



# SPEC® CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant DL360 Gen10  
(2.30 GHz, Intel Xeon Platinum 8165)

**SPECint®\_rate2006 = Not Run**

**SPECint\_rate\_base2006 = 2400**

**CPU2006 license:** 3

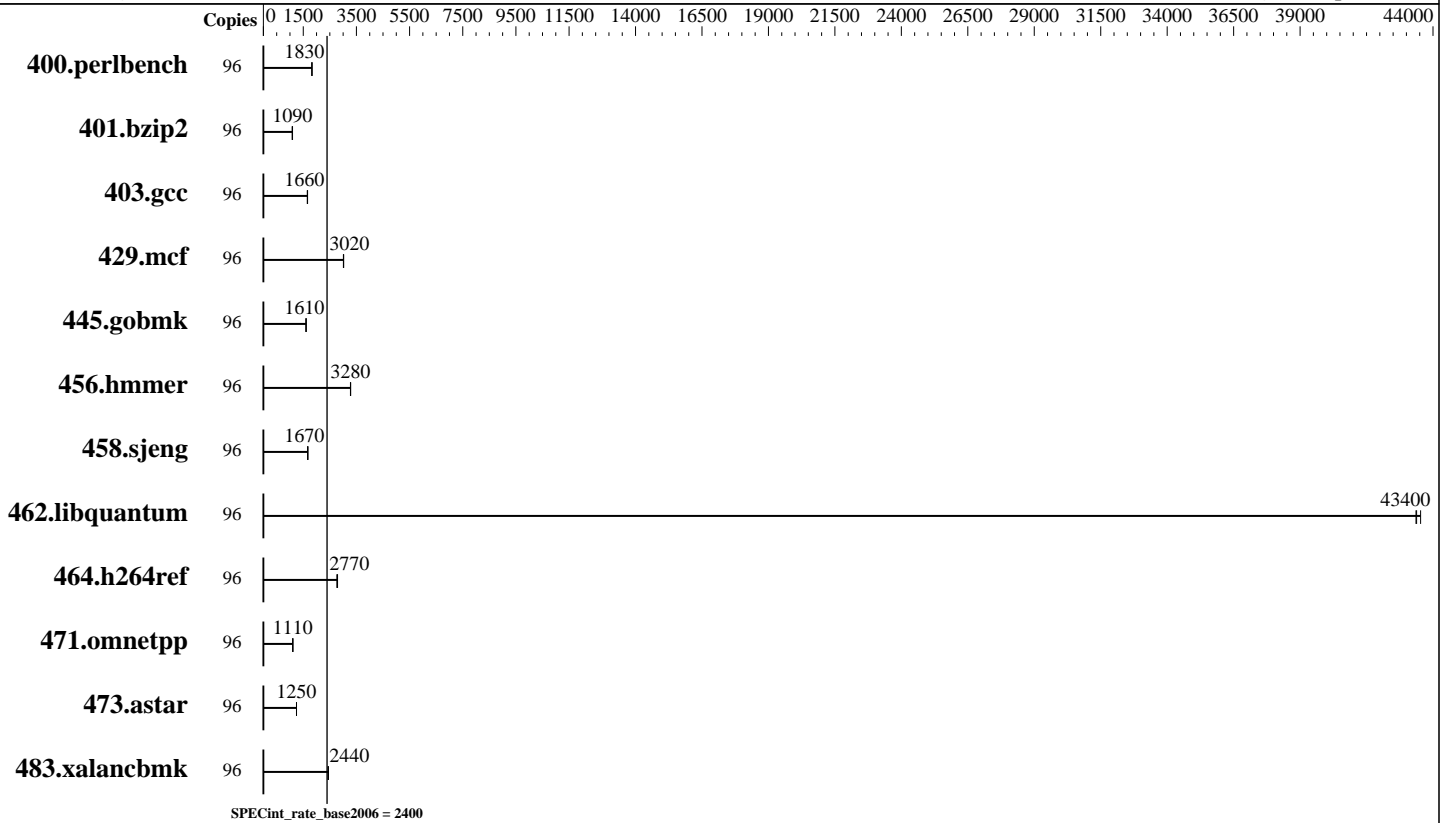
**Test sponsor:** HPE

**Tested by:** HPE

**Test date:** Dec-2017

**Hardware Availability:** Dec-2017

**Software Availability:** Sep-2017



## Hardware

CPU Name: Intel Xeon Platinum 8165  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 48 cores, 2 chips, 24 cores/chip, 2 threads/core  
 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: 33 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R)  
 Disk Subsystem: 1 x 400 GB SATA SSD, RAID 0  
 Other Hardware: None

## Software

Operating System: SUSE Linux Enterprise Server 12 (x86\_64) SP2  
 Kernel 4.4.21-68-default  
 Compiler: C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux  
 Auto Parallel: No  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-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)

ProLiant DL360 Gen10

(2.30 GHz, Intel Xeon Platinum 8165)

