



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp®_rate2006 = 48.5

PowerEdge T300 (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 44.8

CPU2006 license: 55

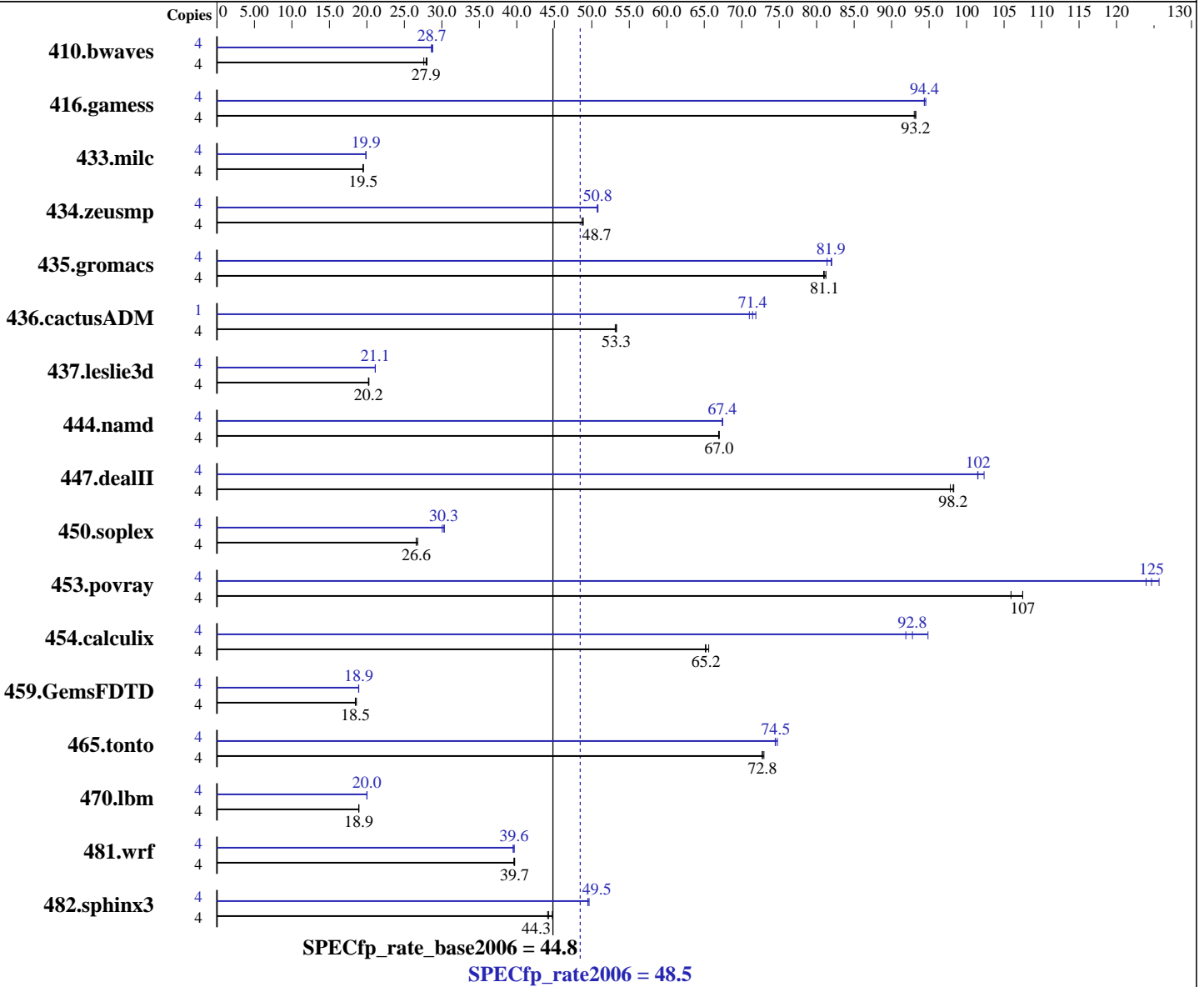
Test date: Feb-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5460
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 3166
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008, l_fc_p_10.1.008
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 48.5

