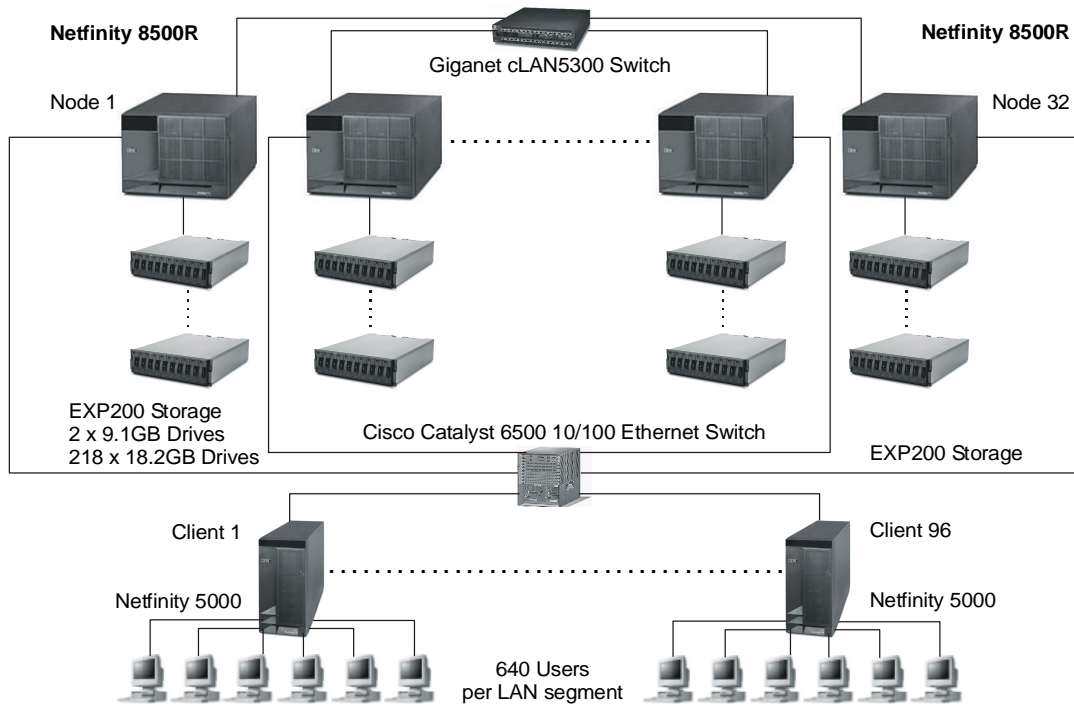


**IBM Netfinity[®] 8500R c/s
with DB2 UDB 7.1**

TPC-C Rev 3.5

Report Date: July 3, 2000

| | | | | |
|--|--------------------------------|---|--|---------------------|
| Total System Cost | | TPC-C Throughput | Price/Performance | Availability Date |
| \$14,232,696 | | 440,879.95 tpmC | \$32.28/tpmC | Dec. 7, 2000 |
| Processors | Database Manager | Operating System | Other Software | Number of Users |
| 128 Intel[®] Pentium[®] III Xeon™ 700MHz 2MB L2 Cache | DB2[®] UDB 7.1 | Microsoft[®] Windows[®] 2000 Advanced Server | Microsoft COM+ Microsoft Visual C++ 6.0 | 368,640 |



| System Component | Qty | Each of 32 Server Nodes | Qty | Each of 96 Clients |
|------------------|-----|---|-----|-------------------------------------|
| Processors | 4 | 700MHz Pentium III Xeon w/2MB L2 Cache | 2 | 600MHz Pentium III w/512KB L2 Cache |
| Cache | | | | |
| Memory | 8 | 512MB SDRAM ECC | 4 | 128MB |
| Disk Controllers | 8 | Netfinity ServeRAID-3HB Ultra2 SCSI Adapter | 1 | Wide Ultra SCSI Onboard |
| Disk Drives | 2 | 9.1GB (10000 rpm) | 1 | 9.1GB Hard Disk |
| | 218 | 18.2GB (10000 rpm) | | |
| | 1 | Gigaset cLAN-1000 Adapter | | |
| Total Storage | | 116TB (59.58TB online) | | |
| Other | | | | |
| Tape Drive | 1 | 3502-108 DLT Tape Autoloader | | |
| Interconnect | 2 | Gigaset cLAN5300 Switch | | |

