| Compaq Computer Corporation | ProLiant 8000-550-4S C/S with 5 ProLiant 1600 | TPC-C Rev. 3.5 |
|---|---|---|
| | | Report Date: Sept 1,1999 |

| Total System Cost | TPC-C Throughput | Price/Performance | Availability Date |
|---|---|---|---|
| **$753,108** | **40266.40** | **$18.70** | **Dec 31, 1999*** |

| Processors | Database | Operating System | Other Software | Number Users |
|---|---|---|---|---|
| 8 Pentium III Xeon 550 MHz | Microsoft SQL Server 7.0 SP2 Enterprise Edition | Windows NT 4.0 Enterprise Edition (SP4) | Microsoft Visual C++ MKS Toolkit for NT Microsoft COM+ | **32400** |

**32400 PCs**

**9XCompaq SMART 4200 Array**
**34 X StorageWorks Enclosure Model**



10Mb
100Mb
100Mb
100Mb 100Mb 100Mb 100Mb
100Mb

**474 X 9.1 GB 10K Pluggable Drives (external) +**
**1 X 4.3 GB 7200 rpm(internal)**
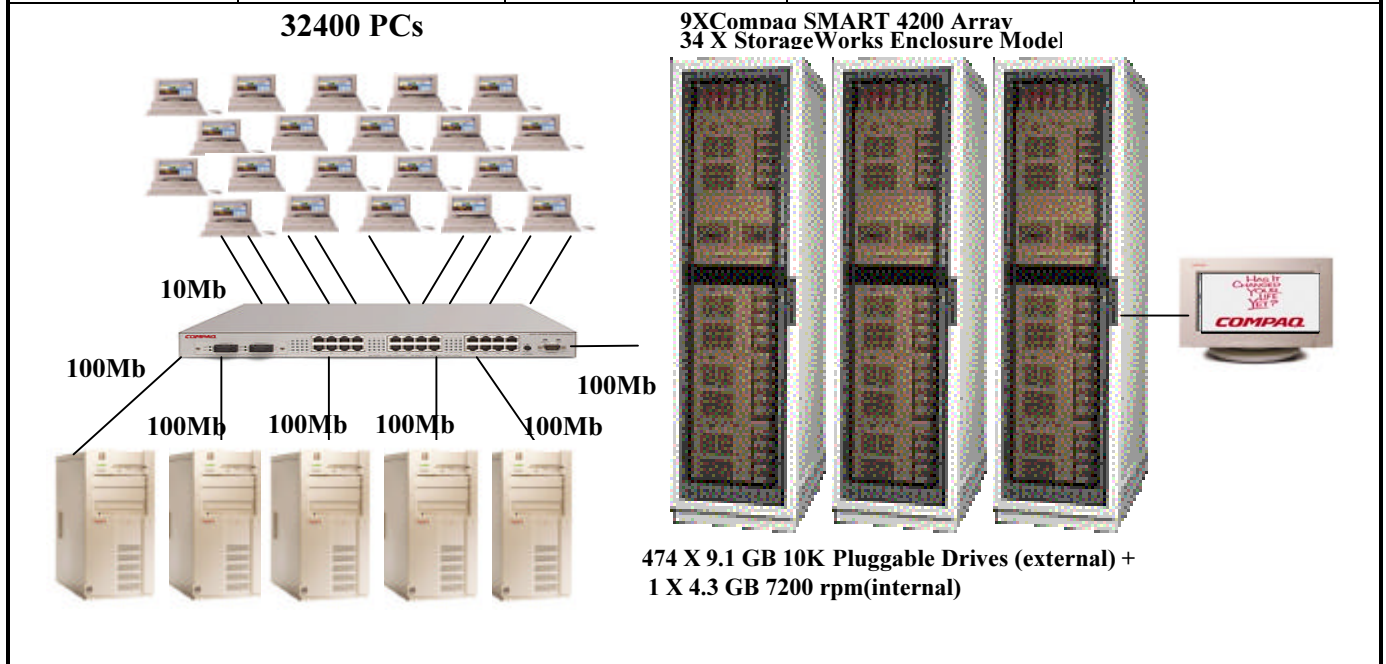
| System Components | Server | | Each Client | |
|---|---|---|---|---|
| | Quantity | Description | Quantity | Description |
| Processor | 8 | 550MHz Pentium III Xeon w/ 2MB Cache | 2 | 500Mhz Pentium III w/ 512K cache |
| Memory | 16 | 256MB | 4 | 128MB |
| Disk Controllers | 9 | SMART SCSI Array Controller 4200 | 1 | Integrated Ultra SCSI Controller |
| Disk Drives | 474 1 | 9.1GB SCSI Drive 4.3GB SCSI Drive | 1 | 4.3GB SCSI Drive |
| Total Storage | | 3.9258 TeraBytes | | 4.3 GB |
| Tape Drives | 1 | 4/16 TurboDAT | | |

