



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]_rate2006 = 237

PRIMERGY RX300 S6, Intel Xeon X5687, 3.60 GHz

SPECfp_rate_base2006 = 230

CPU2006 license: 19

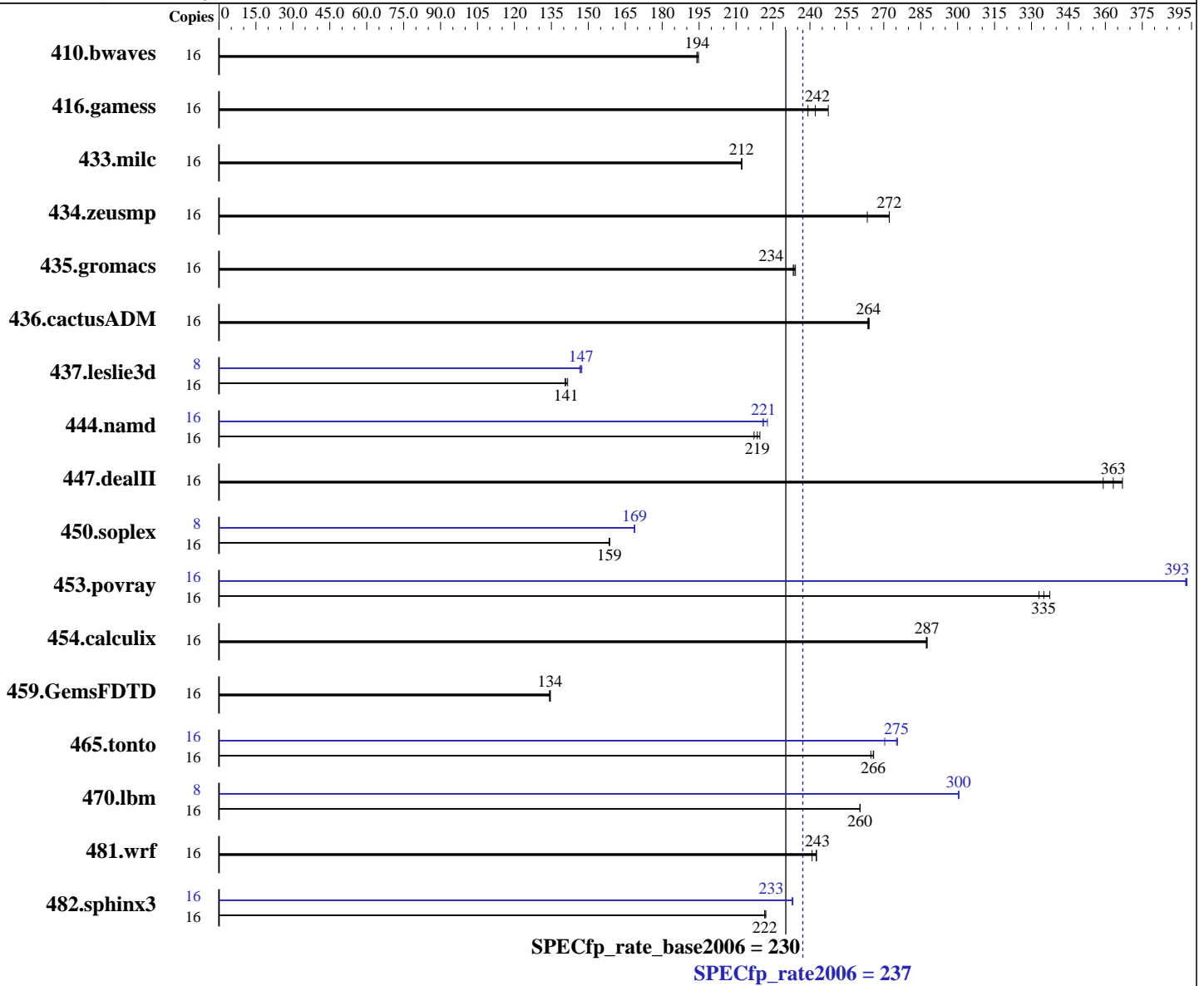
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Dec-2010

Hardware Availability: Feb-2011

Software Availability: Nov-2010



Hardware

CPU Name: Intel Xeon X5687
 CPU Characteristics: Intel Turbo Boost Technology up to 3.87 GHz
 CPU MHz: 3600
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 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	16	1116	195	<u>1119</u>	<u>194</u>	1120	194	16	1116	195	<u>1119</u>	<u>194</u>	1120	194
416.gamess	16	1266	247	<u>1293</u>	<u>242</u>	1310	239	16	1266	247	<u>1293</u>	<u>242</u>	1310	239
433.milc	16	692	212	692	212	<u>692</u>	<u>212</u>	16	692	212	692	212	<u>692</u>	<u>212</u>
434.zeusmp	16	<u>535</u>	<u>272</u>	535	272	553	263	16	<u>535</u>	<u>272</u>	535	272	553	263
435.gromacs	16	488	234	490	233	<u>489</u>	<u>234</u>	16	488	234	490	233	<u>489</u>	<u>234</u>
436.cactusADM	16	724	264	725	264	<u>725</u>	<u>264</u>	16	724	264	725	264	<u>725</u>	<u>264</u>
437.leslie3d	16	<u>1067</u>	<u>141</u>	1070	141	1062	142	8	510	147	513	147	<u>511</u>	<u>147</u>
444.namd	16	<u>587</u>	<u>219</u>	584	220	590	217	16	581	221	<u>580</u>	<u>221</u>	576	223
447.dealII	16	499	367	<u>504</u>	<u>363</u>	510	359	16	499	367	<u>504</u>	<u>363</u>	510	359
450.soplex	16	841	159	<u>841</u>	<u>159</u>	842	158	8	395	169	396	169	<u>395</u>	<u>169</u>
453.povray	16	<u>254</u>	<u>335</u>	252	337	256	333	16	<u>217</u>	<u>393</u>	217	393	216	393
454.calculix	16	<u>459</u>	<u>287</u>	459	288	460	287	16	<u>459</u>	<u>287</u>	459	288	460	287
459.GemsFDTD	16	1261	135	<u>1262</u>	<u>134</u>	1265	134	16	1261	135	<u>1262</u>	<u>134</u>	1265	134
465.tonto	16	<u>592</u>	<u>266</u>	592	266	595	265	16	582	270	571	276	<u>572</u>	<u>275</u>
470.lbm	16	844	260	<u>844</u>	<u>260</u>	844	260	8	366	301	<u>366</u>	<u>300</u>	366	300
481.wrf	16	<u>737</u>	<u>243</u>	736	243	742	241	16	<u>737</u>	<u>243</u>	736	243	742	241
482.sphinx3	16	1404	222	<u>1407</u>	<u>222</u>	1407	222	16	1338	233	1340	233	<u>1339</u>	<u>233</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



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General Notes

This result was measured on the PRIMERGY RX300 S6. The PRIMERGY TX300 S6 and the PRIMERGY RX300 S6 are electronically equivalent.

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.lelie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.deall: -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

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Base Optimization Flags (Continued)

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

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.deall: -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 other inquiries, please contact webmaster@spec.org.

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