



# SPEC® CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

Synergy 480 Gen10  
(3.40 GHz, Intel Xeon Gold 6128)

**SPECint®2006 = Not Run**

**SPECint\_base2006 = 71.9**

**CPU2006 license:** 3

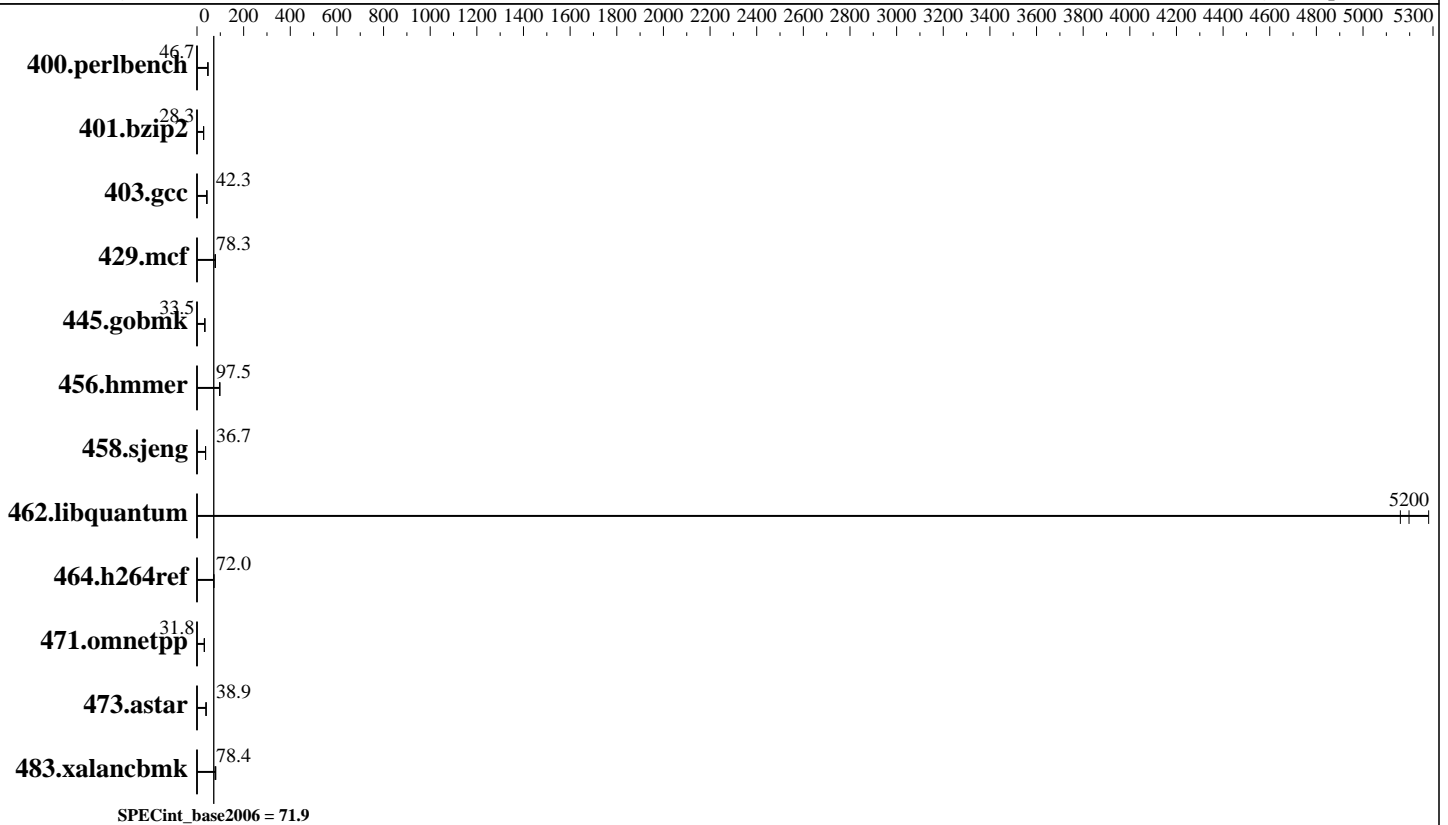
**Test sponsor:** HPE

**Tested by:** HPE

**Test date:** Dec-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Apr-2017



### Hardware

CPU Name: Intel Xeon Gold 6128  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip  
 CPU(s) orderable: 1, 2 chip(s)  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: 19.25 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)  
 Disk Subsystem: 1 x 960 GB SATA SSD, RAID 0  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 12 (x86\_64) SP2  
 Kernel 4.4.21-69-default  
 Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux  
 Auto Parallel: Yes  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: Not Applicable  
 Other Software: Microquill SmartHeap V10.2



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

Synergy 480 Gen10

(3.40 GHz, Intel Xeon Gold 6128)

