



# SPEC® CFP2006 Result

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Huawei

Huawei 2488H V5 (Intel Xeon Platinum 8180)

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

SPECfp®2006 =

Not Run

SPECfp\_base2006 = NC

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.

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.roms |

465.tonto |

470.lbm |

481.wrf |

482.sphinx3 |



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<b>Hardware</b>		<b>Software</b>	
CPU Name:	Intel Xeon Platinum 8180	Operating System:	SUSE Linux Enterprise Server 12 SP2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.80 GHz	4.4.21-69-default	
CPU MHz:	2500	Compiler:	C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
FPU:	Integrated	Autosarallel:	Yes
CPU(s) enabled:	112 cores, 4 chips, 28 cores/chip	File System:	xfs
CPU(s) orderable:	2,4 chip	System State:	Run level 5 (multi-user)
Primary Cache:	32 KB I + 32 KB D on chip per core	Base Pointers:	64-bit
Secondary Cache:	1 MB I+D on chip per core	Peak Pointers:	32/64-bit
L3 Cache:	38.5 MB I+D on chip per chip	Other Software:	None
Other Cache:	None		
Memory:	768 GB (24 x 32 GB 2Rx4 PC4-2666V-R)		
Disk Subsystem:	2 x 900 GB SAS, 10K RPM		
Other Hardware:	None		



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**Results Table**

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

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.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"  
Turbo mode set with:  
cpupower -c all frequency-set -g performance



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## Platform Notes

BIOS configuration:

```
Set Intel Hyper Threading Technology to disabled
Set Memory Patrol Scrub to disabled
cooling Configuration set fan speed to 100%
Sysinfo program /home/cpu2006/config/sysinfo.revision993
Revision 6993 of 2015-11-06 (b5e8d4b7eb51ed3d7f98696cbe290c1)
running on linux-5bjr Mon Jun 19 17:03 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
        4 "physical id"s (chips)
        112 "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 : 3
    siblings : 28
    physical cores : 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
```

```
From /proc/meminfo
MemTotal:      790869156 kB
HugePages_Total:       8196
Hugepagesize:        2048 kB
```

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

```
From /etc/*release* /etc/*version*
SuSE-release:
```

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## Platform Notes (Continued)

```
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="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/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
(9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Jun 25 17:19

SPEC is set to /home/spec2006
Filesystems      Type  Size  Used Avail Use% Mounted on
/dev/sda1        xfs   1.6T  22G  1.6T   2% /home
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
represented" but the intent may not be met, as there are frequent changes to
hardware, firmware, and the "DMTF SMBIOS" standard.

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)
```



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## General Notes

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

KMP\_AFFINITY = "granularity=fine,compact"

LD\_LIBRARY\_PATH = "/home/cpu2006/lib/ia32:/home/cpu2006/lib/intel64:/home/cpu2006/sh10.2"

OMP\_NUM\_THREADS = "28"

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 'sync; echo 3 > /proc/sys/vm/drop\_caches' prior to run

## Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

ifort -m64 icc -m64

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_LP64  
411.gamess: -DSPEC\_CPU\_LP64  
431.milc: -DSPEC\_CPU\_LP64  
434.zfusmp: -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

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## Base Portability Flags (Continued)

```
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_C_PI_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64
```

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
```

Benchmarks using both Fortran and C:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
```

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.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](mailto:webmaster@spec.org).

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