



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp®2006 = **78.5**

SPECfp_base2006 = **77.0**

CPU2006 license: 11

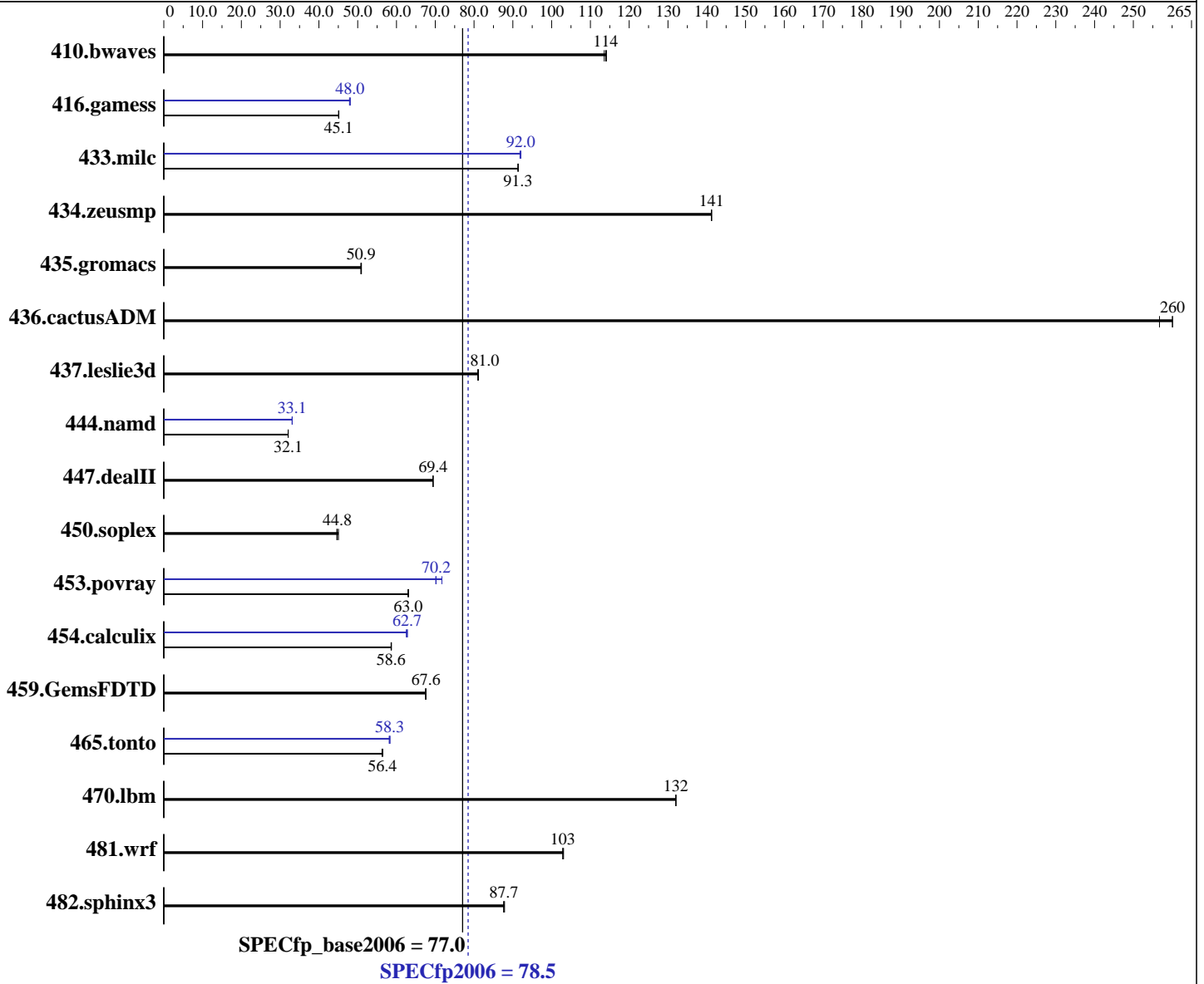
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jun-2014

Hardware Availability: Jul-2014

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E3-1281 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 4.10 GHz
 CPU MHz: 3700
 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

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
 Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp2006 = **78.5**

