



SPEC® CINT2006 Result

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HITACHI

SPECint®2006 = 21.3

BladeSymphony BS320 es (Intel Xeon L5410)

SPECint_base2006 = 18.7

CPU2006 license: 872

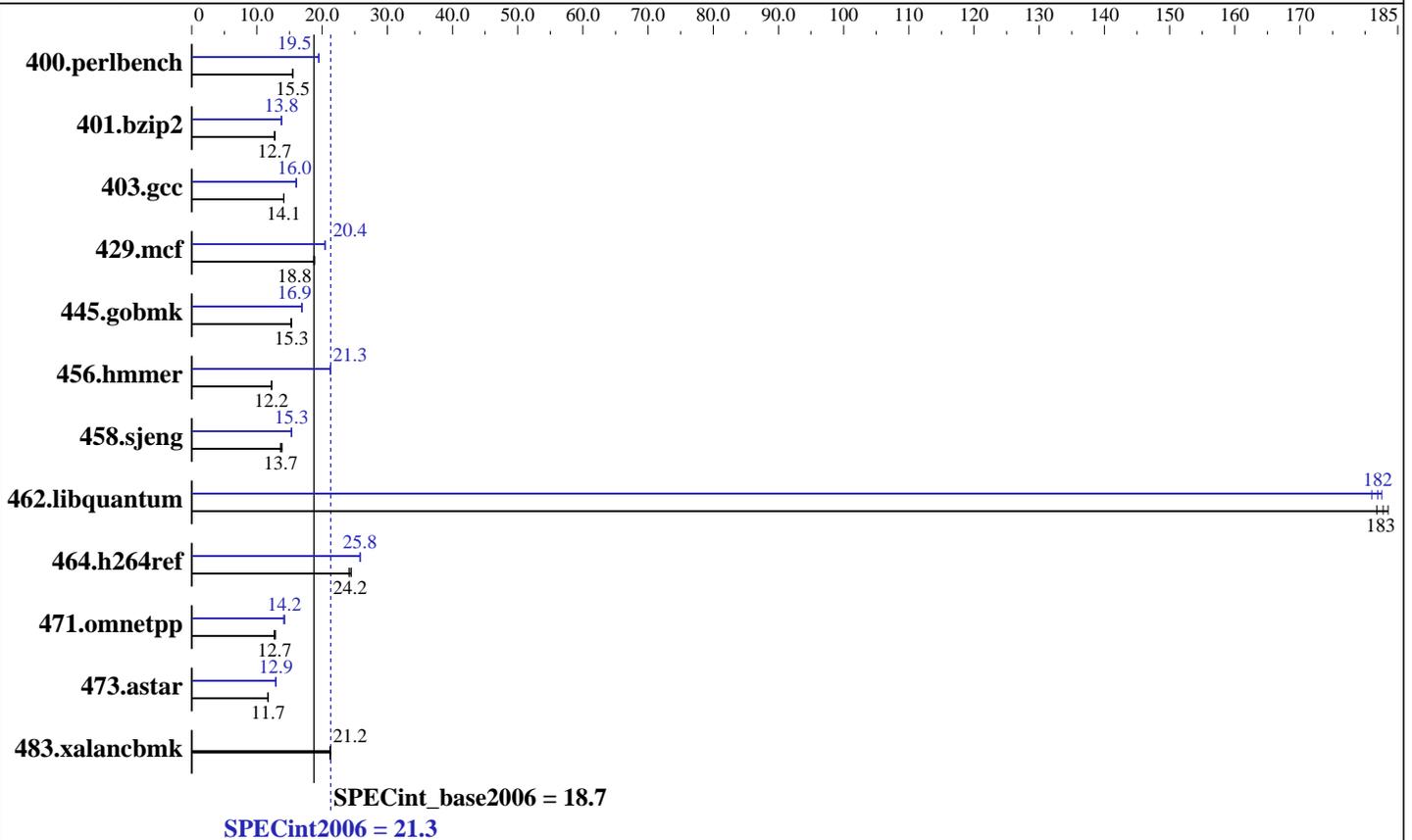
Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-2008

Hardware Availability: May-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon L5410
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 2333
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 8 GB(4 x 2 GB PC2-5300F CAS 5-5-5)
 Disk Subsystem: 1 x 73 GB 10000 rpm SAS
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 5.1 (Tikanga)
 Kernel 2.6.18-53.el5 on an x86_64
 Compiler: Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ext3
 System State: Multi-user run level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap library V8.1



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio										
400.perlbench	629	15.5	633	15.4	<u>630</u>	<u>15.5</u>	<u>501</u>	<u>19.5</u>	502	19.5	501	19.5
401.bzip2	759	12.7	757	12.7	<u>759</u>	<u>12.7</u>	<u>701</u>	<u>13.8</u>	700	13.8	702	13.7
403.gcc	571	14.1	569	14.2	<u>569</u>	<u>14.1</u>	<u>503</u>	<u>16.0</u>	503	16.0	501	16.1
429.mcf	484	18.8	487	18.7	<u>485</u>	<u>18.8</u>	<u>447</u>	<u>20.4</u>	445	20.5	447	20.4
445.gobmk	689	15.2	686	15.3	<u>686</u>	<u>15.3</u>	622	16.9	<u>621</u>	<u>16.9</u>	620	16.9
456.hammer	<u>762</u>	<u>12.2</u>	761	12.3	762	12.2	<u>438</u>	<u>21.3</u>	438	21.3	439	21.3
458.sjeng	<u>885</u>	<u>13.7</u>	872	13.9	888	13.6	793	15.3	788	15.4	<u>791</u>	<u>15.3</u>
462.libquantum	<u>113</u>	<u>183</u>	114	182	113	184	113	183	114	181	<u>114</u>	<u>182</u>
464.h264ref	904	24.5	918	24.1	<u>913</u>	<u>24.2</u>	858	25.8	855	25.9	<u>858</u>	<u>25.8</u>
471.omnetpp	494	12.6	486	12.9	<u>491</u>	<u>12.7</u>	<u>440</u>	<u>14.2</u>	439	14.2	443	14.1
473.astar	601	11.7	598	11.7	<u>600</u>	<u>11.7</u>	<u>543</u>	<u>12.9</u>	543	12.9	546	12.9
483.xalancbmk	324	21.3	<u>325</u>	<u>21.2</u>	326	21.2	324	21.3	<u>325</u>	<u>21.2</u>	326	21.2

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

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
-fast -vec-guard-write -parallel -par-runtime-control

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Base Optimization Flags (Continued)

C++ benchmarks:

```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/home/bsc/smartheap/lib -lsmartheap
```

Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

```
401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include
```

```
456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include
```

C++ benchmarks:

icpc

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
-prefetch
```

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Peak Optimization Flags (Continued)

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

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

456.hmmcr: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
-auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch
-opt-streaming-stores always -vec-guard-write
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs -L/home/bsc/smartheap/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs -L/home/bsc/smartheap/lib -lsmartheap

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-INT-ia32-linux-flags.20090714.03.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-INT-ia32-linux-flags.20090714.03.xml>



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

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