



SPEC[®] CINT2006 Result

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Dell Inc.

SPECint[®]_rate2006 = 70.8

PowerEdge M710 (Intel Xeon E5502, 1.86 GHz)

SPECint_rate_base2006 = 66.0

CPU2006 license: 55

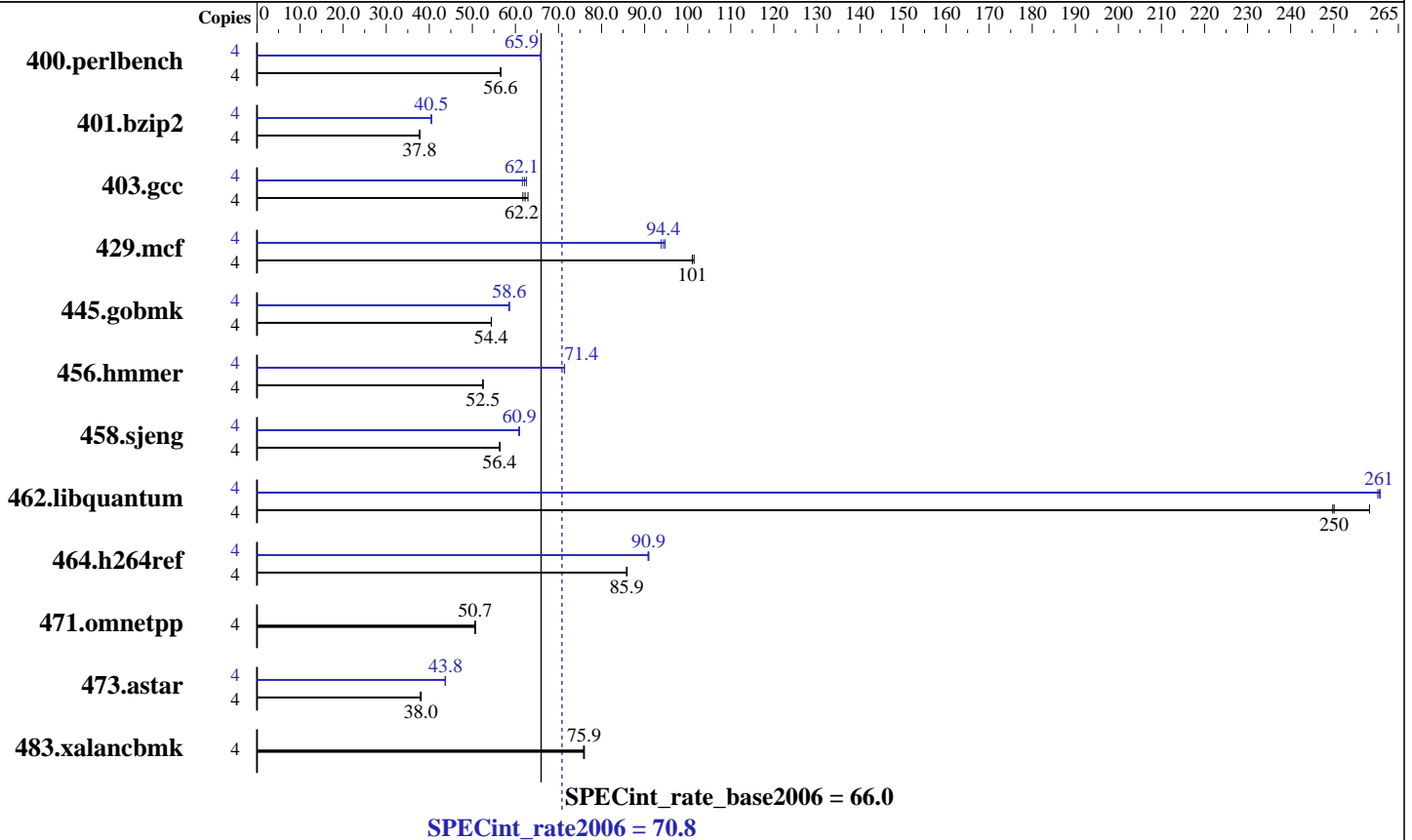
Test date: Jun-2009

Test sponsor: Dell Inc.

