



SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

SPECfp®_rate2006 = 122

ASUS RS100-E7(P8B-M) Server System
(Intel Xeon E3-1280, 3.50 GHz)

SPECfp_rate_base2006 = 118

CPU2006 license: 9016

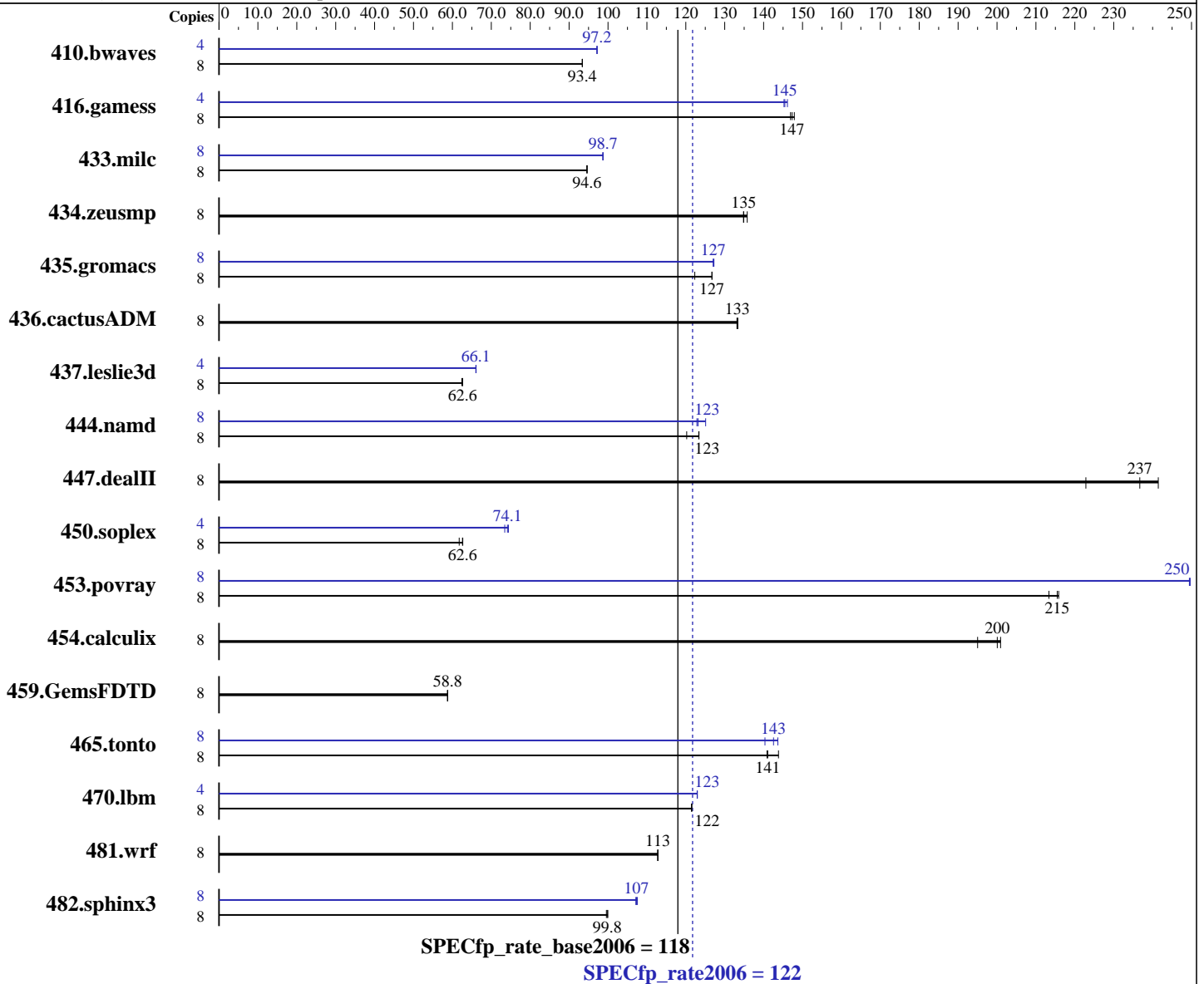
Test date: Jun-2011

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Apr-2011

Tested by: ASUSTeK Computer Inc.

