UNISYS	**Aquanta HS/6 Server** **C/S**		TPC-C Rev. 3.3
			Report Date: 10-Apr-1998

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
$441,289	**13,728.73 tpmC**	**$32.14 per tpmC**	**15-May-1998**

Processors	Database Manager	Operating System	Other Software	Number of Users
6 Pentium® Pro 200 MHz 1MB L2 cache	Microsoft SQL Server 6.5 Enterprise Edition	Microsoft NT Server 4.0 Enterprise Edition	Microsoft IIS 3.0 Tuxedo 6.3 CFS	**11,040**

3 x Aquanta GPS Clients   **Aquanta HS/6 Server**

10mbit Ethernet

11,040 NetPC's

100 mbit Ethernet

1 Inbuilt SCSI Controller + 1 x 4GB Hot-Pluggable Internal SCSI Disk

7 x SCSI RAID Controllers

70 x 4GB + 66 x 9GB Hot-Pluggable External SCSI Disks 2 x Uninteruptable Power Supplies
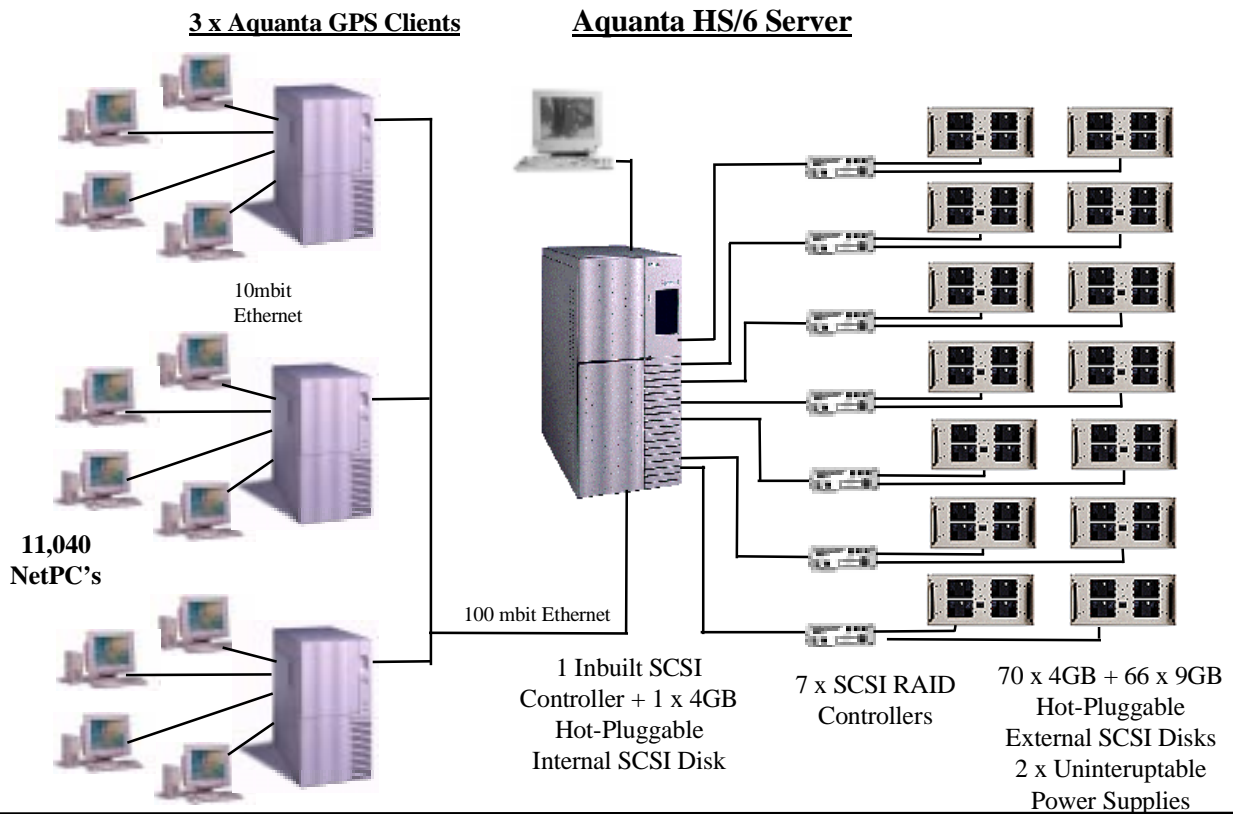
System Components	Server		Clients	
	Quantity	Type	Quantity	Type
Processors	6	200 MHz Pentium® Pro with 1MB Level 2 Cache	3	266MHz Pentium® II with 512KB Level 2 Cache
Memory	1	4096MB	3	256MB
Disk Controllers	7 1	SCSI RAID Inbuilt SCSI	3	Inbuilt SCSI
Disk Drives	70 66 1	4.24GB 8.48GB 4.05GB	3	2.0GB
Total Storage		860.3GB		6.0GB
CD-ROM / Tape	1	CD-ROM Drive	3	CD-ROM Drive

Unisys Corporation		Aquanta HS/6 Client/Server					TPC-C Rev 3.3 10-Apr-1998
Description	**Style**	**Third Party Brand Pricing**	**Unit Price**	**Qty.**		**Extended Price**	**5 Years Maint.**
Server Hardware							
SYS: Aquanta HS/6, w/ CDRom, 0 Proc, 0MB Mem	HS6000122-BAS	1	$9,985	1		$9,985	$864
PROC:3x200MHz PPro/1MB + CPU Riser card	HTC6200-1MB	1	$12,294	1		$12,294	$2,832
PROC:3x200MHz PentiumPro/1MB Cache	HTX6200-1MB	1	$11,992	1		$11,992	$2,760
MEM:ECC Memory Board, 0MB Mem	MEM641-DIM	1	$379	1		$379	$72
MEM:256 MB Memory Upgrade	DIM572-256	1	$2,048	16		$32,768	$5,376
CTRL:RAID Tri-SCSI-2 Ultra PCI	RAD3162-PCI	1	$1,775	7		$12,425	$2,856
CTRL: VGA, 16-bit ISA	VID11-ISA	1	$102	1		$102	
ETHERNET: 100Mbit/sec, PCI 32-bit	SF1001-FET	1	$290	1		$290	$48
CDROM: Twelve Speed	CDR1200-SI	1	$159	1		$159	$120
ACC: 6 SCA Drive Cage	CAG61-ADV	1	$408	1		$408	$120
MONITOR:14-inch Color	EVG1000-E	1	$193	1		$193	
KEYBD: 104 Key Spacesaver	PCK104-SKB	1	$32	1		$32	
MOUSE: 2 Button PS2	PWM1-PS2	1	$24	1		$24	
DRW: Disk Drive Drawer, w/ cables, 7U	P/N 11910190	ALR 2	$1,795	16		$28,720	$6,896
DISK: 4GB Drive, Ultra SCSI SCA	HDS4000-WC7	1	$743	1		$743	$408
DISK: 4GB Drive + 10% spares	HDS4000-H10	1	$800	77		$61,600	spared
DISK: 9GB Drive + 10% spares	HDS9000-H10	1	$1,278	73		$93,294	spared
PWR: 2200VA UPS, 4U	UPD22001-SXR	1	$2,285	2		$4,570	$1,248
CAB: Rack Cabinet, w/ fill pnls, 36U	CAB361-SXR	1	$1,469	3		$4,407	
CAB: Link kit for 36U cabinets	LNK361-SXR	1	$245	2		$490	
CAB: Bezel kit 36U	BEZ3611-CAB	1	$163	3		$489	
CAB: Stabilizer kit 0U	WGT39581-SXR	1	$115	3		$345	
PNL: L&R side panels 36U	PAN3621-SXR	1	$204	1		$204	
					Subtotal	**$275,913**	**$23,600**
Server Software							
Microsoft NT Server 4.0 Enterprise Edition, incl 25 CALs		Microsoft 3	$3,999	1		$3,999	$0
Microsoft SQL Server 6.5 Enterprise Edtion, incl 25 CALs		Microsoft 3	$28,999	1		$28,999	$10,475
					Subtotal	**$32,998**	**$10,475**
Client Hardware							
SYS: Aquanta GPS, 0 Proc, 0MB Mem	GPS60071-BAS	1	$1,121	3		$3,363	$936
PROC:1x266MHz Pentium II/512KB Cache	GPS2266-512	1	$929	6		$5,574	$1,296
UPGRD: GPS P-II 2nd CPU Supt.	GPS600071-P2U	1	$36	3		$108	$144
MEM: 256 MB Memory Upgrade	DIM572-256	1	$2,048	3		$6,144	$1,008
DISK: 2GB Ultra SCSI 3.5 Internal	HDS2000-SW7	1	$558	3		$1,674	$864
CDROM: Twelve Speed	CDR1200-SI	1	$159	3		$477	$360
ETHERNET: 100Mbit/sec, PCI 32-bit	ETH101007-PCI	1	$107	3		$321	
ETHERNET: 100Mbit/sec, PCI 32-bit, Quad	SF1001-ET4	1	$1,011	3		$3,033	$720
MONITOR:14-inch Color	EVG1000-E	1	$193	3		$579	
KEYBD: 104 Key Spacesaver	PCK104-SKB	1	$32	3		$96	
MOUSE: 2 Button PS2	PWM1-PS2	1	$24	3		$72	
					Subtotal	**$21,441**	**$5,328**
Client Software							
Microsoft Windows NT Server 4.0, incl 5 CALs		Microsoft 3	$809	3		$2,427	$0
Microsoft SQL Workstation w/ Programmer's Toolkit		Microsoft 3	$499	1		$499	$0
Microsoft Visual C++ 32-bit edition (subscription)		Microsoft 3	$499	1		$499	$0
TUXEDO Core Functional Services 6.3 for NT		BEA 4	$3,000	3		$9,000	$6,750
					Subtotal	**$12,425**	**$6,750**
User Connectivity							
Ethernet Hub, 8-Port 100TX TrueFast + 10% spares	NX-H8TX	Netlux 5	$249	3		$747	spared
Ethernet Hub, 8-Port 10Base-T + 1-Port BNC + 10% spares	DEH2924	Compex 6	$34	1518		$51,612	spared
					Subtotal	**$52,359**	**$0**
					Total	**$395,136**	**$46,153**

