



SPEC® CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant BL460c Gen10
(2.20 GHz, Intel Xeon Gold 5120)

SPECint®2006 = Not Run

SPECint_base2006 = 60.0

CPU2006 license: 3

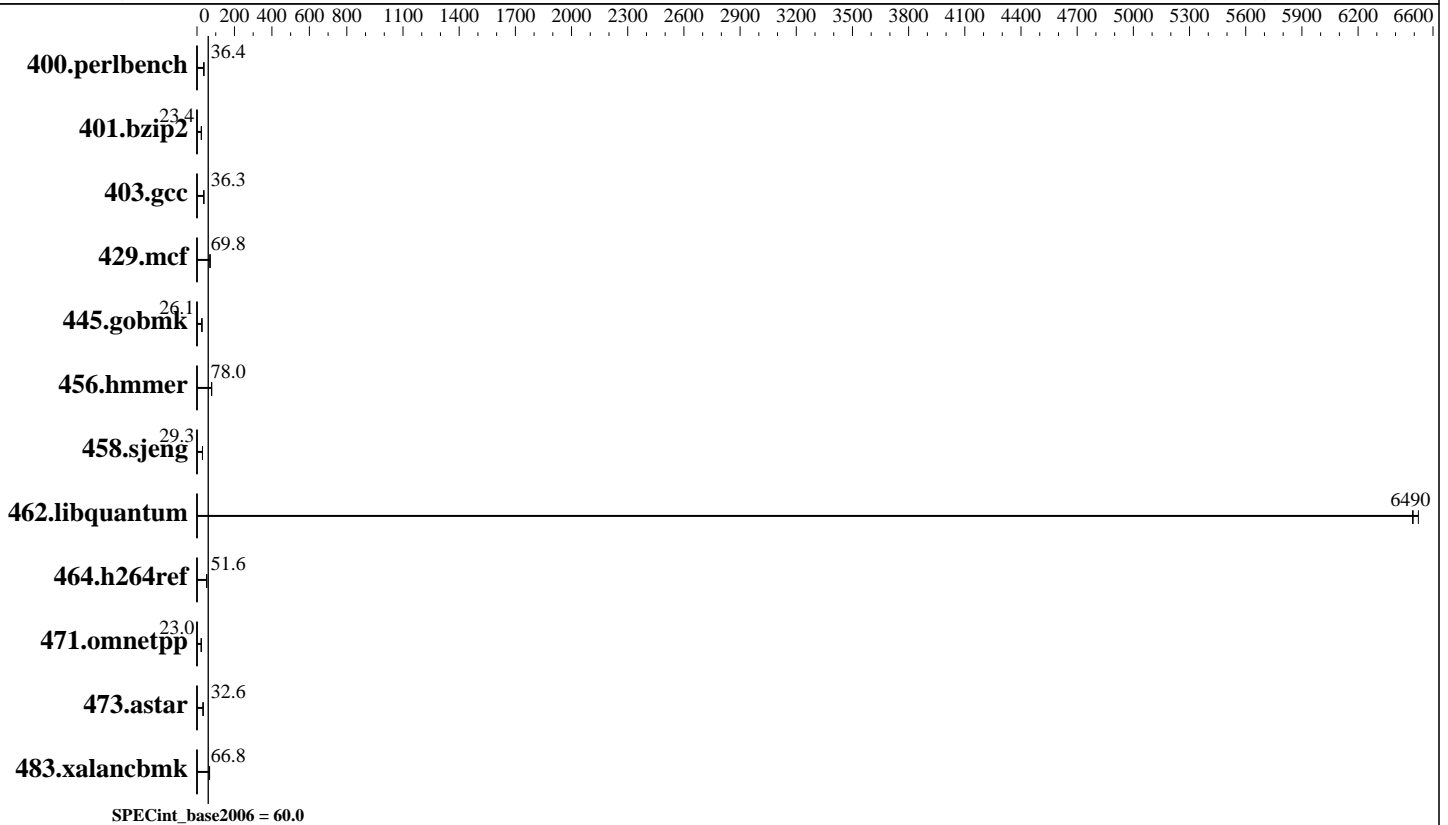
Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Oct-2017

