



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®2006 = 20.4

ProLiant BL680c G5
(2.4 GHz, Intel Xeon E7340)

SPECint_base2006 = 18.0

CPU2006 license: 3

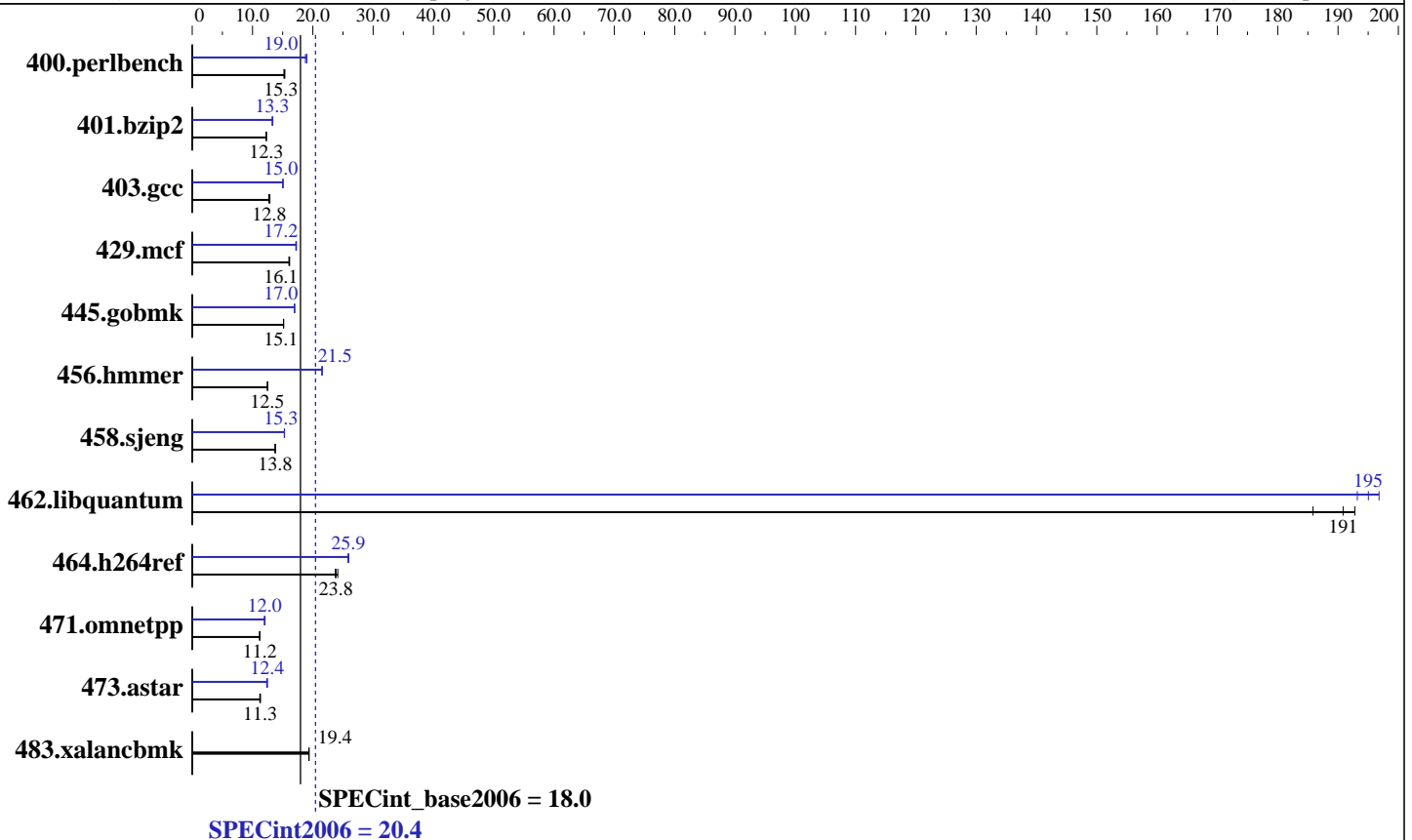
Test date: Jan-2008

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jan-2008

Tested by: Hewlett-Packard Company

Software Availability: Sep-2007



Hardware

CPU Name: Intel Xeon E7340
 CPU Characteristics: 2.4 GHz, 2x4 MB L2 shared, 1066 MHz system bus
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 16 cores, 4 chips, 4 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 64 GB (16x4 GB PC2-5300F CL5)
 Disk Subsystem: 1x146 GB 10 K SAS
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 5.1, Kernel 2.6.18-53.el5
 Compiler: Intel C++ Compiler for applications running on IA-32 and Intel 64, Version 10.1 Build 20070913 Package ID: l_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ext2
 System State: Multi-user run level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap Library 8.1



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	637	15.3	643	15.2	<u>637</u>	<u>15.3</u>	<u>515</u>	<u>19.0</u>	514	19.0	521	18.8
401.bzip2	<u>786</u>	<u>12.3</u>	788	12.3	784	12.3	728	13.3	<u>727</u>	<u>13.3</u>	722	13.4
403.gcc	635	12.7	<u>629</u>	<u>12.8</u>	625	12.9	534	15.1	536	15.0	<u>535</u>	<u>15.0</u>
429.mcf	568	16.1	565	16.2	<u>568</u>	<u>16.1</u>	528	17.3	530	17.2	<u>530</u>	<u>17.2</u>
445.gobmk	693	15.1	<u>693</u>	<u>15.1</u>	692	15.2	618	17.0	618	17.0	<u>618</u>	<u>17.0</u>
456.hammer	<u>748</u>	<u>12.5</u>	746	12.5	748	12.5	<u>433</u>	<u>21.5</u>	434	21.5	433	21.5
458.sjeng	882	13.7	<u>880</u>	<u>13.8</u>	875	13.8	<u>791</u>	<u>15.3</u>	792	15.3	791	15.3
462.libquantum	111	186	107	193	<u>109</u>	<u>191</u>	107	193	<u>106</u>	<u>195</u>	105	197
464.h264ref	<u>928</u>	<u>23.8</u>	933	23.7	917	24.1	853	25.9	857	25.8	<u>854</u>	<u>25.9</u>
471.omnetpp	559	11.2	558	11.2	<u>558</u>	<u>11.2</u>	<u>519</u>	<u>12.0</u>	518	12.1	523	11.9
473.astar	627	11.2	<u>622</u>	<u>11.3</u>	621	11.3	563	12.5	568	12.4	<u>565</u>	<u>12.4</u>
483.xalancbmk	<u>356</u>	<u>19.4</u>	357	19.3	356	19.4	<u>356</u>	<u>19.4</u>	357	19.3	356	19.4

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_STACK_SIZE set to 64M
KMP_AFFINITY set to physical,0

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.xalanbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-fast -vec-guard-write -opt-malloc-options=3 -parallel
-par-runtime-control

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -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/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.perlbenc: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalanbmk: -DSPEC_CPU_LINUX



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Peak Optimization Flags

C benchmarks:

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

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.hmmmer: -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/cpu2006/SmartHeap_8.1/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/cpu2006/SmartHeap_8.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-int-flags.20090713.html>

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

<http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-int-flags.20090713.xml>

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