



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = 49.2

PRIMERGY TX120 S3, Intel Core i3-2120, 3.30 GHz

SPECfp_base2006 = 47.5

CPU2006 license: 19

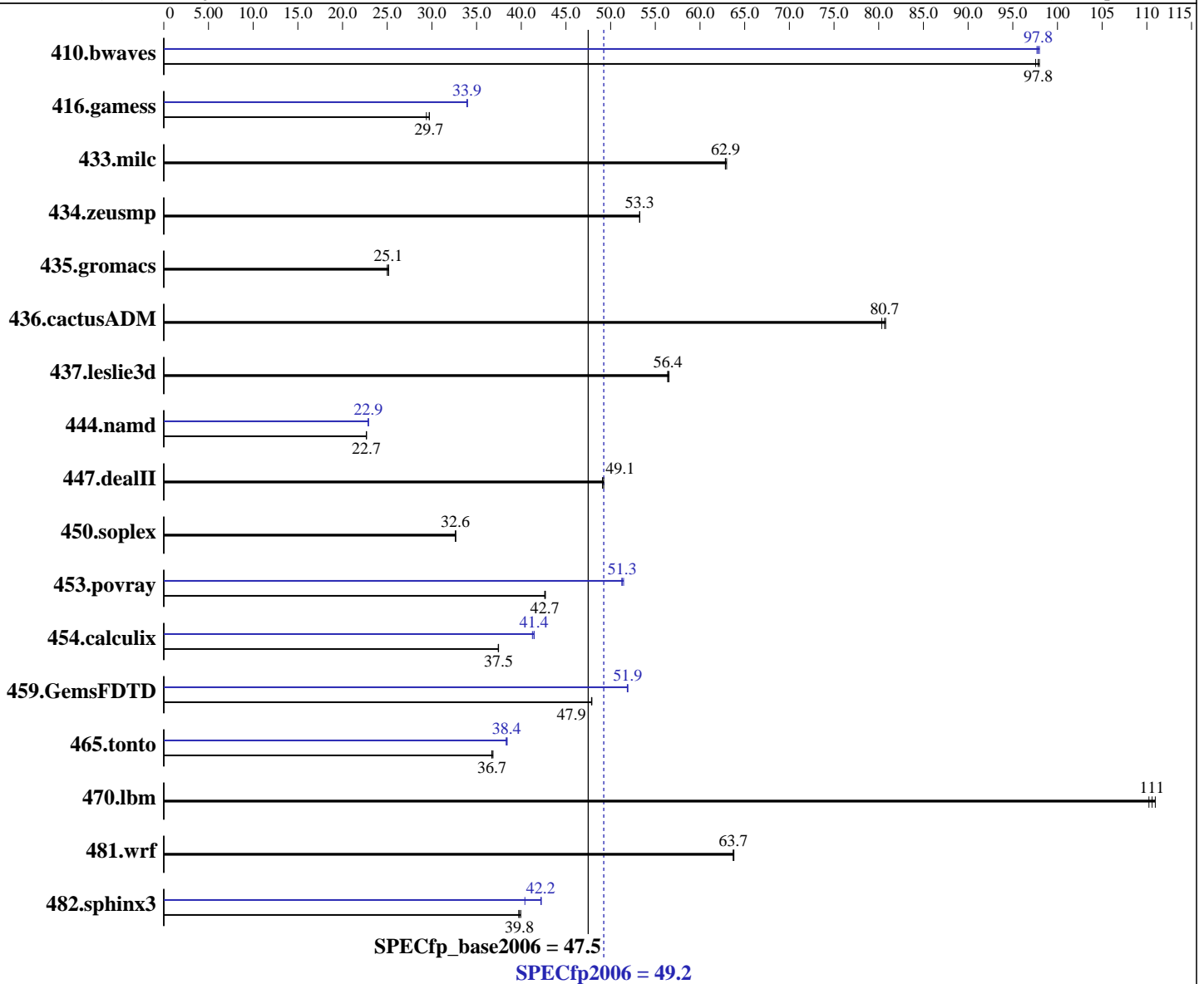
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2011

