



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®2006 = 28.0

ProLiant BL460c G5
(3.0 GHz, Intel Xeon E5450)

SPECint_base2006 = 24.7

CPU2006 license: 3

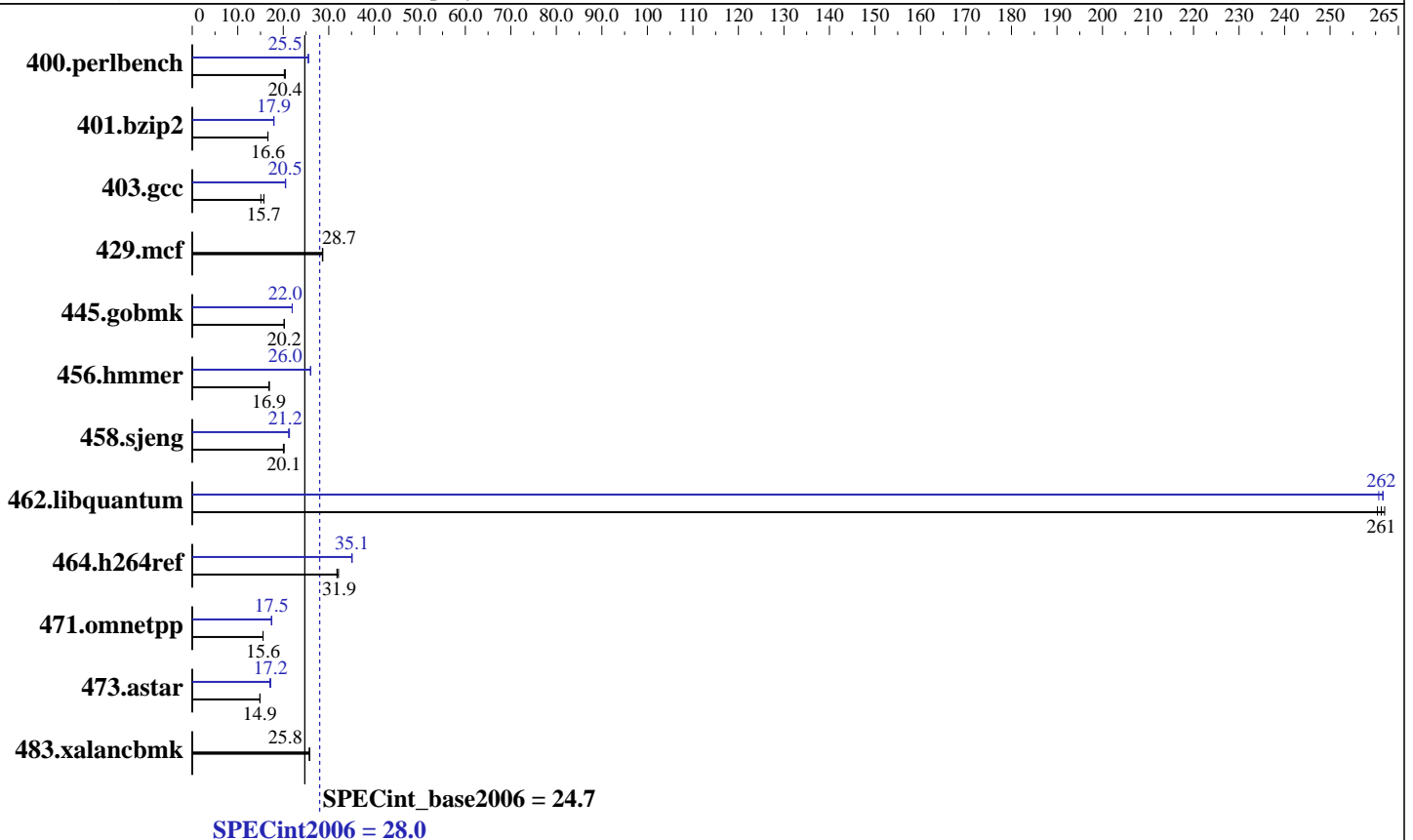
Test date: Dec-2008

Test sponsor: Hewlett-Packard Company

Hardware Availability: Nov-2008

Tested by: Hewlett-Packard Company

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon E5450
 CPU Characteristics: 3.0 GHz, 2x6 MB L2 shared, 1333 MHz 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 (4x4 GB PC2-5300F CL5)
 Disk Subsystem: 1x72 GB 15 K SAS
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080930 Package ID: l_cproc_b_11.0.069
 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 Library 8.1 binutils-2.17.50



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	479	20.4	483	20.2	478	20.4	383	25.5	383	25.5	383	25.5
401.bzip2	580	16.6	581	16.6	580	16.6	538	17.9	539	17.9	538	18.0
403.gcc	534	15.1	511	15.7	511	15.8	393	20.5	392	20.5	394	20.5
429.mcf	319	28.6	318	28.7	318	28.7	319	28.6	318	28.7	318	28.7
445.gobmk	519	20.2	519	20.2	519	20.2	478	22.0	477	22.0	478	22.0
456.hammer	552	16.9	552	16.9	552	16.9	359	26.0	359	26.0	359	26.0
458.sjeng	604	20.0	601	20.1	600	20.2	570	21.2	571	21.2	566	21.4
462.libquantum	79.1	262	79.6	260	79.3	261	79.2	262	79.2	262	79.5	261
464.h264ref	696	31.8	689	32.1	694	31.9	630	35.1	630	35.1	631	35.1
471.omnetpp	402	15.6	402	15.5	402	15.6	358	17.5	358	17.5	360	17.4
473.astar	472	14.9	472	14.9	471	14.9	408	17.2	408	17.2	411	17.1
483.xalancbmk	268	25.8	267	25.8	269	25.7	268	25.8	267	25.8	269	25.7

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 64M
```

Platform Notes

BIOS configuration:
Power Regulator set to Static High Performance Mode

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

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

Continued on next page



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Base Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel
-par-runtime-control -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/cpu2006/SmartHeap_8.1/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/11.0/069/bin/intel64/icc
-L/opt/intel/Compiler/11.0/069/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/069/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/069/bin/intel64/icc
-L/opt/intel/Compiler/11.0/069/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/069/ipp/em64t/include

C++ benchmarks:

icpc

Peak Portability Flags

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



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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

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-calloc
-opt-malloc-options=3

429.mcf: basepeak = yes

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

456.hmmer: -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: -xSSE4.1 -ipo -O3 -no-prec-div -static
-opt-malloc-options=3 -parallel -par-runtime-control
-opt-prefetch

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/cpu2006/SmartHeap_8.1/lib -lsmarheap

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/cpu2006/SmartHeap_8.1/lib -lsmarheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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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-revD.html>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.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-revD.xml>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.xml>

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

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