



SPEC[®] CFP2006 Result

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Fujitsu

PRIMERGY TX140 S1p, Intel Xeon E3-1270 v2, 3.50 GHz

SPECfp[®]2006 = **71.7**

SPECfp_base2006 = **69.8**

CPU2006 license: 19

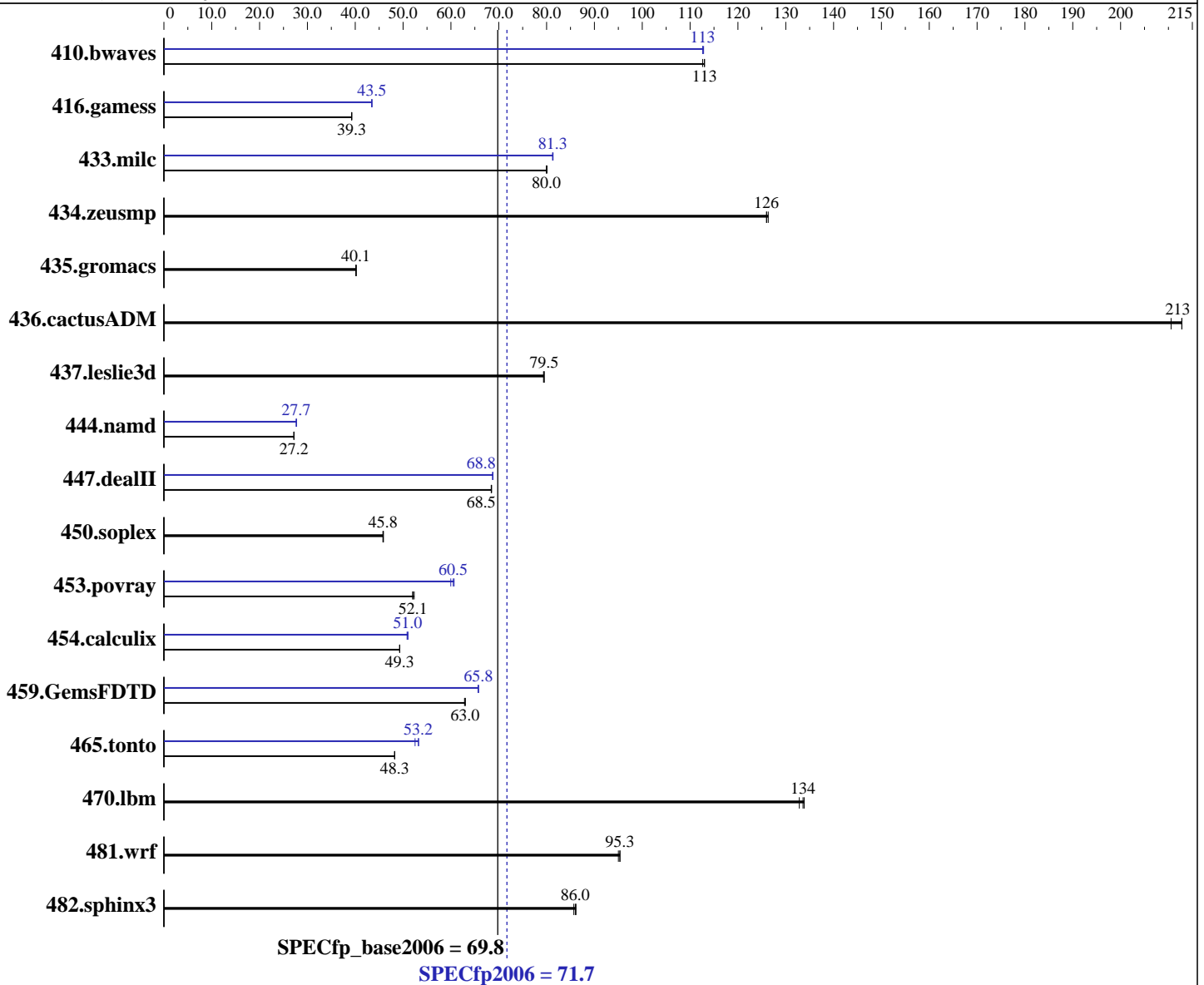
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2012