PowerEdge T300 (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 44.8

CPU2006 license: 55

Test date: Feb-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (4x4 GB DDR2-667)
Disk Subsystem: 1 x 300 GB SAS 15k RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1970	27.6	<u>1948</u>	<u>27.9</u>	1940	28.0	4	1901	28.6	1888	28.8	<u>1895</u>	<u>28.7</u>
416.gamess	4	842	93.0	<u>840</u>	<u>93.2</u>	840	93.2	4	828	94.6	<u>830</u>	<u>94.4</u>	830	94.3
433.milc	4	1887	19.5	<u>1881</u>	<u>19.5</u>	1880	19.5	4	1846	19.9	1848	19.9	<u>1847</u>	<u>19.9</u>
434.zeusmp	4	745	48.9	<u>747</u>	<u>48.7</u>	747	48.7	4	718	50.7	<u>717</u>	<u>50.8</u>	716	50.8
435.gromacs	4	353	80.9	352	81.2	<u>352</u>	<u>81.1</u>	4	351	81.4	348	82.0	<u>349</u>	<u>81.9</u>
436.cactusADM	4	900	53.1	897	53.3	<u>898</u>	<u>53.3</u>	1	168	71.0	<u>167</u>	<u>71.4</u>	166	71.9
437.leslie3d	4	1860	20.2	<u>1859</u>	<u>20.2</u>	1854	20.3	4	1780	21.1	1780	21.1	<u>1780</u>	<u>21.1</u>
444.namd	4	<u>479</u>	<u>67.0</u>	479	67.0	479	66.9	4	<u>476</u>	<u>67.4</u>	476	67.4	476	67.5
447.dealII	4	466	98.3	468	97.8	<u>466</u>	<u>98.2</u>	4	451	101	<u>451</u>	<u>102</u>	447	102
450.soplex	4	<u>1254</u>	<u>26.6</u>	1255	26.6	1245	26.8	4	1110	30.1	1099	30.3	<u>1102</u>	<u>30.3</u>
453.povray	4	201	106	198	107	<u>198</u>	<u>107</u>	4	172	124	<u>171</u>	<u>125</u>	169	126
454.calculix	4	<u>506</u>	<u>65.2</u>	503	65.6	507	65.2	4	348	94.9	<u>356</u>	<u>92.8</u>	359	91.9
459.GemsFDTD	4	<u>2295</u>	<u>18.5</u>	2281	18.6	2299	18.5	4	2243	18.9	2247	18.9	<u>2244</u>	<u>18.9</u>
465.tonto	4	539	73.0	541	72.7	<u>541</u>	<u>72.8</u>	4	529	74.5	526	74.8	<u>528</u>	<u>74.5</u>
470.lbm	4	2907	18.9	<u>2904</u>	<u>18.9</u>	2902	18.9	4	2748	20.0	<u>2746</u>	<u>20.0</u>	2744	20.0
481.wrf	4	<u>1125</u>	<u>39.7</u>	1125	39.7	1128	39.6	4	1127	39.6	<u>1127</u>	<u>39.6</u>	1131	39.5
482.sphinx3	4	1767	44.1	<u>1761</u>	<u>44.3</u>	1743	44.7	4	<u>1575</u>	<u>49.5</u>	1576	49.5	1570	49.6

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

Compiler Invocation Notes

OMP_NUM_THREADS set to number of cores
KMP_STACK_SIZE set to 64M
KMP_AFFINITY set to physical,0

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 48.5

PowerEdge T300 (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 44.8

CPU2006 license: 55

Test date: Feb-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2007

Platform Notes

BIOS Settings:

Adjacent Cache Line Prefetch = Disabled (default Enabled)

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
 416.gamess: -DSPEC_CPU_LP64
 433.milc: -DSPEC_CPU_LP64
 434.zeusmp: -DSPEC_CPU_LP64
 435.gromacs: -DSPEC_CPU_LP64 -nofor_main
 436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
 437.leslie3d: -DSPEC_CPU_LP64
 444.namd: -DSPEC_CPU_LP64
 447.dealII: -DSPEC_CPU_LP64
 450.soplex: -DSPEC_CPU_LP64
 453.povray: -DSPEC_CPU_LP64
 454.calculix: -DSPEC_CPU_LP64 -nofor_main
 459.GemsFDTD: -DSPEC_CPU_LP64
 465.tonto: -DSPEC_CPU_LP64
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
 482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:

-fast

C++ benchmarks:

-fast

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 48.5

PowerEdge T300 (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 44.8

CPU2006 license: 55

Test date: Feb-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2007

Base Optimization Flags (Continued)

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast

Peak Compiler Invocation

C benchmarks (except as noted below):

/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

433.milc: icc

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib
-I/opt/intel/fc/10.1.008/include

Benchmarks using both Fortran and C:

icc ifort

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 48.5

PowerEdge T300 (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 44.8

CPU2006 license: 55

Test date: Feb-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2007

Peak Optimization Flags

C benchmarks:

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -parallel -auto-ilp32

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 48.5

PowerEdge T300 (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 44.8

CPU2006 license: 55

Test date: Feb-2008

Test sponsor: Dell Inc.

Hardware Availability: Mar-2008

Tested by: Dell Inc.

Software Availability: Nov-2007

Peak Optimization Flags (Continued)

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090713.03.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090713.03.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 15:26:52 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 March 2008.