\$499	1	\$499	\$0	
TUXEDO Core Functional Services 6.3 for NT		BEA	\$3,000	3	\$9,000	\$6,750	
				Subtotal	\$11,926	\$6,750	
User Connectivity							
Ethernet Hub, 8-Port 100TX TrueFast + 10% spares	NX-H8TX	Netlux	\$229	3	\$687	spared	
Ethernet Hub, 8-Port 10Base-T + 1-Port BNC + 10% spares	DEH2924	DataComm Whse	\$33	2020	\$66,660	spared	
				Subtotal	\$67,347	\$0	
				Total	\$461,270	\$54,483	
Western Micro discount				1	(\$52,950)		
Notes:							
1. HW Maintenance - 1st 36 months included in Unisys product costs. The next 24 months are at the level: Standard Performance-Gold.							
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 = Microsoft, 3 = BEA, 4 = Netlux, 5 = DataComm Whse							
The benchmark results and test methodology were audited by Richard Gimarc 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.							
					Five Year Cost of Ownership	\$462,803	
					TPC-C Throughput	18,154.00	
					\$/tpmC	\$25.49	

NUMERICAL QUANTITIES SUMMARY
 Unisys Aquanta QS/2 Server
 Microsoft SQL Server Enterprise Edition 7.0

MQTh, Computed Maximum Qualified Throughput: **18154.00**
 % throughput difference, reported & reproducibility runs: 0.25%

Transaction Mix

New Order	44.78%
Payment	43.09%
Delivery	4.03%
Stock-Level	4.03%
Order-Status	4.07%

Response Times

Transaction	Average	Maximum	90th %ile
New-Order	0.58	4.96	0.89
Payment	0.42	4.92	0.72
Delivery	0.14	1.92	0.18
Stock-Level	2.76	5.60	3.36
Order Status	0.46	2.86	0.76
Menu	0.14	3.79	0.16
Delivery (Deferred)	0.54	1.89	0.92

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	18.01/12.04	18.12/120.4
Payment	3.00/0	3/12.05	3.1/120.4
Delivery	2.00/0	2/5.03	2.1/50.7
Stock-Level	2.00/0	2/5.04	2.05/50.7
Order-Status	2.00/0	2/10.04	2.09/100.91

Test Duration

Ramp up time	41 minutes
Measurement interval (M)	30 minutes
Transactions (all types) completed during measurement interval	1216210
Ramp-down time	50 minutes

Checkpointing:

Number of checkpoints	1
Checkpoint interval	30 minutes