| IBM Corporation | | Netfinity 8500R c/s with DB2 UDB 7.1 | | | TPC-C Revision 3.5 | | | |
|---|--------------|---|------------------------|------------|---------------------------|--|--------------------|--|
| | | | | | Report Date: July 3, 2000 | | | |
| Description | Order Number | Third-Party Brand | Third-Party Pricing | Unit Price | Qty | Ext. Price | 5-Yr. Maint.* | |
| Server Hardware | | | | | | | | |
| Netfinity 8500R 700MHz/2MB Pentium III Xeon* | 86818RY | IBM | 1 | \$18,372 | 32 | \$587,904 | \$329,440 | |
| 700MHz/2MB L2 Cache Processor Upgrade | 10K2166 | IBM | 1 | 5,460 | 96 | 524,160 | 0 | |
| 8500R Memory Expansion Card | 28L4454 | IBM | 1 | 557 | 32 | 17,824 | 0 | |
| 8500 >4X Accelerator Filter | 10K2335 | IBM | 1 | 1,113 | 32 | 35,616 | 0 | |
| 512MB ECC SDRAM RDIMM Memory Kit | 20L0249 | IBM | 1 | 2,168 | 256 | 555,008 | 0 | |
| Netfinity ServeRAID-3HB Ultra2 SCSI Adapter | 37L6086 | IBM | 1 | 1,602 | 256 | 410,112 | 0 | |
| Netfinity Ultra2 SCSI 4m Cable | 03K9311 | IBM | 1 | 110 | 736 | 80,960 | 0 | |
| EtherJet 10/100 PCI Management Adapter | 34L1210 | IBM | 1 | 58 | 32 | 1,856 | 0 | |
| E54 15" (13.8" Viewable) Color Monitor* | 6331B2N | IBM | 1 | 165 | 32 | 5,280 | 14,400 | |
| 3502-108 DLT Tape Autoloader* | 3502108 | IBM | 1 | 8,017 | 1 | 8,017 | 2,650 | |
| IBM Smart-UPS Model 3000RMB | 94G6676 | IBM | 2 | 1,690 | 32 | 54,080 | 0 | |
| Netfinity Rack* | 9306900 | IBM | 1 | 1,536 | 78 | 119,808 | 98,280 | |
| Side Panel Kit | 94G6669 | IBM | 1 | 175 | 12 | 2,100 | 0 | |
| Giganet cLAN-1000 Host Adapter (incl. 10%) | cLAN-1000 | Giganet | 4 | 795 | 35 | 27,825 | 75,000 | |
| Giganet cLAN5300 30-Port Switch (incl. 10%) | cLAN5300 | Giganet | 4 | 6,250 | 4 | 25,000 | incl. above | |
| Giganet cLAN-A1011 10M Cable (incl. 10%) | cLAN-A1011 | Giganet | 4 | 135 | 35 | 4,725 | incl. above | |
| Storage Hardware | | | | | | | | |
| Netfinity EXP200 Rack Storage Enclosure* | 35301RU | IBM | 1 | 2,311 | 704 | 1,626,944 | 1,253,120 | |
| 9.1GB 10K Ultra160 SCSI Drive | 00N8207 | IBM | 1 | 356 | 64 | 22,784 | 0 | |
| 18.2GB 10K Ultra160 SCSI Drive | 00N8208 | IBM | 1 | 534 | 6,976 | 3,725,184 | 0 | |
| Subtotal | | | | | | \$7,835,187 | \$1,772,890 | |
| Server Software | | | | | | | | |
| DB2 UDB EEE V7.1 Program Pack | 11K7641 | IBM | 2 | 22,600 | 1 | \$22,600 | \$0 | |
| DB2 UDB EEE V7.1 Processor Ent. | 11K8164 | IBM | 2 | 22,500 | 127 | 2,857,500 | 0 | |
| 5-Year Maintenance (included w/software) | 11K8164 | IBM | 2 | | | | 0 | |
| Microsoft Windows 2000 Advanced Server | | Microsoft | 3 | 3,999 | 32 | 127,968 | 0 | |
| 5-Year Maintenance for Software | | Microsoft | 3 | 8,425 | 1 | | 8,425 | |
| Subtotal | | | | | | \$3,008,068 | \$8,425 | |
| Client Hardware | | | | | | | | |
| Netfinity 5000 / 600MHz/512KB Pentium III* | 86596RY | IBM | 1 | 2,783 | 96 | \$267,168 | \$546,720 | |
| 600MHz/512KB Pentium III Upgrade | 33L5106 | IBM | 1 | 398 | 96 | 38,208 | 0 | |
| 9.1GB 10K Ultra160 SCSI Drive | 00N8207 | IBM | 1 | 356 | 96 | 34,176 | 0 | |
| 128MB DIMMs | 01K7262 | IBM | 1 | 373 | 288 | 107,424 | 0 | |
| Intel Pro/100+ Dual-Port Ethernet Adapter** | 8472 | Intel | 1 | 219 | 288 | 63,072 | 0 | |
| E54 15" (13.8" Viewable) Color Monitor* | 6331B2N | IBM | 1 | 165 | 96 | 15,840 | 43,200 | |
| Subtotal | | | | | | \$525,888 | \$589,920 | |
| Client Software | | | | | | | | |
| Microsoft Windows 2000 Server with COM+ | | Microsoft | 3 | 999 | 96 | 95,904 | incl. above | |
| Microsoft Visual C++ Professional 6.0 | | Microsoft | 3 | 549 | 1 | 549 | incl. above | |
| Subtotal | | | | | | \$96,453 | \$0 | |
| User Connectivity | | | | | | | | |
| 8-Port 10Mbps Hub** (10% spares***) | DEH2924 | Generic | 1 | 25 | 50,688 | \$1,267,200 | \$0 | |
| Cisco Catalyst 6500 48-Port 10/100 RJ-45 | WSX6248RJ45 | Cisco | 5 | 55,399 | 1 | 55,399 | 52,500 | |
| Subtotal | | | | | | \$1,322,599 | \$52,500 | |
| IBM Software Revenue Discount 34% | | | | | | (979,234) | | |
| Total | | | | | | \$12,788,195 | \$2,423,735 | |
| Notes: * The standard 3-year warranty and the extended warranty on IBM hardware is for 7x24, 4-hour response. ** Five-year warranty. *** 10% or minimum 2 spares are added in place of on-site service (products have a 5-year return-to-vendor-warranty) | | | | | | Five-Year Cost of Ownership: \$14,232,696 | | |
| Pricing: 1 - Software House International; 2 - IBM; 3 - Microsoft Corp.; 4 - Giganet; 5 - Cisco | | | | | | tpmC Rating: 440,879.95 | | |
| Audited by Francois Raab of InfoSizing, Inc. | | | | | | \$ / tpmC: \$32.28 | | |
| 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 specification. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you. | | | | | | | | |

