IBM Corporation
IBM System x3650 M3 (Intel Xeon E5506)

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

SPECint®2006 = 23.8
SPECint_base2006 = 21.9

CPU Name: Intel Xeon E5506
CPU Characteristics:
CPU MHz: 2133
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
CPU(s) orderable: 1.2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 4 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB PC3-10600R CL9, 2 Rank)
Disk Subsystem: 1 x 73 GB SAS, 15000 RPM
Other Hardware: None

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: Yes
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V8.1

Software

Hardware
## SPEC CINT2006 Result

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**Test date:**  Jun-2010

**Hardware Availability:**  Jun-2010

**Software Availability:**  Jan-2010

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### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<td>15.9</td>
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<td>12.0</td>
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<td>15.5</td>
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<td>316</td>
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<td>21.8</td>
</tr>
</tbody>
</table>

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

### 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

OMP_NUM_THREADS set to number of cores

KMP_AFFINITY set to granularity=fine,scatter

### Base Compiler Invocation

- C benchmarks:  
  - icc  -m64
- C++ benchmarks:  
  - icpc  -m64

### Base Portability Flags

- 400.perlbench:  -DSPEC_CPU_LP64  -DSPEC_CPU_LINUX_X64

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Base Portability Flags (Continued)

401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -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 -m64
400.perlbench: icc -m32
429.mcf: icc -m32
445.gobmk: icc -m32
464.h264ref: icc -m32

C++ benchmarks (except as noted below):
icpc -m32

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IBM Corporation

IBM System x3650 M3 (Intel Xeon E5506)

**SPEC CINT2006 Result**

**spec**

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### Peak Compiler Invocation (Continued)

473.astar: icpc -m64

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### Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

401.bzip2: -DSPEC_CPU_LP64

403.gcc: -DSPEC_CPU_LP64

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)

-03(pass 2) -no-prec-div(pass 2) -static(pass 2)

-prof-use(pass 2) -ansi-alias -opt-prefetch

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

-03(pass 2) -no-prec-div -static(pass 2) -prof-use(pass 2)

-auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -03 -no-prec-div -static -inline-calloc

-opt-malloc-options=3 -auto-ilp32

429.mcf: -xSSE4.2 -ipo -03 -no-prec-div -static -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -02

-ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -03 -no-prec-div -static -unroll12

-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

-03(pass 2) -no-prec-div(pass 2) -static(pass 2)

-prof-use(pass 2) -unroll4

462.libquantum: -xSSE4.2 -ipo -03 -no-prec-div -static -parallel

-opt-prefetch -par-schedule-static=32768 -ansi-alias

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

-03(pass 2) -no-prec-div(pass 2) -static(pass 2)

-prof-use(pass 2) -unroll12 -ansi-alias

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Peak Optimization Flags (Continued)

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

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch
-Wl,-z,muldefs

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: