



SPEC® CFP2006 Result

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Fujitsu

PRIMERGY TX300 S6, Intel Xeon X5650, 2.66 GHz

SPECfp®_rate2006 = 240

SPECfp_rate_base2006 = 232

CPU2006 license: 19

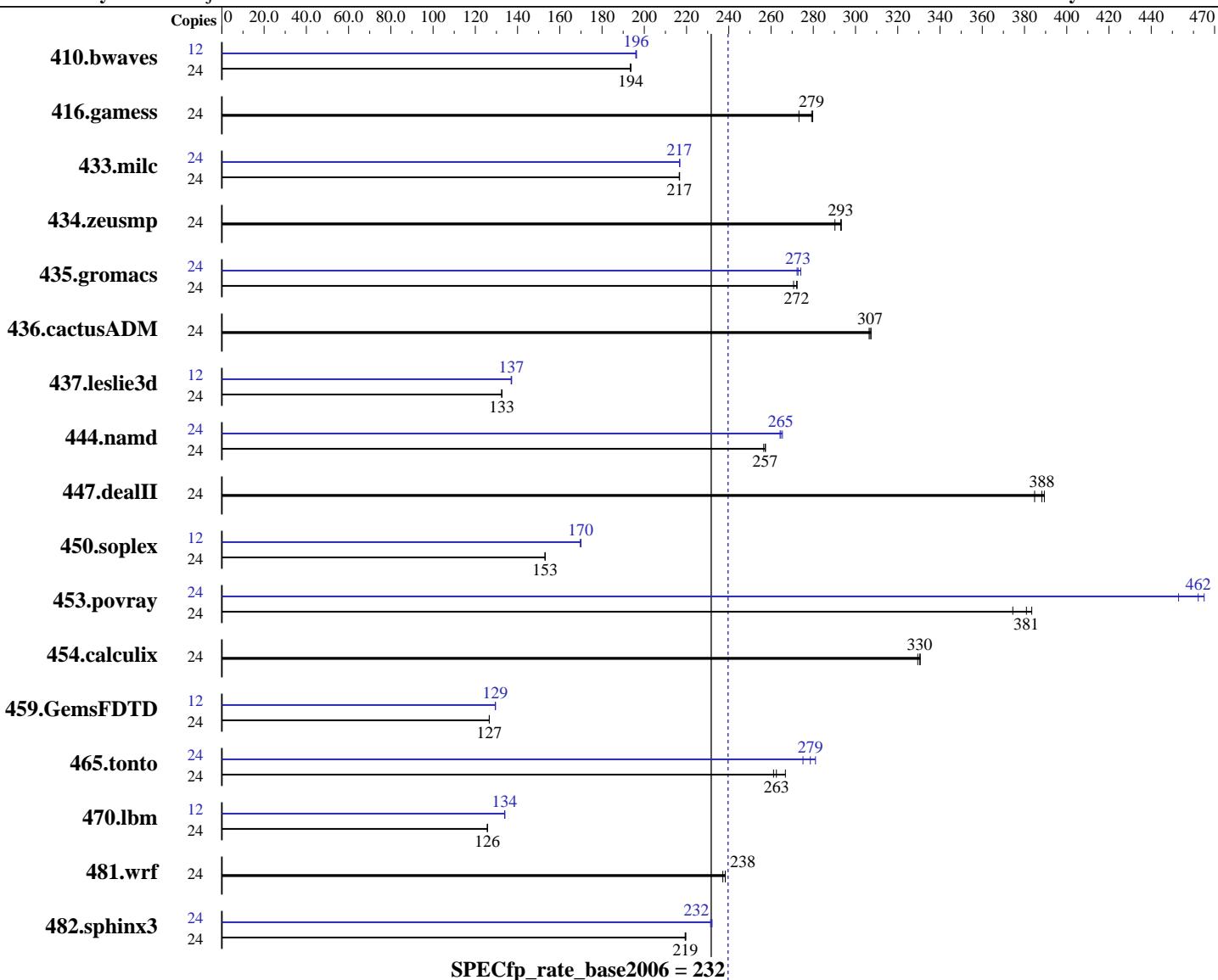
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2010

Hardware Availability: Apr-2010

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon X5650
CPU Characteristics: Intel Turbo Boost Technology up to 3.06 GHz
CPU MHz: 2667
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

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
Auto Parallel: No
File System: ext3
System State: Multi-User Run Level 3

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L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 96 GB (12x8 GB PC3-10600R, 2 rank, CL9-9-9, ECC)
 Disk Subsystem: 1 x SATA, 160 GB, 5.4 krpm
 Other Hardware: None

Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	1684	194	1685	194	1687	193	12	831	196	831	196	832	196
416.gamess	24	1683	279	1720	273	1680	280	24	1683	279	1720	273	1680	280
433.milc	24	1017	217	1017	217	1017	217	24	1017	217	1016	217	1017	217
434.zeusmp	24	745	293	752	290	745	293	24	745	293	752	290	745	293
435.gromacs	24	629	272	633	271	630	272	24	628	273	629	272	625	274
436.cactusADM	24	933	307	936	306	935	307	24	933	307	936	306	935	307
437.leslie3d	24	1701	133	1702	133	1703	132	12	823	137	824	137	822	137
444.namd	24	748	257	748	257	750	257	24	728	264	727	265	725	265
447.dealII	24	705	389	714	385	707	388	24	705	389	714	385	707	388
450.soplex	24	1308	153	1308	153	1308	153	12	590	170	589	170	588	170
453.povray	24	335	381	333	383	341	374	24	276	462	275	465	282	453
454.calculix	24	599	331	601	329	599	330	24	599	331	601	329	599	330
459.GemsFDTD	24	2011	127	2011	127	2011	127	12	983	130	983	129	983	129
465.tonto	24	900	263	885	267	904	261	24	858	275	840	281	848	279
470.lbm	24	2621	126	2622	126	2625	126	12	1230	134	1232	134	1232	134
481.wrf	24	1125	238	1125	238	1130	237	24	1125	238	1125	238	1130	237
482.sphinx3	24	2129	220	2132	219	2132	219	24	2015	232	2022	231	2019	232

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

Platform Notes

BIOS configuration:
 Data Reuse Optimization = Disabled



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General Notes

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

Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

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

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Base Optimization Flags (Continued)

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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

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.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
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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
           -fno-alias -opt-prefetch
```

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

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

C++ benchmarks:

```
444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -static(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) -static(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) -static(pass 2) -prof-use(pass 2)
           -unroll14 -ansi-alias
```

Fortran benchmarks:

```
410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
```

```
416.gamess: basepeak = yes
```

```
434.zeusmp: basepeak = yes
```

```
437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static
```

```
459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -unroll12 -Ob0
```

```
465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
           -unroll14 -auto -inline-calloc -opt-malloc-options=3
```

Benchmarks using both Fortran and C:

```
435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -opt-prefetch -auto-ilp32
```

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Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic11.1-linux64-revE.20100330.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.01.xml>

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

Tested with SPEC CPU2006 v1.1.

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