



SPEC® CFP2006 Result

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Huawei
Huawei CH242 v3

SPECfp®_rate2006 = **NC**
SPECfp_rate_base2006 = **NC**

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Apr-2014
Hardware Availability: Feb-2014
Software Availability: Nov-2013

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Huawei or Intel.

	Copies
410.bwaves	
416.gamess	
433.milc	
434.zeusmp	
435.gromacs	
436.cactusADM	
437.leslie3d	
444.namd	
447.dealII	
450.soplex	
453.povray	
454.calculix	
459.G	
465.tonto	
470.lbm	
481.wrf	
482.sphinx3	

Non-Compliant



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Hardware		Software	
CPU Name:	Intel Xeon E7-4809 v2	Operating System:	Red Hat Enterprise Linux Server release 6.5 (Santiago)
CPU Characteristics:		Kernel:	2.6.32-431.el6.x86_64
CPU MHz:	1900	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
FPU:	Integrated	Auto Parallel:	No
CPU(s) enabled:	24 cores, 4 chips, 6 cores/chip, 2 threads/core	File System:	ext4
CPU(s) orderable:	2,4 chip	System State:	Run level 3 (multi-user)
Primary Cache:	32 KB I + 32 KB D on chip per core	Base Pointers:	32/64-bit
Secondary Cache:	256 KB I+D on chip per core	Peak Pointers:	32/64-bit
L3 Cache:	12 MB I+D on chip per chip	Other Software:	None
Other Cache:	None		
Memory:	256 GB (32 x 8 GB 2Rx4 PC3-10600R-09, ECC)		
Disk Subsystem:	1 X 300 GB SATA 7200RPM		
Other Hardware:	None		

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
416.gamess	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
433.milc	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
434.zeusmp	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
435.gromacs	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
436.cactusADM	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
437.leslie3d	48	NC	NC	NC	NC	NC	NC	24	NC	NC	NC	NC	NC	NC
444.namd	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
447.dealII	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
450.soplex	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
453.povray	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
454.calculix	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
459.GemsFDTD	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
465.tonto	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
470.lbm	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
481.wrf	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC
482.sphinx3	48	NC	NC	NC	NC	NC	NC	48	NC	NC	NC	NC	NC	NC

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"



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Platform Notes

BIOS configuration:
Set VMSE LockStep mode disable
Sysinfo program /spec/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 # \$ e86d102572c0a6e4d596a3cee98f191
running on localhost.localdomain Thu Apr 10 02:19:50 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>

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E7-4809 v2 @ 1.90GHz
4 "physical id"s (chips)
48 "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 : 6
siblings : 12
physical 0: cores 0 1 2 3 4 5
physical 1: cores 0 1 2 3 4 5
physical 2: cores 0 1 2 3 4 5
physical 3: cores 0 1 2 3 4 5
cache size : 12288 KB

From /proc/meminfo
MemTotal: 264358272 kB
HugePages_Total: 0
HugePages_Size: 2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64 x86_64 x86_64 GNU/Linux

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Platform Notes (Continued)

run-level 3 Apr 22 15:37

SPEC is set to: /spec

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	265G	52G	200G	20%	/

Additional information from umidecode

BIOS American Megatrends Inc. BLISV033 12/27/2014

Memory:

32x 8 GB

8x Samsung M393B1K70CH0 8 GB 1333 MHz 2 rank

24x Samsung M393B1K70DH0 8 GB 1333 MHz 2 rank

(End of data from sysinfo program)

General Notes

Environment variables set at runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4

Transparent Huge Pages enabled with:

echo always /sys/kernel/mm/redhat_transparent_hugepage/enabled

Filesystem page cache cleared with:

echo 1 > /proc/sys/vm/drop_caches

and invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

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Base Compiler Invocation (Continued)

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:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3

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Base Optimization Flags (Continued)

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3

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

Peak 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) -opt-mem-layout-trans=3(pass 2)
-prof-use(pass 2) -auto-ilp32

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Peak Optimization Flags (Continued)

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)
-prof-use(pass 2) -fno-alias -auto-ilp32

447.dealIII: 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) -opt-mem-layout-trans=3(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-

434.zeusmp: basepeak = yes

457.mesned: -xAVX -ipo -O3 -no-prec-div -opt-prefetch

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-alloc -opt-malloc-options=3

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) -opt-mem-layout-trans=3(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: -xAVX -ipo -O3 -fcommon -fno-prec-div -auto-ilp32

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-icl14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.html>

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

<http://www.spec.org/cpu2006/flags/Intel-icl14.0-official-linux64.20140128.xml>
<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.xml>

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

Tested with SPEC CPU2006 v1.2.
Report generated on Fri Sep 19 16:00:49 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 June 2014.