**\* All hardware components are available at the time of this publication.**

| Compaq Computer | ProLiant 8000-550-4S | | | | TPC-C Rev. 3.5 | |
|---|---|---|---|---|---|---|
| Corporation | Client/Server | | | | Report Date: | 1-Sep-99 |

| Description | Part Number | Third Party Brand | Unit Price | Qty | Extended Price | 5 yr. Maint. Price |
|---|---|---|---|---|---|---|
| **Server Hardware** | | Pricing | | | | |
| ProLiant 8000-550-4S | 303900-001 | 1 | 57,338 | 1 | 57,338 | |
| - 4 Pentium III Xeon/550MHz 2MB Cache | | | | | | |
| - 2 GB SD RAM Memory | | | | | | |
| - CD-ROM 24X | | | | | | |
| - 10/100 Ethernet Controller | | | | | | |
| ProLiant Pentium III Xeon 6/550-2M w/ Redundant PPM | 146170-B21 | 1 | 6,720 | 4 | 26,880 | |
| 512MB SD RAM Memory Kit (2 x 256MB) | 238807-B21 | 1 | 1,652 | 4 | 6,608 | |
| Compaq SMART Array Controller 4200 | 295636-B21 | 1 | 2,218 | 9 | 19,958 | |
| StorageWorks Enclosure Model 4214R | 103381-001 | 1 | 2,576 | 34 | 87,584 | |
| 4.3-GB Fast SCSI-2 7200 RPM Drive | 199580-001 | 1 | 447 | 1 | 447 | |
| Compaq V500 Color Monitor | 325900-001 | 1 | 203 | 1 | 203 | |
| 4/8GB DAT Drive | 295353-B21 | 1 | 703 | 1 | 703 | |
| Compaq Rack Model 7142 | 165753-001 | 1 | 1,680 | 3 | 5,040 | |
| Compaq Rack Coupling Kit | 165664-001 | 1 | 152 | 2 | 305 | |
| Compaq Rack Sidewall Kit | 165652-001 | 1 | 208 | 1 | 208 | |
| 9.1 GB Hot-Plug SCSI-3 Drive - 10K | 336357-B21 | 1 | 716 | 474 | 339,232 | |
| ProLiant Enterprise Server - Parts Exchange - 1 Year | FM-HEPRT-12 | 1 | 597 | 2 | | 1,194 |
| ProLiant Storage System - Parts Exchange - 1 Year | FM-STPRT-12 | 1 | 255 | 68 | | 17,340 |
| Onsite 5x8 4 Hr Service Upgrade from Compaq Standard Service | | Allstar 1 | | | | 43,561 |
| | | | | Subtotal | 544,507 | 62,095 |
| **Server Software** | | | | | | |
| Microsoft SQL Server 7.0 Enterprise | | Microsoft 2 | 28,999 | 1 | 28,999 | 10,475 |
| MKS Toolkit for NT | | MKS 1 | 499 | 1 | 499 | 5 Yr WTY |
| Microsoft Visual C++ 6.0 | | Microsoft 2 | 549 | 1 | 549 | Incl Above |
| Microsoft Windows NT Enterprise v. 4.0 | | Microsoft 2 | 3,999 | 1 | 3,999 | Incl Above |
| | | | | Subtotal | 34,046 | 10,475 |
| **Client Hardware** | | | | | | |
| ProLiant 1600 6/500 - 128MB,100TX Nic | 386746-001 | 1 | 2,685 | 5 | 13,423 | |
| ProLiant 1600 6/500 Processor Option Kit | 401268-B21 | 1 | 1,399 | 5 | 6,994 | |
| 128-Megabyte SD DIMM Kit | 313615-B21 | 1 | 202 | 15 | 3,024 | |
| Compaq V500 Color Monitor | 325900-001 | 1 | 203 | 5 | 1,014 | |
| 4.3-Gigabyte Pluggable Wide-Ultra SCSI-3 Hard Drive (1") | 272577-001 | 1 | 469 | 5 | 2,346 | |
| ProLiant Workgroup Server - Parts Exchange - 1 Year | FM-LOPRT-12 | 1 | 259 | 10 | | 2,590 |
| Onsite 5x8 4 Hr Service Upgrade from Compaq Standard Service | | Allstar 1 | | | | 2,144 |
| | | | | Subtotal | 26,802 | 4,734 |
| **Client Software** | | | | | | |
| Microsoft Windows 2000 Server | | Microsoft 2 | 809 | 5 | 4,045 | Incl. Above |
| | | | | Subtotal | 4,045 | 0 |
| **User Connectivity** | | | | | | |
| Compaq Dual Speed Switch SW3322 | 355300-B21 | Compaq 1 | 1,679 | 4 | 6,716 | See Note 1 |
| 8-port 10BaseT hub | | Generic 1 | 29.00 | 4461 | 129,369 | See Note 1 |
| | | | | Subtotal | 136,085 | 0 |
| Large Purchase and Cash discount | 9.0% | 1 | | | ($63,665) | ($6,015) |
| | | | | Total | $681,819 | $71,289 |