Hardware Availability: May-2012

Software Availability: Feb-2012



Hardware

CPU Name: Intel Xeon E3-1270 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.9 GHz
 CPU MHz: 3500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 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

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.293 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.293 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

Continued on next page



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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (2 x 8 GB 2Rx8 PC3-12800E-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	<u>120</u>	<u>113</u>	121	113	120	113	120	113	121	113	<u>121</u>	<u>113</u>
416.gamess	498	39.3	<u>499</u>	<u>39.3</u>	499	39.2	<u>450</u>	<u>43.5</u>	450	43.5	451	43.4
433.milc	115	80.0	115	80.1	<u>115</u>	<u>80.0</u>	<u>113</u>	<u>81.3</u>	113	81.2	113	81.4
434.zeusmp	72.0	126	<u>72.2</u>	<u>126</u>	72.2	126	72.0	126	<u>72.2</u>	<u>126</u>	72.2	126
435.gromacs	178	40.1	<u>178</u>	<u>40.1</u>	178	40.2	178	40.1	<u>178</u>	<u>40.1</u>	178	40.2
436.cactusADM	56.8	211	56.2	213	<u>56.2</u>	<u>213</u>	56.8	211	56.2	213	<u>56.2</u>	<u>213</u>
437.leslie3d	<u>118</u>	<u>79.5</u>	118	79.5	118	79.4	<u>118</u>	<u>79.5</u>	118	79.5	118	79.4
444.namd	295	27.2	295	27.2	<u>295</u>	<u>27.2</u>	290	27.7	290	27.7	<u>290</u>	<u>27.7</u>
447.dealII	167	68.4	167	68.5	<u>167</u>	<u>68.5</u>	<u>166</u>	<u>68.8</u>	166	68.8	166	68.7
450.soplex	<u>182</u>	<u>45.8</u>	182	45.9	182	45.8	<u>182</u>	<u>45.8</u>	182	45.9	182	45.8
453.povray	102	52.0	102	52.3	<u>102</u>	<u>52.1</u>	87.7	60.7	<u>88.0</u>	<u>60.5</u>	88.7	60.0
454.calculix	<u>167</u>	<u>49.3</u>	167	49.3	167	49.3	162	51.0	162	50.8	<u>162</u>	<u>51.0</u>
459.GemsFDTD	168	63.0	<u>168</u>	<u>63.0</u>	169	62.8	161	65.8	162	65.7	<u>161</u>	<u>65.8</u>
465.tonto	204	48.3	204	48.2	<u>204</u>	<u>48.3</u>	<u>185</u>	<u>53.2</u>	187	52.5	185	53.2
470.lbm	103	134	103	133	<u>103</u>	<u>134</u>	103	134	103	133	<u>103</u>	<u>134</u>
481.wrf	<u>117</u>	<u>95.3</u>	117	95.3	118	95.0	<u>117</u>	<u>95.3</u>	117	95.3	118	95.0
482.sphinx3	226	86.2	227	85.7	<u>227</u>	<u>86.0</u>	226	86.2	227	85.7	<u>227</u>	<u>86.0</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"

Platform Notes

BIOS configuration:
Intel HT Technology = Disable

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 = "4"

Continued on next page



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General Notes (Continued)

Binaries compiled on a system with 1x E3-1270V2 CPU + 32 GB memory using RHEL6.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
This result was measured on the PRIMERGY TX140 S1p. The PRIMERGY tx140 S1p and the PRIMERGY TX120 S3p 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: basepeak = yes

Continued on next page



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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.dealIII: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
-ansi-alias
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: -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: -xSSE4.2(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.20120320.html>



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

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<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml>

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