

Numerical Quantities Summary for the Ultra Enterprise 4000

MQTH, Computed Maximum Qualified Throughput **11465.93 tpmC**
% throughput difference, reported & reproducibility runs < 1%

| Response Times (in secs) | 90th Percentile | Average | Maximum |
|---------------------------------|------------------------|----------------|----------------|
| Menu | 0.25 | 0.02 | 1.04 |
| New-Order | 0.60 | 0.38 | 5.20 |
| Payment | 2.40 | 1.05 | 26.40 |
| Order-Status | 0.80 | 0.45 | 2.16 |
| Delivery(interactive) | 0.04 | 0.02 | 0.47 |
| Delivery(deferred) | 6.00 | 2.74 | 12.00 |
| Stock-level | 3.00 | 1.34 | 8.42 |

Transaction Mix, in percent of total transactions

| | |
|--------------|--------|
| New-Order | 44.31% |
| Payment | 43.35% |
| Order-Status | 4.10% |
| Delivery | 4.09% |
| Stock-level | 4.16% |

| Keying/Think Times (in secs) | Average. | Min. | Maximum |
|-------------------------------------|-----------------|-------------|----------------|
| New-Order | 18.01/12.51 | 18.0/0 | 18.08/125.00 |
| Payment | 3.01/12.50 | 3.0/0 | 3.08/125.00 |
| Order-Status | 2.02/10.45 | 2.0/0 | 2.05/95.21 |
| Delivery | 2.02/5.54 | 2.0/0 | 2.04/52.35 |
| Stock-level | 2.02/5.48 | 2.0/0 | 2.07/55.00 |

Test Duration

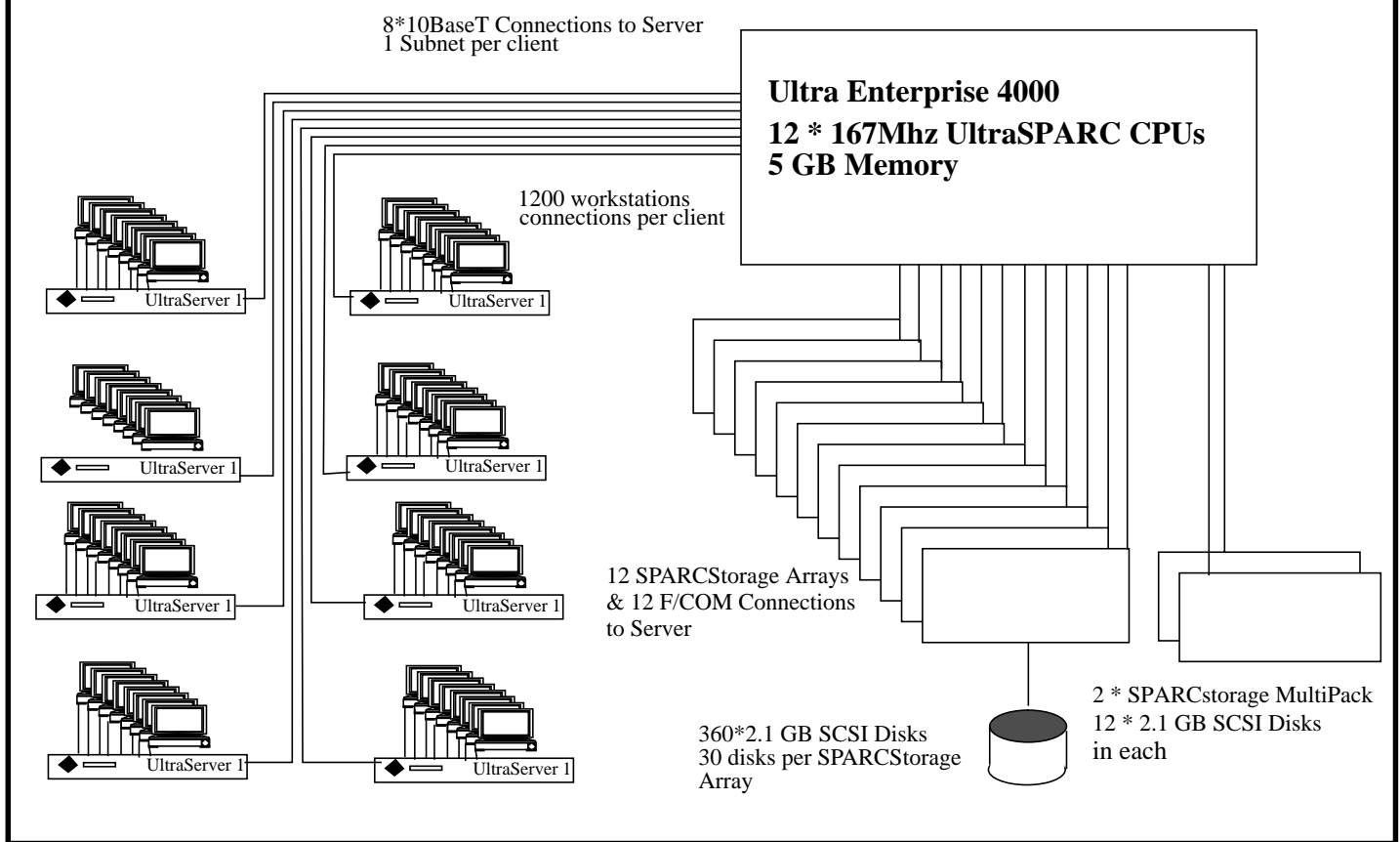
| | |
|---|------------|
| Ramp-up time | 25 minutes |
| Measurement Interval | 30 minutes |
| Number of checkpoints | 1 |
| Checkpoint Interval | 30 minutes |
| Number of transactions (all types) completed in measurement interval | 634933 |

