IBM Corporation

IBM System x iDataPlex dx360 M3 (Intel Xeon E5506)  

SPEClnt_rate2006 = 148  
SPEClnt_rate_base2006 = 139

CPU2006 license: 11  
Test sponsor: IBM Corporation  
Tested by: IBM Corporation

Test date: Jun-2010  
Hardware Availability: Jun-2010  
Test date: Jun-2010  
Software Availability: Jan-2010

SPEClnt_rate2006 = 148  
SPEClnt_rate_base2006 = 139

Operating System: SuSe Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default  
Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1, Build 20091130 Package ID: l_cproc_p_11.1.064

Auto Parallel: No  
File System: ext3  
System State: Run level 3 (multi-user)  
Base Pointers: 32-bit  
Peak Pointers: 32/64-bit  
Other Software: Microquill SmartHeap V8.1

Hardware

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Xeon E5506</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td></td>
</tr>
<tr>
<td>CPU MHz:</td>
<td>2133</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>8 cores, 2 chips, 4 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache:</td>
<td>4 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>48 GB (12 x 4 GB PC3-10600R CL9, 2 Rank)</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>1 x 250 GB SATA, 7200 RPM</td>
</tr>
<tr>
<td>Other Hardware:</td>
<td>None</td>
</tr>
</tbody>
</table>

Software

CPU Name: Intel Xeon E5506

Operating System: SuSe Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1, Build 20091130 Package ID: l_cproc_p_11.1.064
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**IBM Corporation**

IBM System x iDataPlex dx360 M3 (Intel Xeon E5506)

**SPEC CINT2006 Result**

**SPECint_rate2006 = 148**

**SPECint_rate_base2006 = 139**

**CPU2006 license:** 11

**Test sponsor:** IBM Corporation

**Test date:** Jun-2010

**Tested by:** IBM Corporation

**Hardware Availability:** Jun-2010

**Software Availability:** Jan-2010

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### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Base</th>
<th>Peak</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Copies</td>
<td>Seconds</td>
<td>Ratio</td>
</tr>
<tr>
<td>400.perlbench</td>
<td>8</td>
<td>641</td>
<td>122</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>8</td>
<td>1044</td>
<td>73.9</td>
</tr>
<tr>
<td>403.gcc</td>
<td>8</td>
<td>588</td>
<td>110</td>
</tr>
<tr>
<td>429.mcf</td>
<td>8</td>
<td>426</td>
<td>171</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>8</td>
<td>686</td>
<td>122</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>8</td>
<td>363</td>
<td>205</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>8</td>
<td>780</td>
<td>124</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>8</td>
<td>369</td>
<td>450</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>8</td>
<td>926</td>
<td>191</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>8</td>
<td>538</td>
<td>93.0</td>
</tr>
<tr>
<td>473.astar</td>
<td>8</td>
<td>723</td>
<td>77.7</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>8</td>
<td>362</td>
<td>153</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

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**Submit Notes**

The config file option 'submit' was used. numactl was used to bind copies to the cores

---

**Platform Notes**

Turbo Mode Enable
Turbo Boost set to Traditional
CPU C State Enable

---

**General Notes**

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

---

**Base Compiler Invocation**

C benchmarks:
```plaintext
icc -m32
```

C++ benchmarks:
```plaintext
icpc -m32
```
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**Base Portability Flags**

- 400.perlbench: -DSPEC_CPU_LINUX_IA32
- 462.libquantum: -DSPEC_CPU_LINUX
- 483.xalancbmk: -DSPEC_CPU_LINUX

**Base Optimization Flags**

C benchmarks:
- -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
C++ benchmarks:
- -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs

**Base Other Flags**

C benchmarks:
- 403.gcc: -Dalloca=_alloca

**Peak Compiler Invocation**

C benchmarks (except as noted below):
- icc -m32
  - 401.bzip2: icc -m64
  - 456.hmmer: icc -m64
  - 458.sjeng: icc -m64
  - 462.libquantum: icc -m64
C++ benchmarks (except as noted below):
- icpc -m32
  - 473.astar: icpc -m64

**Peak Portability Flags**

- 400.perlbench: -DSPEC_CPU_LINUX_IA32
- 401.bzip2: -DSPEC_CPU_LP64

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IBM Corporation

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SPEC_CINT2006 Result

SPECint_rate2006 = 148
SPECint_rate_base2006 = 139

Peak Portability Flags (Continued)

456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
   -prof-use(pass 2) -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
   -prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
   -ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
   -ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
   -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
   -opt-prefetch

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
   -prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs

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Peak Optimization Flags (Continued)

473.astar (continued):

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
You can also download the XML flags source by saving the following link:

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For other inquiries, please contact webmaster@spec.org.

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