



SPEC® CFP2006 Result

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Huawei

SPECfp®_rate2006 = Not Run

Huawei 2488H V5 (Intel Xeon Platinum 8180)

SPECfp_rate_base2006 = NC

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jun-2017

Hardware Availability: Sep-2017

Software Availability: Apr-2017

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the system was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

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



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Hardware

CPU Name: Intel Xeon Platinum 8180
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 112 cores, 4 chips, 28 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core
 L3 Cache: 38.5 MB I+D on chip per chip
 Other Cache: None
 Memory: 768 GB (24 x 32 GB 288x4 PC4-2666V-R)
 Disk Subsystem: 2 x 900 GB SAS, 10K RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12 SP2
 4.4.21-69-default
 Compiler: C/C++: Version 17.0.3.191 of Intel C/C++
 Compiler for Linux;
 Fortran: Version 17.0.3.191 of Intel Fortran
 Compiler for Linux
 Auto Parallel: No
 File System: tmpfs
 System State: Run level 5 (multi user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: None

Non-Compliant



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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	224	NC	NC	NC	NC	NC	NC							
416.gamess	224	NC	NC	NC	NC	NC	NC							
433.milc	224	NC	NC	NC	NC	NC	NC							
434.zeusmp	224	NC	NC	NC	NC	NC	NC							
435.gromacs	224	NC	NC	NC	NC	NC	NC							
436.cactusADM	224	NC	NC	NC	NC	NC	NC							
437.leslie3d	224	NC	NC	NC	NC	NC	NC							
444.namd	224	NC	NC	NC	NC	NC	NC							
447.dealII	224	NC	NC	NC	NC	NC	NC							
450.soplex	224	NC	NC	NC	NC	NC	NC							
453.povray	224	NC	NC	NC	NC	NC	NC							
454.calculix	224	NC	NC	NC	NC	NC	NC							
459.GemsFDTD	224	NC	NC	NC	NC	NC	NC							
465.tonto	224	NC	NC	NC	NC	NC	NC							
470.lbm	224	NC	NC	NC	NC	NC	NC							
481.wrf	224	NC	NC	NC	NC	NC	NC							
482.sphinx3	224	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. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Kernel Boot Parameter set with:
vi /boot/grub2/grub.cfg

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Operating System Notes (Continued)

```
add nohz_full=1-223 to the boot kernel parameter line
Turbo mode set with:
cpupower -c all frequency-set -g performance
Tmpfs filesystem can be set with :
mkdir /home/shm
mount -t tmpfs -o size=400g,rw tmpfs /home/shm
```

Platform Notes

```
BIOS configuration:
Set SNC to enabled
Set IMC interleaving to 1 way interleave
Set Memory Patrol Scrub to disabled
cooling Configuration set fan speed to 100%
Sysinfo program /home/shm/cfp2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-04 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-5b Fri Jun 23 21:35:12 2017
```

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) Platinum 8180 CPU @ 2.50GHz
  "physical id"s (chips)
  22 "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 : 28
    siblings  : 56
    physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
    25 26 27 28 29 30
    physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
    25 26 27 28 29 30
    physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
    25 26 27 28 29 30
    physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
    25 26 27 28 29 30
    cache size : 39424 KB
```

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Platform Notes (Continued)

```

From /proc/meminfo
MemTotal:      790852276 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

/usr/bin/lsb_release -d
    SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
SuSE-release:
    SUSE Linux Enterprise Server 12 (x86_64)
    VERSION = 12
    PATCHLEVEL = 2
    # This file is deprecated and will be removed in a future service pack or
    # release.
    # Please check /etc/os-release for details about this release.
os-release:
    NAME="SLES"
    VERSION="12 SP2"
    VERSION_ID="12 SP2"
    PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
    ID="sles"
    ANSI_COLOR="0;32"
    CPE_NAME="/o:suse:sles:12:sp2"

uname -a:
    Linux linux-5bjr 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
    x86_64 x86_64 x86_64 GNU/Linux

run level 5 Jun 23 10:24

SPEC is set to: /home/shm/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
tmpfs           tmpfs    400G   8.8G  392G   3% /home/shm
Additional information from dmidecode:

```

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

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Platform Notes (Continued)

BIOS INSYDE Corp. 0.09 03/29/2017

Memory:

8x NO DIMM NO DIMM

24x Samsung M393A4K40BB2-CTD 32 GB 2 Rank 2666 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:

LD_LIBRARY_PATH = "/home/shm/cpu2006/lib/ia32:/home/shm/cpu2006/lib/intel64:/home/shm/cpu2006/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2

Transparent Huge Pages enabled by default

Filesystem page cache cleared with:

shell invocation of 'sysctl -w vm.drop_caches=3' prior to run

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:

icc -m64

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64



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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.deall: -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 -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

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

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

```



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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-evF.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-SKL-V1.6.html>

You can also download the XML flags source files using the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-evF.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-SKL-V1.6.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 v1.2.
Report generated on Tue Jan 9 17:28:20 2018 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 July 2017.