| Part Number | Description | Qty | Unit Price | Extended Price | Maintenance per Month | 5 Yr. Total Maintenance |
|-------------------------------------|--|-----|------------|-------------------|-----------------------|------------------------------|
| Hardware | | | | | | |
| E4000 | Enterprise Server 4000 | 1 | 31500.00 | 31500.00 | 450.00 | 24300.00 |
| 2600A | CPU/Memory Board | 6 | 6750.00 | 40500.00 | 150.00 | 48600.00 |
| 2500A | UltraSPARC Module with .5MB cache | 12 | 5250.00 | 63000.00 | | |
| 954A | Power Cooling Module | 2 | 1350.00 | 2700.00 | | |
| 2610A | SBus I/O Board | 2 | 4875.00 | 9750.00 | | |
| 7023A | 1 GB Expansion Memory | 5 | 75000.00 | 375000.00 | | |
| 1058A | Quad Ethernet Controller | 2 | 746.00 | 1492.00 | | |
| 5513A | 12x2GB Disk Drives | 2 | 10650.00 | 21300.00 | | |
| 1057A | Fibre Channel SBus Card | 4 | 1200.00 | 4800.00 | | |
| 595A | Fibre Channel Module | 8 | 450.00 | 3600.00 | | |
| 792A | SSA112 with 30 2GB Drives | 12 | 35100.00 | 421200.00 | 120.00 | 77760.00 |
| 822A | 4mm Tape Backup | 1 | 1294.00 | 1294.00 | | |
| | Server Totals | | | 976136.00 | | 150660.00 |
| Front End | | | | | | |
| A11-UBA1-9S-064CB | UltraServer 1 Model 170 | 8 | 11621.00 | 92968.00 | 76.00 | 32832.00 |
| X1058A | Quad Ethernet Controller | 8 | 746.00 | 5968.00 | | |
| X7003A | 2*64 Mb Simm for UltraServer | 32 | 4275.00 | 136800.00 | | |
| | Front End Total | | | 235736.00 | | 32832.00 |
| Terminals & Connectivity | | | | | | |
| | Wyse35 Terminal | 9 | 295.00 | 2655.00 | | |
| DEH1286 | Bocca 24 Port Hubs with 10% spares | 440 | 335.00 | 147400.00 | | |
| | Terminals & Connectivity Totals | | | 150055.00 | | |
| | ALL HARDWARE SUBTOTALS | | | 1361927.00 | | 183492.00 |
| Software | | | | | | |
| SOLS-C | Solaris Software on CD-ROM | 1 | 100.00 | 100.00 | | |
| CC-P | SPARC Compiler Single Usr. License | 1 | 695.00 | 695.00 | 20.00 | 1140.00 |
| | Sun SoftwareTotals | | | 795.00 | | 1140.00 |
| Indepentent Tech. Inc. Clients | Tuxedo 4.2.1 Runtime | 8 | 7500.00 | 60000.00 | 9000.00 | 45000.00 |
| | Tuxedo 4.2.1 Development | 1 | 2395.00 | 2395.00 | 359.25 | 1796.25 |
| | Tuxedo Totals | | | 62395.00 | | 46796.25 |
| Sybase | Sybase SQL Server License | 1 | 360000.00 | 360000.00 | 39600.00 | 198000.00 |
| | Sybase Open Client for Unix | 1 | 795.00 | 795.00 | 87.45 | 437.25 |
| | Sybase Totals | | | 360795.00 | | 198437.25 |
| Discount | ALL SOFTWARE SUBTOTALS: | | | 423985.00 | | 246373.50 |
| ☐ | | | | | | |
| ☐ | | | | | | |
| | Sun Prepaid Maintenance Discount (Hardware) | 15% | | | | -27523.80 |
| | Sybase Volume Discount | 10% | | | | -36000.00 |
| | TOTAL HARDWARE & SOFTWARE COST (5YR) PRICE PER TPMC | | | | | 2152253.70 187.71 |