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon E3-1280
 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, 2 threads/core
 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 SP1 (x86_64),
Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ Intel 64 Compiler XE for applications running on Intel 64
Version 12.0.1.116 Build 20101116
 Auto Parallel: No
 File System: ReiserFS
 System State: Run level 3 (multi-user)

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3L-10600E-9, ECC)
Disk Subsystem: Seagate ST3500320AS 1 x 500 GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 64-bit
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	8	1164	93.4	<u>1164</u>	<u>93.4</u>	1164	93.4	4	559	97.2	<u>559</u>	<u>97.2</u>	559	97.2
416.gamess	8	<u>1063</u>	<u>147</u>	1066	147	1059	148	4	<u>538</u>	<u>145</u>	536	146	539	145
433.milc	8	<u>776</u>	<u>94.6</u>	776	94.6	777	94.6	8	744	98.7	744	98.7	<u>744</u>	<u>98.7</u>
434.zeusmp	8	<u>540</u>	<u>135</u>	540	135	536	136	8	<u>540</u>	<u>135</u>	540	135	536	136
435.gromacs	8	451	127	467	122	<u>451</u>	<u>127</u>	8	<u>450</u>	<u>127</u>	449	127	450	127
436.cactusADM	8	718	133	<u>717</u>	<u>133</u>	717	133	8	718	133	<u>717</u>	<u>133</u>	717	133
437.leslie3d	8	<u>1201</u>	<u>62.6</u>	1201	62.6	1205	62.4	4	<u>569</u>	<u>66.1</u>	569	66.1	569	66.0
444.namd	8	<u>520</u>	<u>123</u>	520	123	534	120	8	522	123	513	125	<u>521</u>	<u>123</u>
447.dealII	8	379	241	<u>387</u>	<u>237</u>	411	223	8	379	241	<u>387</u>	<u>237</u>	411	223
450.soplex	8	1081	61.7	<u>1066</u>	<u>62.6</u>	1065	62.7	4	448	74.4	<u>450</u>	<u>74.1</u>	454	73.5
453.povray	8	199	213	<u>198</u>	<u>215</u>	197	216	8	<u>171</u>	<u>250</u>	170	250	171	249
454.calculix	8	<u>330</u>	<u>200</u>	328	201	338	195	8	<u>330</u>	<u>200</u>	328	201	338	195
459.GemsFDTD	8	1445	58.7	1444	58.8	<u>1444</u>	<u>58.8</u>	8	1445	58.7	1444	58.8	<u>1444</u>	<u>58.8</u>
465.tonto	8	<u>558</u>	<u>141</u>	559	141	547	144	8	<u>552</u>	<u>143</u>	548	144	561	140
470.lbm	8	905	122	<u>905</u>	<u>122</u>	905	121	4	<u>447</u>	<u>123</u>	447	123	447	123
481.wrf	8	792	113	<u>792</u>	<u>113</u>	792	113	8	792	113	<u>792</u>	<u>113</u>	792	113
482.sphinx3	8	1566	99.6	<u>1562</u>	<u>99.8</u>	1560	100	8	<u>1453</u>	<u>107</u>	1455	107	1450	108

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.
taskset 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
Hugepages was not enabled

General Notes

Binaries compiled on RHEL5.5 with
binutils-2.17.50.0.6-14.el5



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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.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:

-xAVX -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -ansi-alias

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -ansi-alias



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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

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

470.lbm: -xAVX(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

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Peak Optimization Flags (Continued)

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

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.deallI: basepeak = yes

450.soplex: -xAVX(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
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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

459.GemsFDTD: basepeak = yes

465.tonto: -xAVX(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
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

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

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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Peak Optimization Flags (Continued)

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.html>

<http://www.spec.org/cpu2006/flags/ASUSTekPlatform.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.xml>

<http://www.spec.org/cpu2006/flags/ASUSTekPlatform.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 21:26:33 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 July 2011.