Software Availability: Nov-2016



Hardware

CPU Name: Intel Xeon Gold 5120
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 28 cores, 2 chips, 14 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: 192 GB (12 x 16 GB 2Rx8 PC4-2666V-R, running at 2400)
Disk Subsystem: 1 x 480 GB SATA SSD, RAID 0
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.3 (Maipo)
 Kernel 3.10.0-514.el7.x86_64
Compiler: C/C++: Version 17.0.1.132 of Intel C/C++ Compiler for Linux;
 Fortran: Version 17.0.1.132 of Intel Fortran Compiler for Linux
Auto Parallel: Yes
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 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)

ProLiant BL460c Gen10

(2.20 GHz, Intel Xeon Gold 5120)

SPECint2006 =

Not Run

SPECint_base2006 =

60.0

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Oct-2017

Software Availability: Nov-2016

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	268	36.5	<u>268</u>	<u>36.4</u>	268	36.4						
401.bzip2	412	23.4	<u>412</u>	<u>23.4</u>	412	23.4						
403.gcc	<u>222</u>	<u>36.3</u>	222	36.3	222	36.3						
429.mcf	<u>131</u>	<u>69.8</u>	132	68.9	131	69.8						
445.gobmk	<u>401</u>	<u>26.1</u>	401	26.1	402	26.1						
456.hammer	120	78.1	120	78.0	<u>120</u>	<u>78.0</u>						
458.sjeng	414	29.2	<u>414</u>	<u>29.3</u>	413	29.3						
462.libquantum	3.18	6520	<u>3.19</u>	<u>6490</u>	3.19	6490						
464.h264ref	<u>429</u>	<u>51.6</u>	428	51.7	429	51.6						
471.omnetpp	<u>272</u>	<u>23.0</u>	279	22.4	270	23.2						
473.astar	216	32.5	<u>215</u>	<u>32.6</u>	215	32.7						
483.xalancbmk	103	67.2	<u>103</u>	<u>66.8</u>	104	66.3						

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
IRQ balance service was stop using "service irqbalance stop"
Tuned-adm profile was set to Throughput-Performance

Platform Notes

BIOS Configuration:

Intel Hyperthreading 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
Sysinfo program /root/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on localhost.localdomain Fri Dec 1 15:50:06 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)

ProLiant BL460c Gen10
(2.20 GHz, Intel Xeon Gold 5120)

SPECint2006 = **Not Run**

SPECint_base2006 = **60.0**

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Oct-2017

Software Availability: Nov-2016

Platform Notes (Continued)

From /proc/cpuinfo

model name : Intel(R) Xeon(R) Gold 5120 CPU @ 2.20GHz

2 "physical id"s (chips)

28 "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 : 14

siblings : 14

physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14

physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14

cache size : 19712 KB

From /proc/meminfo

MemTotal: 197572768 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*

os-release:

NAME="Red Hat Enterprise Linux Server"

VERSION="7.3 (Maipo)"

ID="rhel"

ID_LIKE="fedora"

VERSION_ID="7.3"

PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"

ANSI_COLOR="0;31"

CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"

redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)

system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)

system-release-cpe: cpe:/o:redhat:enterprise_linux:7.3:ga:server

uname -a:

Linux localhost.localdomain 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13 EDT 2016 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 1 15:41

SPEC is set to: /root/cpu2006

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda4	xfs	442G	28G	415G	7%	/

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 I41 09/29/2017

Memory:

4x UNKNOWN NOT AVAILABLE

12x UNKNOWN NOT AVAILABLE 16 GB 2 rank 2666 MHz, configured at 2400 MHz

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant BL460c Gen10
(2.20 GHz, Intel Xeon Gold 5120)

SPECint2006 = Not Run

SPECint_base2006 = 60.0

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Oct-2017

Software Availability: Nov-2016

Platform Notes (Continued)

(End of data from sysinfo program)

General Notes

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

KMP_AFFINITY = "granularity=fine,compact,1,0"

LD_LIBRARY_PATH = "/root/cpu2006/lib/ia32:/root/cpu2006/lib/intel64:/root/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

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

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.hmmmer: -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-AVX512 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-auto-p32

C++ benchmarks:

-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64



SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant BL460c Gen10
(2.20 GHz, Intel Xeon Gold 5120)

SPECint2006 = Not Run

SPECint_base2006 = 60.0

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Dec-2017

Hardware Availability: Oct-2017

Software Availability: Nov-2016

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.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Jan 16 12:09:12 2018 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 14 January 2018.