



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **82.2**

PRIMERGY CX270 S1, Intel Xeon E5-2643, 3.30 GHz

SPECfp_base2006 = **78.6**

CPU2006 license: 19

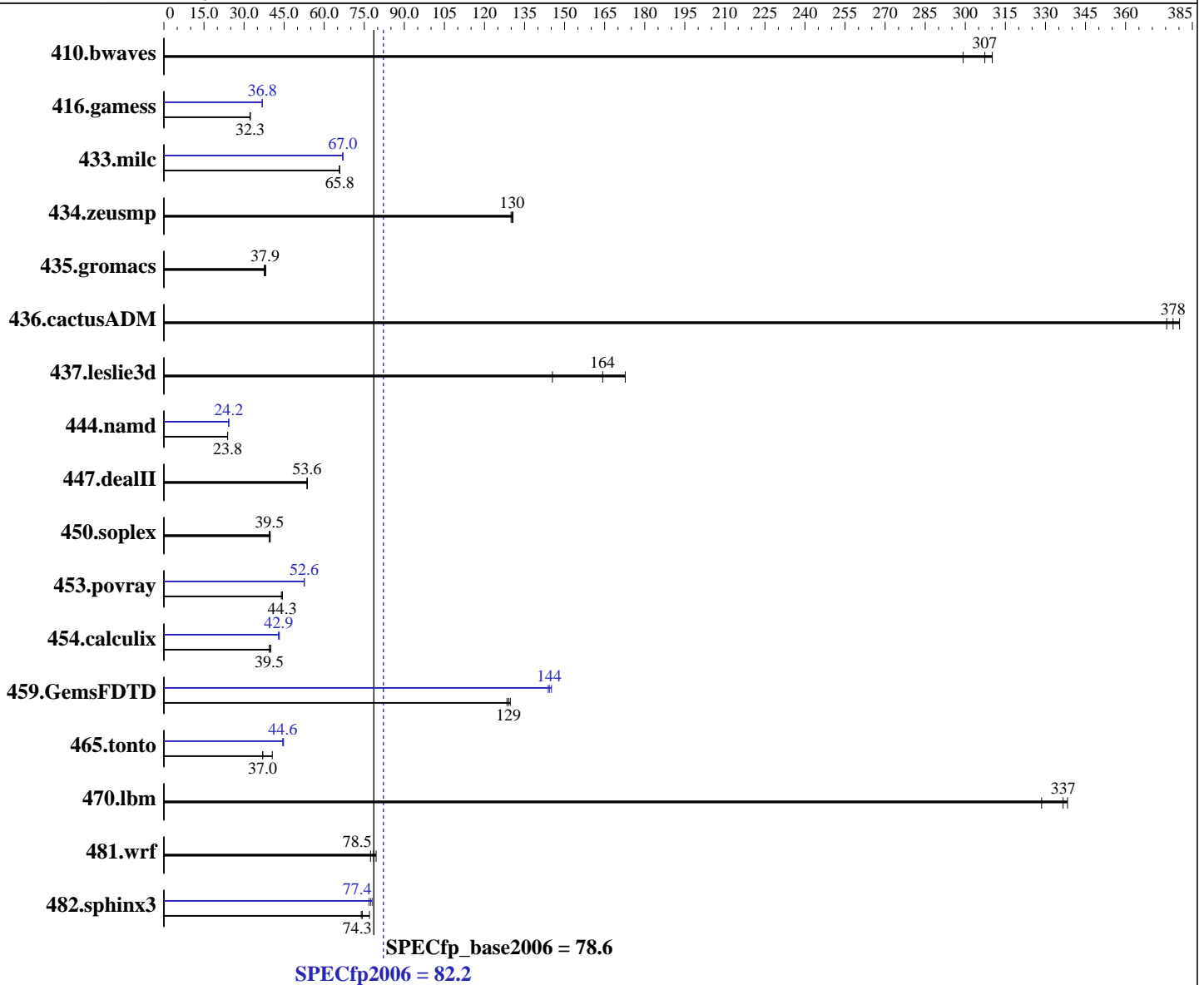
Test date: May-2012

Test sponsor: Fujitsu

Hardware Availability: Jun-2012

Tested by: Fujitsu

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2643
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 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: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

