



SPEC® CINT2006 Result

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HITACHI

SPECint®_rate2006 = 133

BladeSymphony BS320 (Intel Xeon E5450)

SPECint_rate_base2006 = 107

CPU2006 license: 872

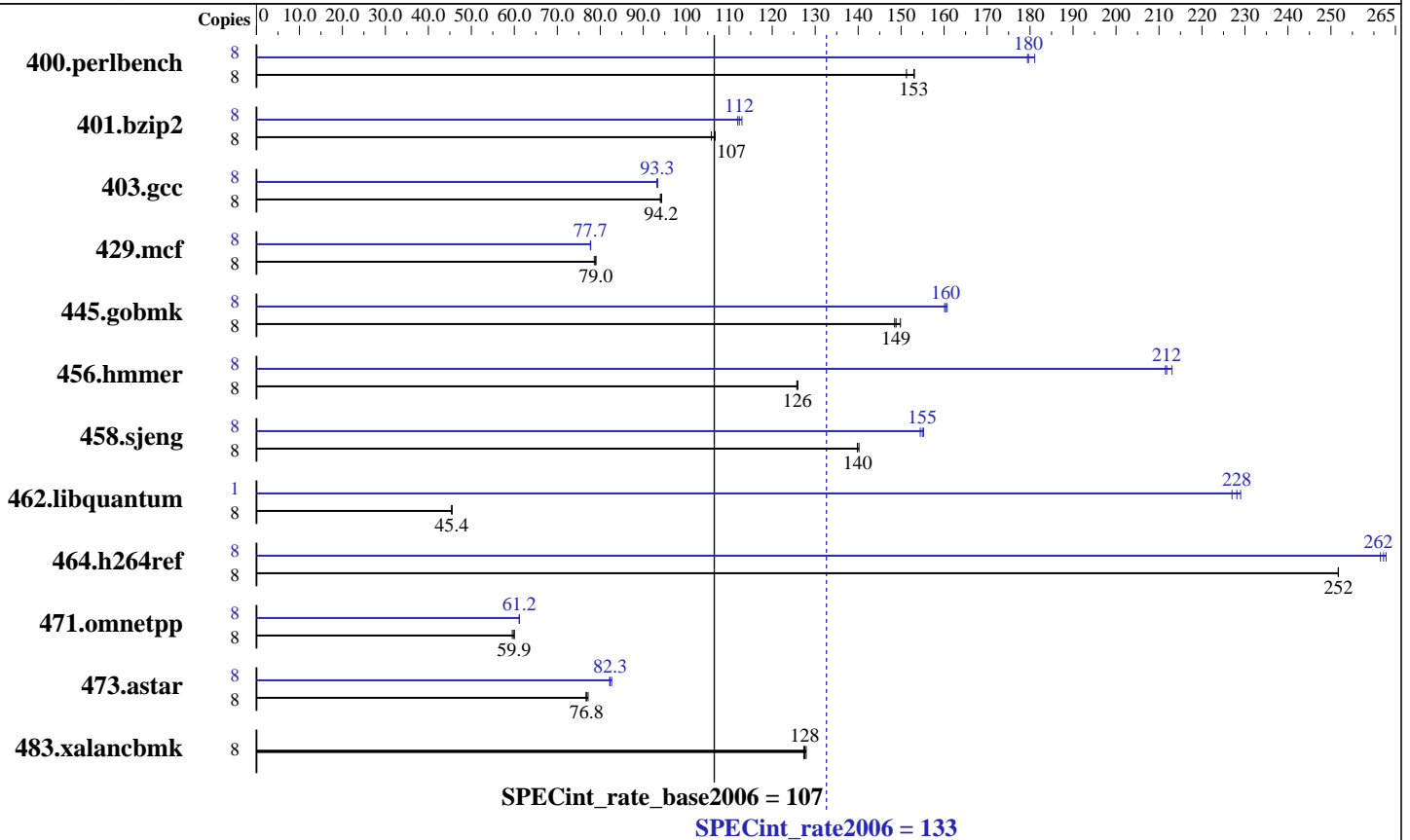
Test sponsor: HITACHI

Tested by: HITACHI

Test date: Feb-2008

Hardware Availability: Nov-2007

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5450
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 3000
 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: 16 GB(4 x 4 GB PC2-5300F CAS 5-5-5)
 Disk Subsystem: 1 x 147 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							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	517	151	511	153	<u>511</u>	<u>153</u>	8	432	181	<u>435</u>	<u>180</u>	436	179
401.bzip2	8	724	107	729	106	<u>724</u>	<u>107</u>	8	<u>687</u>	<u>112</u>	689	112	683	113
403.gcc	8	<u>684</u>	<u>94.2</u>	685	94.0	683	94.3	8	690	93.4	691	93.2	<u>690</u>	<u>93.3</u>
429.mcf	8	<u>924</u>	<u>79.0</u>	924	79.0	928	78.6	8	<u>939</u>	<u>77.7</u>	939	77.7	938	77.8
445.gobmk	8	<u>564</u>	<u>149</u>	560	150	565	148	8	<u>523</u>	<u>160</u>	524	160	522	161
456.hammer	8	594	126	<u>593</u>	<u>126</u>	593	126	8	<u>352</u>	<u>212</u>	353	211	350	213
458.sjeng	8	692	140	<u>692</u>	<u>140</u>	690	140	8	627	154	<u>625</u>	<u>155</u>	624	155
462.libquantum	8	<u>3647</u>	<u>45.4</u>	3644	45.5	3649	45.4	1	91.3	227	<u>90.8</u>	<u>228</u>	90.5	229
464.h264ref	8	703	252	703	252	<u>703</u>	<u>252</u>	8	677	262	<u>675</u>	<u>262</u>	674	263
471.omnetpp	8	<u>834</u>	<u>59.9</u>	833	60.0	840	59.5	8	<u>817</u>	<u>61.2</u>	817	61.2	818	61.1
473.astar	8	728	77.2	732	76.7	<u>731</u>	<u>76.8</u>	8	<u>683</u>	<u>82.3</u>	680	82.6	683	82.2
483.xalancbmk	8	432	128	<u>433</u>	<u>128</u>	433	127	8	432	128	<u>433</u>	<u>128</u>	433	127

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

General Notes

'/bin/taskset' used to bind processes to CPUs
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 -inline-calloc -opt-malloc-options=3

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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

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.hmmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

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.20090713.01.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.20090713.01.xml>



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

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