| | |
|---|---|
| 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 assumptions 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 benchmark pricing 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. | **Five-Year Cost of Ownership:** $753,108<br><br>**tpmC Rating:** 40266.40<br><br>**$ / tpmC:** $18.70 |

Pricing: 1=Allstar Systems 2= Microsoft

Note 1 = 5 Year warranty with 10% Spares -

Note:The benchmark results and test methodology were audited by Lorna Livingtree of Performance Metrics, Inc.

# Numerical Quantities Summary

**MQTH, Computed Maximum Qualified Throughput**      **40266.40  tpmC**

% throughput difference, reported & reproducibility runs      0.10%

| Response Times (in seconds) | Average | 90% | Maximum |
|---|---|---|---|
| New-Order | 0.44 | 0.64 | 4.92 |
| Payment | 0.35 | 0.65 | 6.51 |
| Order-Status | 0.22 | 0.28 | 4.19 |
| Delivery (interactive portion) | 0.11 | 0.13 | 0.64 |
| Delivery (deferred portion) | 0.50 | 0.66 | 1.42 |
| Stock-Level | 1.95 | 2.49 | 7.67 |
| Menu | 0.11 | 0.13 | 0.71 |

## Transaction Mix, in percent of total transaction

| | |
|---|---|
| New-Order | 44.79% |
| Payment | 43.07% |
| Order-Status | 4.04% |
| Delivery | 4.06% |
| Stock-Level | 4.04% |

| Emulation Delay (in seconds) | Resp.Time | Menu |
|---|---|---|
| New-Order | 0.10 | 0.10 |
| Payment | 0.10 | 0.10 |
| Order-Status | 0.10 | 0.10 |
| Delivery (interactive) | 0.10 | 0.10 |
| Stock-Level | 0.10 | 0.10 |

| Keying/Think Times (in seconds) | Min. | Average | Max. |
|---|---|---|---|
| New-Order | 18.00/0.00 | 18.01/12.11 | 18.18/121.21 |
| Payment | 3.00/0.00 | 3.01/12.10 | 3.18/121.21 |
| Order-Status | 2.00/0.00 | 2.01/10.08 | 2.10/100.99 |
| Delivery (interactive) | 2.00/0.00 | 2.01/5.06 | 2.18/50.50 |
| Stock-Level | 2.00/0.00 | 2.01/5.06 | 2.15/50.50 |

## Test Duration

| | |
|---|---|
| Ramp-up time | 20 minutes |
| Measurement interval | 20 minutes |
| Transactions (all types) completed during measurement interval | 1797845 |
| Ramp down time | 20 minutes |

## Checkpointing

| | |
|---|---|
| Number of checkpoints | 1 |
| Checkpoint interval | 20 minutes |