Hardware Availability: Mar-2009

Tested by: Dell Inc.

Software Availability: Feb-2009



Hardware

CPU Name: Intel Xeon E5502
 CPU Characteristics:
 CPU MHz: 1867
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 4 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (12 x 4 GB DDR3-1333 DR RDIMM downclocked to 800 MHz)
 Disk Subsystem: 1 x 73 GB 10000 RPM SAS
 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 Professional 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080
 Auto Parallel: No
 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 | | | | | | |
|----------------|--------|-------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 4 | 691 | 56.6 | <u>691</u> | <u>56.6</u> | 691 | 56.5 | 4 | 592 | 66.0 | 594 | 65.8 | <u>593</u> | <u>65.9</u> |
| 401.bzip2 | 4 | 1022 | 37.8 | <u>1022</u> | <u>37.8</u> | 1023 | 37.7 | 4 | 952 | 40.6 | 955 | 40.4 | <u>953</u> | <u>40.5</u> |
| 403.gcc | 4 | 522 | 61.7 | <u>517</u> | <u>62.2</u> | 512 | 62.9 | 4 | <u>518</u> | <u>62.1</u> | 515 | 62.6 | 523 | 61.6 |
| 429.mcf | 4 | 359 | 101 | 361 | 101 | <u>361</u> | <u>101</u> | 4 | <u>387</u> | <u>94.4</u> | 389 | 93.8 | 385 | 94.8 |
| 445.gobmk | 4 | 771 | 54.4 | 771 | 54.4 | <u>771</u> | <u>54.4</u> | 4 | 716 | 58.6 | 717 | 58.5 | <u>716</u> | <u>58.6</u> |
| 456.hammer | 4 | <u>711</u> | <u>52.5</u> | 711 | 52.5 | 711 | 52.5 | 4 | <u>523</u> | <u>71.4</u> | 523 | 71.4 | 523 | 71.4 |
| 458.sjeng | 4 | 860 | 56.3 | 858 | 56.4 | <u>859</u> | <u>56.4</u> | 4 | 794 | 60.9 | 796 | 60.8 | <u>795</u> | <u>60.9</u> |
| 462.libquantum | 4 | 321 | 258 | 332 | 250 | <u>331</u> | <u>250</u> | 4 | 318 | 261 | 319 | 260 | <u>318</u> | <u>261</u> |
| 464.h264ref | 4 | 1030 | 85.9 | <u>1031</u> | <u>85.9</u> | 1032 | 85.8 | 4 | <u>974</u> | <u>90.9</u> | 975 | 90.8 | 973 | 91.0 |
| 471.omnetpp | 4 | 494 | 50.6 | 493 | 50.7 | <u>494</u> | <u>50.7</u> | 4 | 494 | 50.6 | 493 | 50.7 | <u>494</u> | <u>50.7</u> |
| 473.astar | 4 | <u>738</u> | <u>38.0</u> | 736 | 38.1 | 740 | 38.0 | 4 | 643 | 43.7 | 642 | 43.8 | <u>642</u> | <u>43.8</u> |
| 483.xalanbmk | 4 | 363 | 76.0 | <u>363</u> | <u>75.9</u> | 364 | 75.8 | 4 | 363 | 76.0 | <u>363</u> | <u>75.9</u> | 364 | 75.8 |

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

Submit Notes

The config file option 'submit' was used.
numactl was used to bind copies to the cores

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

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc
-opt-malloc-options=3 -opt-prefetch

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Base Optimization Flags (Continued)

C++ benchmarks:

-xSSE4.2 -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/11.0/080/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc

458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

C++ benchmarks (except as noted below):

icpc

473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

401.bzip2: -DSPEC_CPU_LP64

456.hmmer: -DSPEC_CPU_LP64

458.sjeng: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LINUX

473.astar: -DSPEC_CPU_LP64

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias -opt-prefetch

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Peak Optimization Flags (Continued)

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

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc
-opt-malloc-options=3

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch

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

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static
-opt-malloc-options=3 -opt-prefetch

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

C++ benchmarks:

471.omnetpp: basepeak = yes

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=routine -auto-ilp32
-W1,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

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/Intel-ic11.0-int-linux64-revA.20090710.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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