SPECint\_rate2006 = Not Run

SPECint\_rate\_base2006 = 2400

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Dec-2017

Software Availability: Sep-2017

## Results Table

Benchmark	Base								Peak					
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	96	514	1830	<b><u>514</u></b>	<b><u>1830</u></b>	513	1830							
401.bzip2	96	855	1080	<b><u>848</u></b>	<b><u>1090</u></b>	845	1100							
403.gcc	96	468	1650	<b><u>465</u></b>	<b><u>1660</u></b>	465	1660							
429.mcf	96	<b><u>290</u></b>	<b><u>3020</u></b>	291	3010	290	3020							
445.gobmk	96	<b><u>627</u></b>	<b><u>1610</u></b>	627	1610	627	1610							
456.hammer	96	273	3280	<b><u>273</u></b>	<b><u>3280</u></b>	273	3280							
458.sjeng	96	696	1670	<b><u>696</u></b>	<b><u>1670</u></b>	695	1670							
462.libquantum	96	<b><u>45.9</u></b>	<b><u>43400</u></b>	45.9	43400	45.7	43500							
464.h264ref	96	767	2770	761	2790	<b><u>766</u></b>	<b><u>2770</u></b>							
471.omnetpp	96	<b><u>542</u></b>	<b><u>1110</u></b>	542	1110	542	1110							
473.astar	96	541	1250	541	1250	<b><u>541</u></b>	<b><u>1250</u></b>							
483.xalancbmk	96	272	2440	<b><u>271</u></b>	<b><u>2440</u></b>	271	2450							

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"
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
runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>
irqbalance disabled with "service irqbalance stop"
tuned profile set with "tuned-adm profile throughput-performance"
VM Dirty ratio was set to 40 using "echo 40 > /proc/sys/vm/dirty_ratio"
Numa balancing was disabled using "echo 0 > /proc/sys/kernel/numa_balancing"
```

## Platform Notes

```
BIOS Configuration:
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 Throughput Compute
Minimum Processor Idle Power Core C-State set to C1E State
Sysinfo program /home/cpu2006/config/sysinfo.rev6993
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL360 Gen10  
(2.30 GHz, Intel Xeon Platinum 8165)

SPECint\_rate2006 = Not Run

SPECint\_rate\_base2006 = 2400

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Dec-2017

Software Availability: Sep-2017

## Platform Notes (Continued)

Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
running on linux-rugf Thu Nov 30 01:34:51 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 8165 CPU @ 2.30GHz
 2 "physical id"s (chips)
 96 "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 : 24
  siblings  : 48
  physical 0: cores 0 1 2 3 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28
 29
  physical 1: cores 0 1 2 3 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28
 29
cache size : 33792 KB
```

From /proc/meminfo

```
MemTotal:      197737672 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

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-rugf 4.4.21-68-default #1 SMP Tue Oct 18 18:19:37 UTC 2016
(63cf368) x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Nov 30 01:08

SPEC is set to: /home/cpu2006

```
Filesystem      Type  Size  Used Avail Use% Mounted on
Continued on next page
```



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL360 Gen10

(2.30 GHz, Intel Xeon Platinum 8165)

SPECint\_rate2006 = Not Run

SPECint\_rate\_base2006 = 2400

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Dec-2017

Software Availability: Sep-2017

## Platform Notes (Continued)

/dev/nvme0n1p4 xfs 331G 82G 249G 25% /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 determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS HPE U32 09/29/2017

Memory:

24x UNKNOWN NOT AVAILABLE 8 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/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh10.2"

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

## Base Compiler Invocation

C benchmarks:

icc -m32 -L/opt/intel/compilers\_and\_libraries\_2018.0.082/linux/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/compilers\_and\_libraries\_2018.0.082/linux/lib/ia32

## Base Portability Flags

400.perlbench: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -D\_FILE\_OFFSET\_BITS=64  
403.gcc: -D\_FILE\_OFFSET\_BITS=64  
429.mcf: -D\_FILE\_OFFSET\_BITS=64  
445.gobmk: -D\_FILE\_OFFSET\_BITS=64  
456.hmmer: -D\_FILE\_OFFSET\_BITS=64  
458.sjeng: -D\_FILE\_OFFSET\_BITS=64  
462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX  
464.h264ref: -D\_FILE\_OFFSET\_BITS=64  
471.omnetpp: -D\_FILE\_OFFSET\_BITS=64  
473.astar: -D\_FILE\_OFFSET\_BITS=64  
483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX



# SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL360 Gen10

(2.30 GHz, Intel Xeon Platinum 8165)

SPECint\_rate2006 = Not Run

SPECint\_rate\_base2006 = 2400

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Dec-2017

Software Availability: Sep-2017

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs  
-L/home/cpu2006/sh10.2 -lsmartheap
```

## 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 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 Tue Jan 16 12:09:52 2018 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 14 January 2018.