



SPEC® CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 25.1

PowerEdge R900 (Intel Xeon X7460, 2.66 GHz)

SPECint_base2006 = 21.8

CPU2006 license: 55

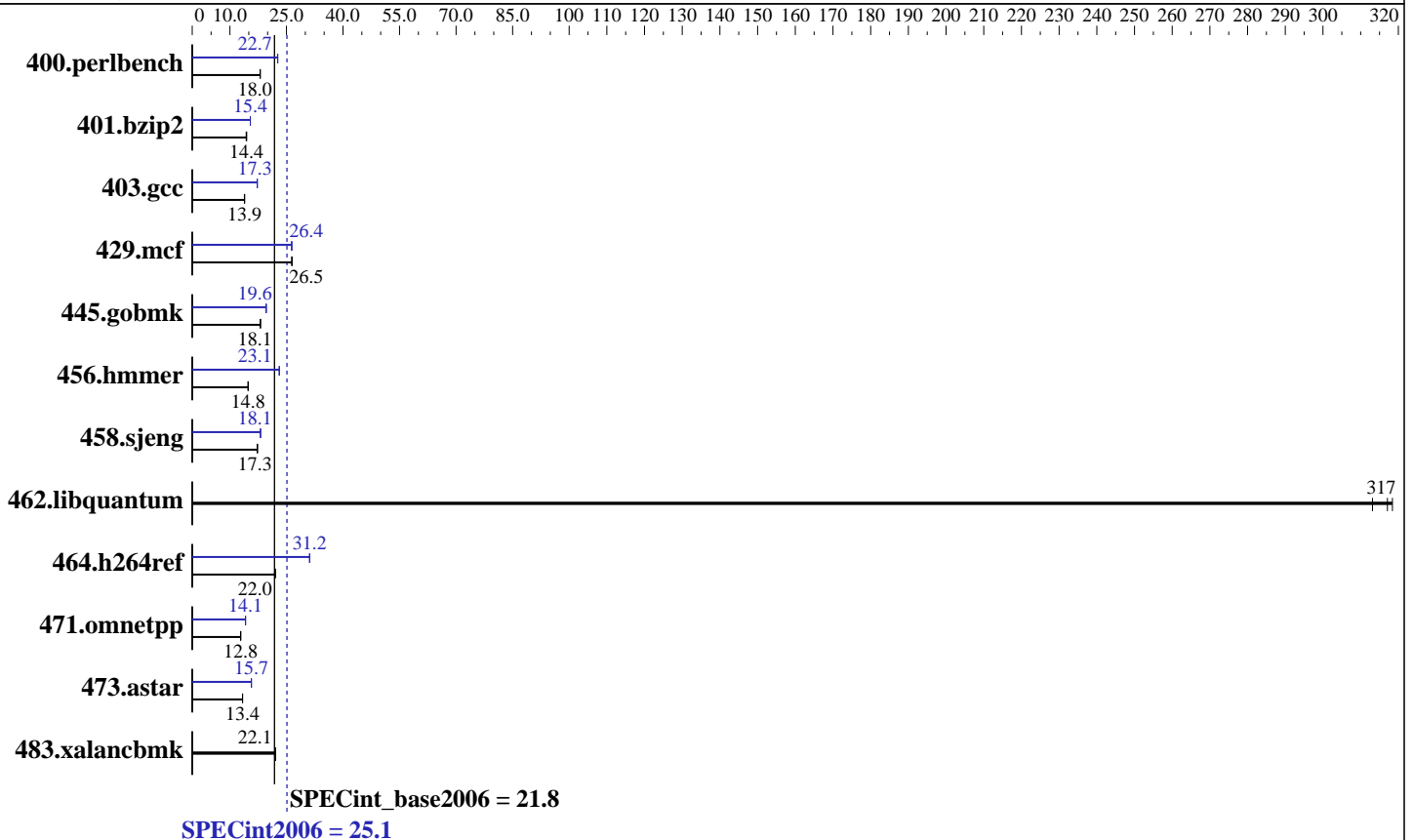
Test date: Sep-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X7460
 CPU Characteristics:
 CPU MHz: 2666
 FPU: Integrated
 CPU(s) enabled: 24 cores, 4 chips, 6 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 9 MB I+D on chip per chip, 3 MB shared / 2 cores
 L3 Cache: 16 MB I+D on chip per chip
 Other Cache: None
 Memory: 64 GB (16 x 4GB DDR2-667 FBDIMM)
 Disk Subsystem: 2 x 36 GB SAS 15000 RPM (RAID-0) for OS,
 1 x 73 GB SAS 10000 RPM for benchmark
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2,
 Kernel 2.6.16-60.0.21-smp
 Compiler: Intel C++ Compiler 11.0 for Linux
 Build 20080730 Package ID: l_cproc_b_11.0.042
 Auto Parallel: Yes
 File System: ReiserFS
 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	543	18.0	541	18.1	<u>543</u>	<u>18.0</u>	431	22.7	<u>431</u>	<u>22.7</u>	431	22.6
401.bzip2	674	14.3	669	14.4	<u>669</u>	<u>14.4</u>	626	15.4	626	15.4	<u>626</u>	<u>15.4</u>
403.gcc	582	13.8	<u>580</u>	<u>13.9</u>	579	13.9	466	17.3	<u>467</u>	<u>17.3</u>	467	17.2
429.mcf	346	26.4	344	26.5	<u>345</u>	<u>26.5</u>	346	26.4	<u>346</u>	<u>26.4</u>	345	26.4
445.gobmk	580	18.1	<u>580</u>	<u>18.1</u>	580	18.1	<u>535</u>	<u>19.6</u>	535	19.6	535	19.6
456.hmmmer	<u>629</u>	<u>14.8</u>	628	14.9	629	14.8	<u>404</u>	<u>23.1</u>	404	23.1	404	23.1
458.sjeng	<u>700</u>	<u>17.3</u>	701	17.3	699	17.3	669	18.1	667	18.1	<u>668</u>	<u>18.1</u>
462.libquantum	65.1	318	66.2	313	<u>65.3</u>	<u>317</u>	65.1	318	66.2	313	<u>65.3</u>	<u>317</u>
464.h264ref	1001	22.1	1006	22.0	<u>1006</u>	<u>22.0</u>	711	31.1	<u>710</u>	<u>31.2</u>	710	31.2
471.omnetpp	<u>487</u>	<u>12.8</u>	485	12.9	487	12.8	442	14.1	<u>442</u>	<u>14.1</u>	442	14.1
473.astar	526	13.3	526	13.4	<u>526</u>	<u>13.4</u>	448	15.7	<u>447</u>	<u>15.7</u>	447	15.7
483.xalanbmk	312	22.1	<u>313</u>	<u>22.1</u>	313	22.1	312	22.1	<u>313</u>	<u>22.1</u>	313	22.1

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 stack size to unlimited prior to run

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmmer, for peak, are compiled in 64-bit mode
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.xalanbmk: -DSPEC_CPU_LINUX



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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/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:

Continued on next page



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Peak Optimization Flags (Continued)

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-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.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: 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

Same as Base Other Flags

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.20090713.02.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.06.html>



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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.20090713.02.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.06.xml>

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