SPECint2006 =

Not Run

SPECint\_base2006 =

71.9

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Oct-2017

Software Availability: Apr-2017

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	208	46.9	210	46.6	<u>209</u>	<u>46.7</u>						
401.bzip2	<u>341</u>	<u>28.3</u>	339	28.4	342	28.2						
403.gcc	<u>191</u>	<u>42.3</u>	190	42.3	191	42.1						
429.mcf	<u>116</u>	<u>78.3</u>	116	78.5	117	77.9						
445.gobmk	<u>313</u>	<u>33.5</u>	313	33.5	313	33.5						
456.hammer	95.4	97.8	<u>95.7</u>	<u>97.5</u>	95.9	97.3						
458.sjeng	329	36.8	<u>329</u>	<u>36.7</u>	330	36.7						
462.libquantum	<u>3.99</u>	<u>5200</u>	4.02	5160	3.92	5280						
464.h264ref	307	72.1	<u>307</u>	<u>72.0</u>	309	71.6						
471.omnetpp	196	31.9	201	31.1	<u>197</u>	<u>31.8</u>						
473.astar	180	39.0	181	38.9	<u>180</u>	<u>38.9</u>						
483.xalancbmk	85.5	80.7	<u>88.0</u>	<u>78.4</u>	88.6	77.8						

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"  
 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  
 irqbalance disabled with "systemctl stop irqbalance"  
 tuned profile set with "tuned-adm profile throughput-performance"

## Platform Notes

BIOS Configuration:  
 Intel Hyper-Threading set to Disabled  
 Thermal Configuration set to Maximum Cooling  
 LLC Prefetch set to Enabled  
 LLC Dead Line Allocation set to Disabled  
 Memory Patrol Scrubbing set to Disabled  
 Workload Profile set to General Peak Frequency Compute  
 Energy/Performance Bias set to Maximum Performance  
 Workload Profile set to Custom  
 NUMA Group Size Optimization set to Flat  
 Uncore Frequency Scaling set to Auto  
 Sysinfo program /home/cpu2006/config/sysinfo.rev6993  
 Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
 running on linux-vjvuj Fri Dec 15 15:25:45 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>

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

Synergy 480 Gen10  
(3.40 GHz, Intel Xeon Gold 6128)

**SPECint2006 =**

**Not Run**

**SPECint\_base2006 =**

**71.9**

**CPU2006 license:** 3

**Test sponsor:** HPE

**Tested by:** HPE

**Test date:** Dec-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Apr-2017

## Platform Notes (Continued)

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Gold 6128 CPU @ 3.40GHz
 2 "physical id"s (chips)
 12 "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  : 6
  physical 0: cores 0 6 9 10 11 13
  physical 1: cores 0 6 9 10 11 13
cache size : 19712 KB

From /proc/meminfo
MemTotal:      395932436 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="12.2"
    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-vjuj 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 3 Dec 15 11:59

```

SPEC is set to: /home/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda4       xfs   852G  72G  780G   9% /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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

Synergy 480 Gen10  
(3.40 GHz, Intel Xeon Gold 6128)

**SPECint2006 = Not Run**

**SPECint\_base2006 = 71.9**

**CPU2006 license:** 3

**Test sponsor:** HPE

**Tested by:** HPE

**Test date:** Dec-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Apr-2017

## Platform Notes (Continued)

determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS HPE I42 09/27/2017

Memory:

24x UNKNOWN NOT AVAILABLE 16 GB 2 rank 2666 MHz

(End of data from sysinfo program)

## 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 = "12"

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

No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

No: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

No: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

This benchmark result is intended to provide perspective on past performance using the historical hardware and/or software described on this result page.

The system as described on this result page was formerly generally available. At the time of this publication, it may not be shipping, and/or may not be supported, and/or may fail to meet other tests of General Availability described in the SPEC OSG Policy document, <http://www.spec.org/osg/policy.htm>.

This measured result may not be representative of the result that would be measured were this benchmark run with hardware and software available as of the publication date.

## Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

Synergy 480 Gen10  
(3.40 GHz, Intel Xeon Gold 6128)

**SPECint2006 = Not Run**

**SPECint\_base2006 = 71.9**

**CPU2006 license:** 3

**Test sponsor:** HPE

**Tested by:** HPE

**Test date:** Dec-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Apr-2017

## Base Portability Flags

```

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

```

## Base Optimization Flags

C benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-auto-p32

```

C++ benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64

```

## Base Other Flags

C benchmarks:

```

403.gcc: -Dalloca=_alloca

```

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/HPE-Platform-Flags-Intel-V1.2-SKX-revH.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/HPE-Platform-Flags-Intel-V1.2-SKX-revH.xml>



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

Synergy 480 Gen10  
(3.40 GHz, Intel Xeon Gold 6128)

**SPECint2006 = Not Run**

**SPECint\_base2006 = 71.9**

**CPU2006 license:** 3

**Test sponsor:** HPE

**Tested by:** HPE

**Test date:** Dec-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Apr-2017

SPEC and SPECint 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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jun 14 11:29:52 2018 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 13 June 2018.