SPECfp_base2006 = **77.0**

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Sep-2013

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (4 x 4 GB 2Rx8 PC3-12800E-11, ECC)
Disk Subsystem: 1 x 250 GB SATA, 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	120	114	119	114	<u>119</u>	<u>114</u>	120	114	119	114	<u>119</u>	<u>114</u>
416.gamess	<u>434</u>	<u>45.1</u>	434	45.1	435	45.1	<u>408</u>	<u>48.0</u>	407	48.1	409	47.9
433.milc	101	91.3	<u>101</u>	<u>91.3</u>	100	91.4	99.7	92.1	<u>99.8</u>	<u>92.0</u>	100	91.8
434.zeusmp	<u>64.4</u>	<u>141</u>	64.4	141	64.4	141	<u>64.4</u>	<u>141</u>	64.4	141	64.4	141
435.gromacs	140	51.0	<u>140</u>	<u>50.9</u>	141	50.8	140	51.0	<u>140</u>	<u>50.9</u>	141	50.8
436.cactusADM	45.9	260	46.5	257	<u>45.9</u>	<u>260</u>	45.9	260	46.5	257	<u>45.9</u>	<u>260</u>
437.leslie3d	<u>116</u>	<u>81.0</u>	116	81.1	116	81.0	<u>116</u>	<u>81.0</u>	116	81.1	116	81.0
444.namd	<u>250</u>	<u>32.1</u>	250	32.1	250	32.1	242	33.1	<u>242</u>	<u>33.1</u>	242	33.1
447.dealII	165	69.5	165	69.4	<u>165</u>	<u>69.4</u>	165	69.5	165	69.4	<u>165</u>	<u>69.4</u>
450.soplex	185	45.0	<u>186</u>	<u>44.8</u>	187	44.6	185	45.0	<u>186</u>	<u>44.8</u>	187	44.6
453.povray	<u>84.4</u>	<u>63.0</u>	84.3	63.1	84.5	63.0	74.2	71.7	75.9	70.1	<u>75.8</u>	<u>70.2</u>
454.calculix	141	58.7	141	58.6	<u>141</u>	<u>58.6</u>	132	62.5	131	62.8	<u>131</u>	<u>62.7</u>
459.GemsFDTD	157	67.5	157	67.6	<u>157</u>	<u>67.6</u>	157	67.5	157	67.6	<u>157</u>	<u>67.6</u>
465.tonto	174	56.5	<u>175</u>	<u>56.4</u>	175	56.3	169	58.3	<u>169</u>	<u>58.3</u>	169	58.1
470.lbm	104	132	104	132	<u>104</u>	<u>132</u>	104	132	104	132	<u>104</u>	<u>132</u>
481.wrf	<u>109</u>	<u>103</u>	109	103	108	103	<u>109</u>	<u>103</u>	109	103	108	103
482.sphinx3	<u>222</u>	<u>87.7</u>	222	87.6	222	87.9	<u>222</u>	<u>87.7</u>	222	87.6	222	87.9

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 setting:
Operating Mode set to Maximum Performance
Sysinfo program /root/SPECCpu2014jan16/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Mon Jun 23 19:17:54 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp2006 = **78.5**

SPECfp_base2006 = **77.0**

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Sep-2013

Platform Notes (Continued)

```

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) CPU E3-1281 v3 @ 3.70GHz
    1 "physical id"s (chips)
    8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
  cpu cores : 4
  siblings  : 8
  physical 0: cores 0 1 2 3
  cache size : 8192 KB

From /proc/meminfo
MemTotal:      16298904 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41
EST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 23 14:44

SPEC is set to: /root/SPECCpu2014jan16
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root
                ext4      221G   32G  179G  15% /

Additional information from dmidecode:
BIOS IBM  -[JUE113JUS-1.03]- 06/17/2014
Memory:
  4x Micron 18KSF51272AZ-1G6K1 4 GB 1600 MHz 2 rank

(End of data from sysinfo program)

```

General Notes

Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,compact,1,0"
 LD_LIBRARY_PATH = "/root/SPECCpu2014jan16/libs/32:/root/SPECCpu2014jan16/libs/64:/root/SPECCpu2014jan16/sh"
 OMP_NUM_THREADS = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp2006 = 78.5

SPECfp_base2006 = 77.0

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Sep-2013

General Notes (Continued)

memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp2006 = 78.5

SPECfp_base2006 = 77.0

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Sep-2013

Base Optimization Flags (Continued)

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32 -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xCORE-AVX2(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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp2006 = 78.5

SPECfp_base2006 = 77.0

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jun-2014

Hardware Availability: Jul-2014

Software Availability: Sep-2013

Peak Optimization Flags (Continued)

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(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: -xCORE-AVX2(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-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(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: -xCORE-AVX2 -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-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/IBM-Platform-Flags-V1.2-HSW-A.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/IBM-Platform-Flags-V1.2-HSW-A.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3250 M5
(Intel Xeon E3-1281 v3, 3.70 GHz)

SPECfp2006 = 78.5

SPECfp_base2006 = 77.0

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Sep-2013

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Report generated on Fri Jul 25 01:06:47 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 July 2014.