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= ALR, 3 = Microsoft, 4 = BEA, 5 = Netlux, 6 = Compex

Five Year Cost of Ownership	**$441,289**
TPC-C Throughput	**13,728.73**
$/tpmC	**$32.14**

The benchmark results and test methodology were audited by Tom Sawyer 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.

NUMERICAL QUANTITIES SUMMARY
Unisys Aquanta HS/6 Server
Microsoft SQL Server 6.5 Enterprise Edition

MQTh, Computed Maximum Qualified Throughput: **13728.73**

% throughput difference, reported & reproducibility runs: 0.13%

Transaction Mix

New Order	44.74%
Payment	43.08%
Delivery	4.08%
Stock-Level	4.05%
Order-Status	4.05%

Response Times

Transaction	Average	Maximum	90th %ile
New-Order	0.46	4.70	0.71
Payment	0.36	3.44	0.58
Delivery	0.14	1.85	0.17
Stock-Level	1.71	5.99	2.82
Order Status	0.70	4.13	1.12
Menu	0.12	1.49	0.13
Delivery (Deferred)	0.51	2.88	0.79

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	18.01/12.03	18.13/120.41
Payment	3.00/0	3/12.07	3.13/120.4
Delivery	2.00/0	2/5.07	2.07/50.51
Stock-Level	2.00/0	2/5.06	2.11/50.7
Order-Status	2.00/0	2/10.03	2.11/95.31

Test Duration

Ramp up time	32 minutes
Measurement interval (M)	30 minutes
Transactions (all types) completed during measurement interval	920630
Ramp-down time	53 minutes

Checkpointing:

Number of checkpoints	1
Checkpoint interval	30 minutes