



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 21.9

PowerEdge T300 (Intel Xeon X3323, 2.50 GHz)

SPECint_base2006 = 19.6

CPU2006 license: 55

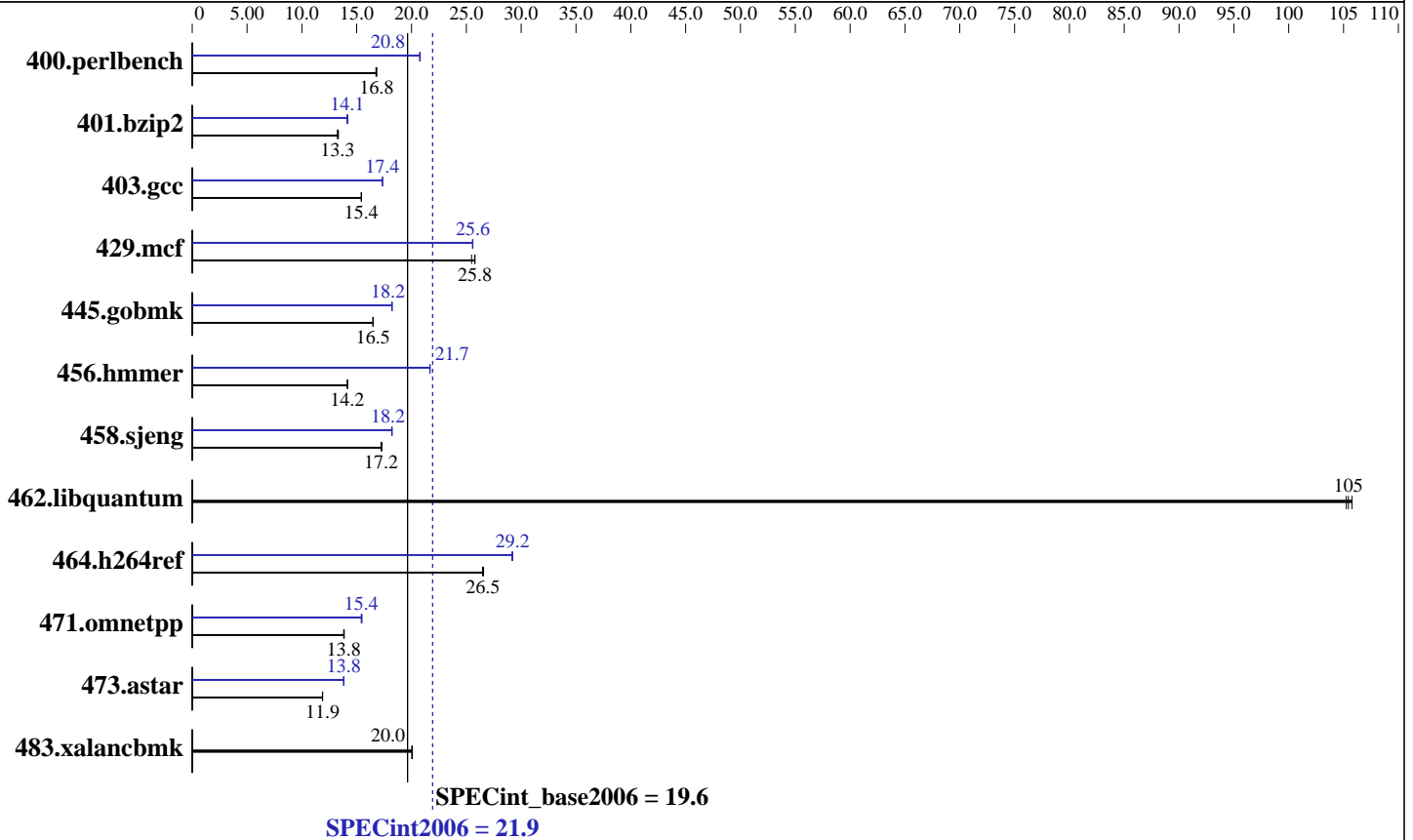
Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X3323
 CPU Characteristics:
 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: 16 GB (4 x 4 GB DDR2-667)
 Disk Subsystem: 1 x 300 GB SAS 15000 RPM
 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 | <u>581</u> | <u>16.8</u> | 583 | 16.8 | 581 | 16.8 | <u>471</u> | <u>20.8</u> | 470 | 20.8 | 471 | 20.7 |
| 401.bzip2 | <u>727</u> | <u>13.3</u> | 724 | 13.3 | 729 | 13.2 | <u>682</u> | <u>14.1</u> | 680 | 14.2 | 684 | 14.1 |
| 403.gcc | 522 | 15.4 | <u>522</u> | <u>15.4</u> | 521 | 15.4 | 464 | 17.4 | <u>464</u> | <u>17.4</u> | 464 | 17.3 |
| 429.mcf | 358 | 25.5 | 354 | 25.8 | <u>354</u> | <u>25.8</u> | 356 | 25.6 | <u>356</u> | <u>25.6</u> | 357 | 25.6 |
| 445.gobmk | 636 | 16.5 | 636 | 16.5 | <u>636</u> | <u>16.5</u> | 576 | 18.2 | 576 | 18.2 | <u>576</u> | <u>18.2</u> |
| 456.hammer | <u>659</u> | <u>14.2</u> | 660 | 14.1 | 659 | 14.2 | 430 | 21.7 | <u>430</u> | <u>21.7</u> | 430 | 21.7 |
| 458.sjeng | 700 | 17.3 | <u>702</u> | <u>17.2</u> | 703 | 17.2 | 665 | 18.2 | 664 | 18.2 | <u>664</u> | <u>18.2</u> |
| 462.libquantum | 196 | 106 | <u>197</u> | <u>105</u> | 197 | 105 | 196 | 106 | <u>197</u> | <u>105</u> | 197 | 105 |
| 464.h264ref | 833 | 26.6 | <u>834</u> | <u>26.5</u> | 836 | 26.5 | 759 | 29.2 | <u>758</u> | <u>29.2</u> | 757 | 29.2 |
| 471.omnetpp | 451 | 13.9 | <u>452</u> | <u>13.8</u> | 452 | 13.8 | 405 | 15.4 | <u>405</u> | <u>15.4</u> | 404 | 15.5 |
| 473.astar | 590 | 11.9 | 591 | 11.9 | <u>590</u> | <u>11.9</u> | 508 | 13.8 | <u>508</u> | <u>13.8</u> | 508 | 13.8 |
| 483.xalancbmk | <u>344</u> | <u>20.0</u> | 344 | 20.1 | 344 | 20.0 | <u>344</u> | <u>20.0</u> | 344 | 20.1 | 344 | 20.0 |

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

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



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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.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

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-calloc
-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

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.20090713.02.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.11.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.20090713.11.xml>

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

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