Hardware Availability: Jun-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i3-2120
 CPU Characteristics:
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1 chip
 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 Update 3
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

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L3 Cache: 3 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600E-9, ECC)
Disk Subsystem: 1 x SATA, 300 GB, 7200 RPM
Other Hardware: None

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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	139	97.6	139	98.0	<u>139</u>	<u>97.8</u>	139	97.7	<u>139</u>	<u>97.8</u>	139	98.0
416.gamess	666	29.4	<u>659</u>	<u>29.7</u>	659	29.7	<u>577</u>	<u>33.9</u>	577	33.9	576	34.0
433.milc	146	62.8	146	63.0	<u>146</u>	<u>62.9</u>	146	62.8	146	63.0	<u>146</u>	<u>62.9</u>
434.zeusmp	171	53.3	171	53.3	<u>171</u>	<u>53.3</u>	171	53.3	171	53.3	<u>171</u>	<u>53.3</u>
435.gromacs	286	25.0	284	25.2	<u>284</u>	<u>25.1</u>	286	25.0	284	25.2	<u>284</u>	<u>25.1</u>
436.cactusADM	148	80.8	149	80.3	<u>148</u>	<u>80.7</u>	148	80.8	149	80.3	<u>148</u>	<u>80.7</u>
437.leslie3d	<u>167</u>	<u>56.4</u>	166	56.5	167	56.4	<u>167</u>	<u>56.4</u>	166	56.5	167	56.4
444.namd	<u>354</u>	<u>22.7</u>	354	22.7	354	22.7	<u>350</u>	<u>22.9</u>	351	22.9	350	22.9
447.dealII	233	49.1	<u>233</u>	<u>49.1</u>	232	49.2	233	49.1	<u>233</u>	<u>49.1</u>	232	49.2
450.soplex	256	32.6	255	32.7	<u>256</u>	<u>32.6</u>	256	32.6	255	32.7	<u>256</u>	<u>32.6</u>
453.povray	125	42.6	<u>125</u>	<u>42.7</u>	125	42.7	103	51.5	<u>104</u>	<u>51.3</u>	104	51.3
454.calculix	220	37.4	<u>220</u>	<u>37.5</u>	220	37.5	200	41.2	<u>199</u>	<u>41.4</u>	199	41.4
459.GemsFDTD	221	47.9	<u>222</u>	<u>47.9</u>	222	47.9	205	51.9	204	51.9	<u>204</u>	<u>51.9</u>
465.tonto	<u>268</u>	<u>36.7</u>	267	36.8	268	36.7	256	38.4	257	38.3	<u>257</u>	<u>38.4</u>
470.lbm	125	110	124	111	<u>124</u>	<u>111</u>	125	110	124	111	<u>124</u>	<u>111</u>
481.wrf	<u>175</u>	<u>63.7</u>	175	63.8	175	63.7	<u>175</u>	<u>63.7</u>	175	63.8	175	63.7
482.sphinx3	<u>490</u>	<u>39.8</u>	488	39.9	491	39.7	482	40.4	<u>462</u>	<u>42.2</u>	461	42.2

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 stacksize to unlimited prior to run
'nodetv /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
echo 900 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

BIOS configuration:
Intel HT Technology = Disable



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General Notes

OMP_NUM_THREADS set to number of cores
For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on RHEL5.5
This result was measured on the PRIMERGY TX140 S1. The PRIMERGY TX120 S3 and the PRIMERGY TX140 S1 are electronically equivalent.

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.deallI: -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:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

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Base Optimization Flags (Continued)

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias`

Fortran benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Benchmarks using both Fortran and C:

`-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias`

Peak Compiler Invocation

C benchmarks:

`icc -m64`

C++ benchmarks:

`icpc -m64`

Fortran benchmarks:

`ifort -m64`

Benchmarks using both Fortran and C:

`icc -m64 ifort -m64`

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: `basepeak = yes`

470.lbm: `basepeak = yes`

482.sphinx3: `-xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel`

C++ benchmarks:

444.namd: `-xAVX(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`

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Peak Optimization Flags (Continued)

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.xml>

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 18:16:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 7 June 2011.