



SPEC® CINT2006 Result

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FORMAT

SPECint®2006 = 22.7

FORMAT R1520ML (2.5 GHz Intel Xeon X3320)

SPECint_base2006 = 20.3

CPU2006 license: 9015

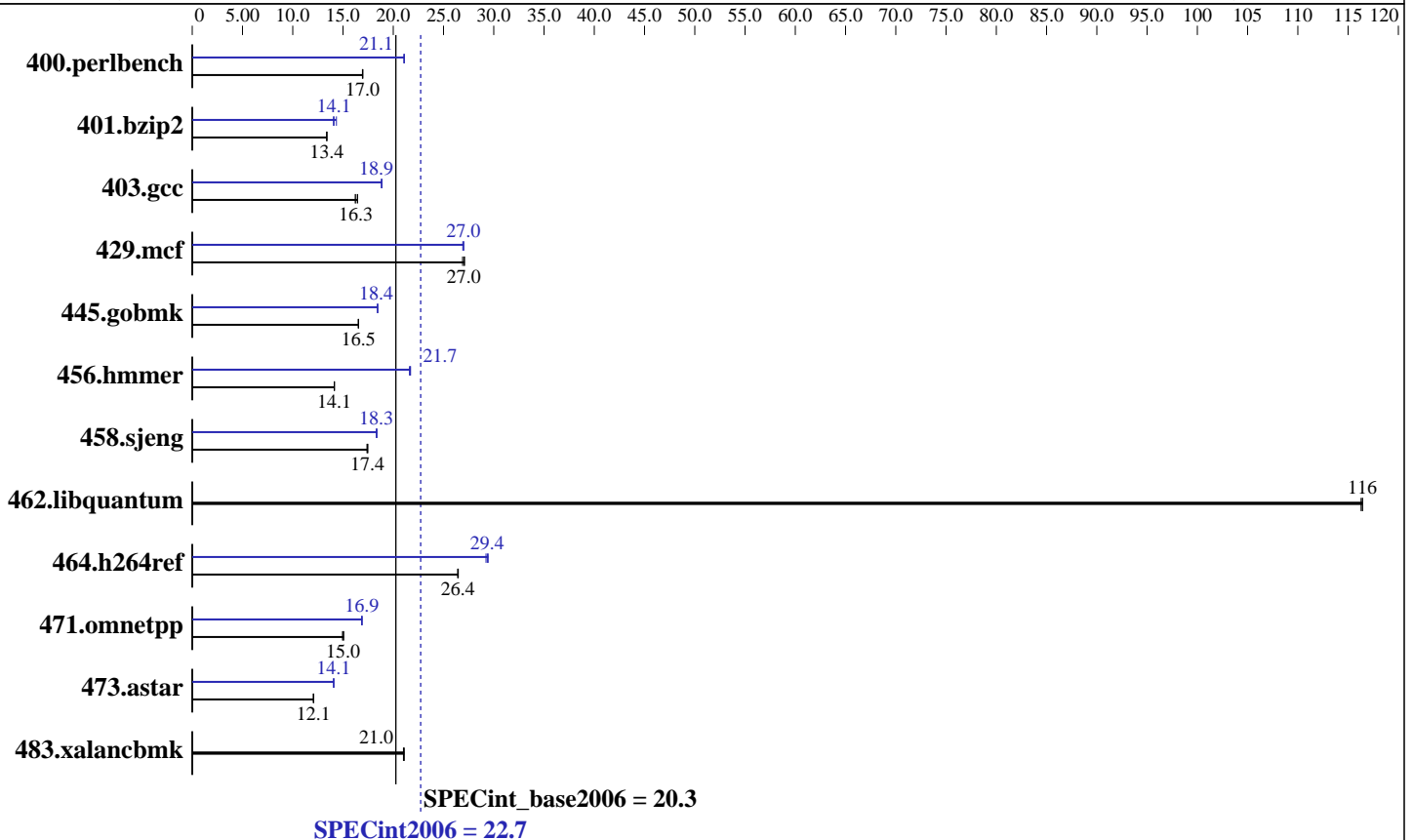
Test sponsor: FORMAT

Tested by: FORMAT

Test date: Oct-2008

Hardware Availability: Aug-2008

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X3320
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 6 MB I+D on chip per chip, 3 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 8 GB (4 x 2 GB ECC DDR2 SDRAM)
 Disk Subsystem: 1 x 160 GB SATA, 5400 RPM
 Other Hardware: None

Software

Operating System: Scientific Linux 5.2 2.6.18-92.1.13.el5
 Compiler: Intel C++ Compiler 11.0 for Linux
 Build 20080730 Package ID: l_cproc_b_11.0.042
 Auto Parallel: Yes
 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
 Binutils 2.18.50.0.7.20080502



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	577	16.9	575	17.0	576	17.0	463	21.1	463	21.1	464	21.1
401.bzip2	721	13.4	721	13.4	720	13.4	684	14.1	687	14.0	673	14.3
403.gcc	489	16.5	494	16.3	496	16.2	427	18.9	427	18.9	428	18.8
429.mcf	339	26.9	337	27.1	337	27.0	338	27.0	339	26.9	338	27.0
445.gobmk	635	16.5	635	16.5	634	16.5	569	18.4	569	18.4	569	18.4
456.hammer	660	14.1	660	14.1	660	14.1	432	21.6	430	21.7	430	21.7
458.sjeng	696	17.4	694	17.4	693	17.5	658	18.4	660	18.3	660	18.3
462.libquantum	178	116	178	116	178	116	178	116	178	116	178	116
464.h264ref	837	26.4	838	26.4	836	26.5	754	29.4	752	29.4	757	29.2
471.omnetpp	415	15.1	416	15.0	418	15.0	371	16.9	370	16.9	370	16.9
473.astar	582	12.1	583	12.1	581	12.1	499	14.1	499	14.1	499	14.1
483.xalancbmk	327	21.1	328	21.0	328	21.0	327	21.1	328	21.0	328	21.0

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

General Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of processors
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:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel
-par-runtime-control -opt-prefetch

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Base Optimization Flags (Continued)

C++ benchmarks:

```
-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/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/Compiler/11.0/042/bin/intel64/icc
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include
```

```
456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/042/ipp/em64t/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) -xSSE4.1 -ipo -O3
-no-prec-div -static -ansi-alias -opt-prefetch
```

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Peak Optimization Flags (Continued)

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

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-alloc
-opt-malloc-options=3

429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmr: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

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

462.libquantum: basepeak = yes

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

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.01.html>
<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.00.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.01.xml>
<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.00.xml>



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Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 21:49:50 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 November 2008.