



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]_rate2006 = 220

PRIMERGY RX200 S6, Intel Xeon E5649, 2.53 GHz

SPECfp_rate_base2006 = 215

CPU2006 license: 19

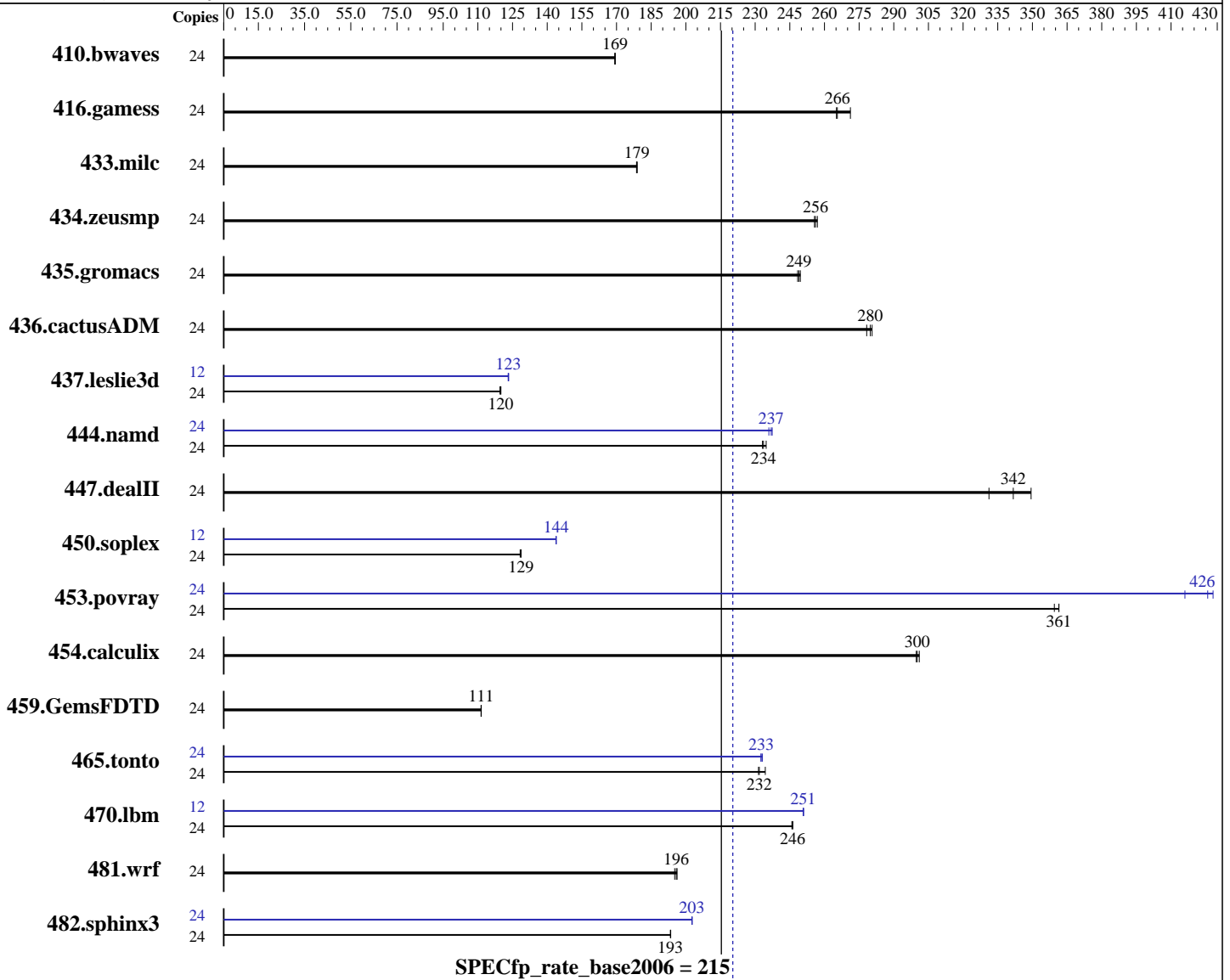
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Jul-2010

Software Availability: Nov-2010



Hardware

CPU Name: Intel Xeon E5649
 CPU Characteristics: Intel Turbo Boost Technology up to 2.93 GHz
 CPU MHz: 2533
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 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

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) with SP1, Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64, Version 12.0.0.082 Build 20101006
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: --

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	24	<u>1925</u>	<u>169</u>	1925	169	1927	169	24	<u>1925</u>	<u>169</u>	1925	169	1927	169
416.gamess	24	<u>1769</u>	<u>266</u>	1772	265	1733	271	24	<u>1769</u>	<u>266</u>	1772	265	1733	271
433.milc	24	1233	179	1231	179	<u>1232</u>	<u>179</u>	24	1233	179	1231	179	<u>1232</u>	<u>179</u>
434.zeusmp	24	854	256	<u>853</u>	<u>256</u>	850	257	24	854	256	<u>853</u>	<u>256</u>	850	257
435.gromacs	24	690	248	<u>688</u>	<u>249</u>	687	250	24	690	248	<u>688</u>	<u>249</u>	687	250
436.cactusADM	24	<u>1025</u>	<u>280</u>	1022	281	1031	278	24	<u>1025</u>	<u>280</u>	1022	281	1031	278
437.leslie3d	24	1881	120	1887	120	<u>1882</u>	<u>120</u>	12	<u>916</u>	<u>123</u>	915	123	916	123
444.namd	24	820	235	<u>824</u>	<u>234</u>	826	233	24	811	237	816	236	<u>812</u>	<u>237</u>
447.dealII	24	786	349	829	331	<u>803</u>	<u>342</u>	24	786	349	829	331	<u>803</u>	<u>342</u>
450.soplex	24	<u>1556</u>	<u>129</u>	1560	128	1556	129	12	696	144	<u>696</u>	<u>144</u>	696	144
453.povray	24	<u>353</u>	<u>361</u>	353	361	355	359	24	<u>300</u>	<u>426</u>	307	416	298	428
454.calculix	24	658	301	661	300	<u>660</u>	<u>300</u>	24	658	301	661	300	<u>660</u>	<u>300</u>
459.GemsFDTD	24	2287	111	2284	111	<u>2285</u>	<u>111</u>	24	2287	111	2284	111	<u>2285</u>	<u>111</u>
465.tonto	24	1020	231	1008	234	<u>1019</u>	<u>232</u>	24	1013	233	1016	233	<u>1015</u>	<u>233</u>
470.lbm	24	1341	246	1339	246	<u>1339</u>	<u>246</u>	12	<u>657</u>	<u>251</u>	658	251	657	251
481.wrf	24	1366	196	<u>1369</u>	<u>196</u>	1374	195	24	1366	196	<u>1369</u>	<u>196</u>	1374	195
482.sphinx3	24	<u>2419</u>	<u>193</u>	2418	193	2419	193	24	2307	203	2308	203	<u>2308</u>	<u>203</u>

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
Large pages were not enabled for this run

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Performance/Power Setting = Traditional



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General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on SLES 10 SP1 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

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:
-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

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Base Optimization Flags (Continued)

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

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
 437.leslie3d: -DSPEC_CPU_LP64
 444.namd: -DSPEC_CPU_LP64
 447.deallI: -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



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Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-ansi-alias -opt-prefetch -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealII: basepeak = yes

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
-inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.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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