Sun hardware has 1-year warranty bundled.
During the warranty period, maintenance is discounted 50%.
Maintenance prices for Sybase and Tuxedo are yearly rates.

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|--------------------------|------------------------------|-------------------------------|--------------------------|
| Sun Microsystems | Ultra Enterprise 4000 | TPC-C Rev 3.0 | |
| Sybase, Inc. | C/S w/8 Front-Ends | Report Date: 4/15/1996 | |
| Total System Cost | TPC-C Throughput | Price/Performance | Availability Date |
| \$2,152,253.70 | 11465.93 tpmC | \$188 per tpmC | Sep. 30, 1996 |

| | | | | |
|------------------------------------|---|-------------------------|--------------------------|------------------------|
| Processors | Database Manager | Operating System | Other Software | Number of Users |
| 12 * UltraSPARC 167 MHz | Sybase SQL Server 11.0.2 RDBMS | Solaris 2.5.1 | Tuxedo Ver. 4.2.1 | 9600 |



| System Components | Server System | Front End Systems |
|---------------------------|--|---|
| Database Nodes: | 1 Ultra Enterprise 4000 | 8 * UltraServer 1 Model 170 |
| Processors | 12 * 167 MHz UltraSPARC | 1 * 167 MHz UltraSPARC each |
| Cache memory | 32KB (D+I), 512KB external, per | 32KB (D+I), 512KB external, each |
| Main memory | 5120 MB | 512 MB each |
| Disk controllers | 12 * FC25/S + 2 * SCSI-2 | 1 * SCSI-2 each |
| Disk Drives | 384 * 2.1 GB SCSI | 1 * 2.1GB SCSI-2 each |
| Total Disk Storage | 806 GB | 2.1 GB each |
| Terminals | 1 Console | 1 Console each |
| 10 BaseT Hubs | None | 440 x 24-Port Hubs |