| Numerical Quantities Summary | | | |
|---|----------------|--------------------------|----------------------------|
| MQTh, Computed Maximum Qualified Throughput: % throughput difference, reported and reproducibility runs: | | | 440,879.95 tpmC 0.0099% |
| Response Times (in seconds) | 90% | Average | Maximum |
| New-Order | 2.00 | 1.25 | 315.39 |
| Payment | 2.64 | 1.19 | 787.71 |
| Order-Status | 1.07 | 0.53 | 126.20 |
| Delivery (Interactive) | 0.66 | 0.25 | 84.08 |
| Delivery (Deferred) | 1.69 | 0.93 | 32.44 |
| Stock-Level | 1.38 | 0.80 | 52.91 |
| Menu | 0.67 | 0.26 | 262.60 |
| Transaction Mix (in percent of total transactions) | | Total Occurrences | Percent |
| New-Order | | 8,817,599 | 44.66 |
| Payment | | 8,518,739 | 43.15 |
| Order-Status | | 800,948 | 4.06 |
| Delivery | | 803,890 | 4.07 |
| Stock-Level | | 801,588 | 4.06 |
| Emulation Delay (in seconds) | | Response Time | Menu |
| New-Order | | 0.1 | 0.1 |
| Payment | | 0.1 | 0.1 |
| Order-Status | | 0.1 | 0.1 |
| Delivery | | 0.1 | 0.1 |
| Stock-Level | | 0.1 | 0.1 |
| Keying/Think Times (in seconds) | Minimum | Average | Maximum |
| New-Order | 18.00 / 0.00 | 18.01 / 12.04 | 18.05 / 120.51 |
| Payment | 3.00 / 0.00 | 3.01 / 12.04 | 3.05 / 120.50 |
| Order Status | 2.00 / 0.00 | 2.01 / 10.04 | 2.05 / 100.50 |
| Delivery | 2.00 / 0.00 | 2.01 / 5.06 | 2.05 / 50.50 |
| Stock-Level | 2.00 / 0.00 | 2.01 / 5.05 | 2.05 / 50.50 |
| Test Duration | | | |
| Ramp-up time | | | 65 minutes |
| Measurement interval | | | 20 minutes |
| Number of transactions (all types) completed in measurement interval | | | 19,742,764 |
| Ramp-down time | | | 7 minutes |
| Number of checkpoints in measurement interval | | | N/A |
| Checkpoint interval | | | N/A |