## IBM NUMA-Q E410 with IBM Netfinity 4500R Using IBM DB2 UDB 7.1

<table>
<thead>
<tr>
<th>Price Performance</th>
<th>Performance</th>
<th>Availability Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>$195.59 per WIPS@100,000</td>
<td>6272.5 WIPS@100,000</td>
<td>February 2, 2001</td>
</tr>
</tbody>
</table>

### Price/Performace

#### Description
- **Web/Application/Index/Image Servers**
  - Netfinity 4500R with 933MHz Pentium III 256KB Cache: 86565RY
  - Netfinity 933 MHz 133 FSB/256KB Pentium III Processor: 19K4631
  - 128MB 133 MHz ECC SDRAM RDIMM II: 33L3123
  - 256MB 133 MHz ECC SDRAM RDIMM II: 33L3125
  - 1GB 133 MHz ECC SDRAM RDIMM II: 33L3129
  - 10/100 Ethernet Server Adapter: 06F3601
  - Netfinity 6000R with 700MHz/1MB Pentium III Xenon Processor: 68B21RY
  - Netfinity 700 MHz/1MB Pentium III Xenon Processor: 00N7946
  - Netfinity 512Mb/100 MHz ECC SDRAM RDIMM: 33L5117
  - 18.2GB 10K-4 Ultra160 SCSI Hot-Swap SL HDD: 37L7205
  - 3YR Onsite repair 24x7 4-Hour warranty service upgrade: 30L9186
  - Intel Pro/1000 Gigabit Server Adapter: PWLAB490
  - Netfinity Rack: 9306900
  - Side Panel Kit: 94G6669
  - E51 - 15(13.8) in. UV-NH Color Monitor: 633347N
  - NETGEAR FS108 8-Port Fast Ethernet Switch: FS108NA

- **Database**
  - NUMA BASE Console, ethernet: CON-0030
  - Console country kit for NAO, includes power cord and modem: IOC-0021-30
  - NUMA Q 2000 Quads w4x 700 MHz 2MB, 1GB: QUAD-0414
  - IQ-LINK for Eth quad: IQ-LINK-20
  - 32X CD-ROM and QIC525 TAPE DRIVE in a 3.5" PBAY: CDR-0010-03
  - 36 GB Disk in 3.5" PBAY Carrier: DSK-3600-B1
  - Boot Bay, SCSI-HA and cable, devices separate: BBAY-MR00-01
  - 1GB Memory Add-on for 400 Series Quad: MEM-1200-00
  - FC Switch: 8 Ports, with 8 multi-mode NON-OFC GBIC's: FCS-0008-01
  - Gigabit Ethernet Adapter Card from Syskonnect: COMM-0040-61
  - PCI/Fibre Channel Ctrl wmulti-mode NON-OFC CML, 500M: IOC-0210-54
  - 8 meter, multi-mode, FC cable for all MM FC connections: CBL-0800-F3
  - IQ-RING Memory Programmable Control Switch: IQ-RING-00
  - IQ Ring-IQ Link interconnect cable, quads 1, 2, or 3: CBL-PLUS-03
  - IBM NUMA-Q Enterprise Server Cabinet: CAB-2000-00
  - 3YR Onsite repair 24x7 4-Hour warranty Service: IBM 1

- **Database Storage**
  - HDD 5800 30 slot, 512MB cache, 2 CU's 2 FC ports: HDS-0580-10
  - HDD single 16GB 10K RPM disk: HDS-D018-10
  - HDD single 36GB 10K RPM disk: HDS-D036-10

- **Software**
  - DYNIX/pixt Initial 2 users license for NUMA-Q 2000: PTX-BASE-000
  - ptxSVM v2.2.1: SVM-P051-2Q
  - DYNIX/pixt v4.5.1 CD-ROM Media for NUMA-Q system - US: PTX-C451-000
  - ptxC++ v5.2.3 for DYNIX/pixt v4.5.1: CMP-5230-00
  - DB2 Enterprise Edition for NUMA-Q V7.1 Program Package: 11K8374
  - DB2 Enterprise Edition for NUMA-Q 1 Process Entitlement: 11K8106
  - Cypress AutoTask 2000 Scheduler v2.30: Cypress 4
  - Microsoft Windows 2000 Server: C11-00018
  - Visual C++ Professional 6.0 Win32: PIC502-P84
  - Microsoft ISA Standard Edition: EB4-00001
  - 3-Year maintenance for all Microsoft Software: MS 3

### Software Subtotal
- $215,337.95

### 3-Year Cost of Ownership
- $1,226,840.95

### WIPS@100,000
- $195.59

### Result Audited By Francois Raab of InfoSizing (www.sizing.com)

1=IBM
2=Software House International
3=Microsoft
4=Cypress Technologies
## Numerical Quantities Summary

### WIPS Interactions Summary

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Mix</th>
<th>Count</th>
<th>90% Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>15.98%</td>
<td>1804809</td>
<td>0.2</td>
</tr>
<tr>
<td>Shopping Cart</td>
<td>11.59%</td>
<td>1309135</td>
<td>1.0</td>
</tr>
<tr>
<td>Customer Registration</td>
<td>3.01%</td>
<td>339570</td>
<td>0.1</td>
</tr>
<tr>
<td>Buy Request</td>
<td>2.61%</td>
<td>294187</td>
<td>1.3</td>
</tr>
<tr>
<td>Buy Confirm</td>
<td>1.21%</td>
<td>136313</td>
<td>4.3</td>
</tr>
<tr>
<td>Order Inquiry</td>
<td>0.75%</td>
<td>84736</td>
<td>0.4</td>
</tr>
<tr>
<td>Order Display</td>
<td>0.66%</td>
<td>74643</td>
<td>0.5</td>
</tr>
<tr>
<td>Search Request</td>
<td>20.01%</td>
<td>2258982</td>
<td>0.1</td>
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<tr>
<td>Search Result</td>
<td>17.01%</td>
<td>1920150</td>
<td>0.1</td>
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<tr>
<td>New Product</td>
<td>5.00%</td>
<td>564116</td>
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<tr>
<td>Best Sellers</td>
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<td>563650</td>
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<tr>
<td>Product Detail</td>
<td>17.00%</td>
<td>1919420</td>
<td>0.1</td>
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<tr>
<td>Admin. Request</td>
<td>0.10%</td>
<td>11056</td>
<td>0.1</td>
</tr>
<tr>
<td>Admin. Confirm</td>
<td>0.09%</td>
<td>9900</td>
<td>2.0</td>
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</table>

### Measurement Intervals Summary

<table>
<thead>
<tr>
<th></th>
<th>Shopping</th>
<th>Browsing</th>
<th>Ordering</th>
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</thead>
<tbody>
<tr>
<td>Ramp-up Time (min)</td>
<td>30.0</td>
<td>30.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Length of Measurement Interval (min.)</td>
<td>30.0</td>
<td>30.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Average Think Time (sec.)</td>
<td>7.6</td>
<td>7.6</td>
<td>7.6</td>
</tr>
<tr>
<td>Average User Session duration (min.)</td>
<td>15.1</td>
<td>14.7</td>
<td>15.3</td>
</tr>
<tr>
<td>Number of Users</td>
<td>50,000</td>
<td>45,000</td>
<td>25,000</td>
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### Overload Run

<table>
<thead>
<tr>
<th>Maximum Think Time</th>
<th>90% WIRT for Home</th>
<th>Failure Rate</th>
<th>WIPS</th>
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<tbody>
<tr>
<td>19.0 (average=1.9)</td>
<td>10.5</td>
<td>0.048%</td>
<td>6388.4</td>
</tr>
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