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L3 Cache: 10 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
Other Hardware: None

System State: Run level 3 (multi-user)
Base Pointers: 64-bit
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	45.4	299	43.8	310	<u>44.2</u>	<u>307</u>	45.4	299	43.8	310	<u>44.2</u>	<u>307</u>
416.gamess	<u>606</u>	<u>32.3</u>	605	32.4	608	32.2	532	36.8	<u>532</u>	<u>36.8</u>	532	36.8
433.milc	140	65.7	139	65.8	<u>140</u>	<u>65.8</u>	137	67.0	137	67.0	<u>137</u>	<u>67.0</u>
434.zeusmp	<u>69.8</u>	<u>130</u>	70.0	130	69.6	131	<u>69.8</u>	<u>130</u>	70.0	130	69.6	131
435.gromacs	190	37.6	187	38.1	<u>189</u>	<u>37.9</u>	190	37.6	187	38.1	<u>189</u>	<u>37.9</u>
436.cactusADM	31.4	380	31.8	375	<u>31.6</u>	<u>378</u>	31.4	380	31.8	375	<u>31.6</u>	<u>378</u>
437.leslie3d	64.6	145	<u>57.2</u>	<u>164</u>	54.4	173	64.6	145	<u>57.2</u>	<u>164</u>	54.4	173
444.namd	<u>336</u>	<u>23.8</u>	336	23.8	336	23.9	331	24.3	<u>331</u>	<u>24.2</u>	331	24.2
447.dealII	<u>213</u>	<u>53.6</u>	213	53.6	213	53.7	<u>213</u>	<u>53.6</u>	213	53.6	213	53.7
450.soplex	<u>211</u>	<u>39.5</u>	209	39.8	211	39.5	<u>211</u>	<u>39.5</u>	209	39.8	211	39.5
453.povray	121	44.0	<u>120</u>	<u>44.3</u>	120	44.4	101	52.5	101	52.6	<u>101</u>	<u>52.6</u>
454.calculix	206	40.0	209	39.5	<u>209</u>	<u>39.5</u>	191	43.2	192	42.9	<u>192</u>	<u>42.9</u>
459.GemsFDTD	<u>82.2</u>	<u>129</u>	81.8	130	82.6	128	73.7	144	73.1	145	<u>73.5</u>	<u>144</u>
465.tonto	243	40.6	266	37.0	<u>266</u>	<u>37.0</u>	<u>221</u>	<u>44.6</u>	220	44.8	221	44.5
470.lbm	40.6	338	<u>40.8</u>	<u>337</u>	41.8	329	40.6	338	<u>40.8</u>	<u>337</u>	41.8	329
481.wrf	<u>142</u>	<u>78.5</u>	141	79.4	144	77.3	<u>142</u>	<u>78.5</u>	141	79.4	144	77.3
482.sphinx3	<u>262</u>	<u>74.3</u>	264	73.9	253	77.0	<u>250</u>	<u>77.9</u>	254	76.8	<u>252</u>	<u>77.4</u>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Platform Notes

BIOS configuration:
Intel HT Technology = Disable



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General Notes

Environment variables set by runspec before the start of the run:

```
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64"
OMP_NUM_THREADS = "8"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

This result was measured on the PRIMERGY CX250 S1. The PRIMERGY CX250 S1 and the PRIMERGY CX270 S1 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.com>

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
```



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Base Optimization Flags

C benchmarks:

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

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: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias`

470.lbm: `basepeak = yes`

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

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Peak Optimization Flags (Continued)

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

447.dealII: 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

Fortran benchmarks:

410.bwaves: basepeak = yes

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

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

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

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-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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

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