



SPEC[®] CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(1.70 GHz, Intel Xeon Bronze 3104)

SPECint[®]_rate2006 = Not Run

SPECint_rate_base2006 = 326

CPU2006 license: 3

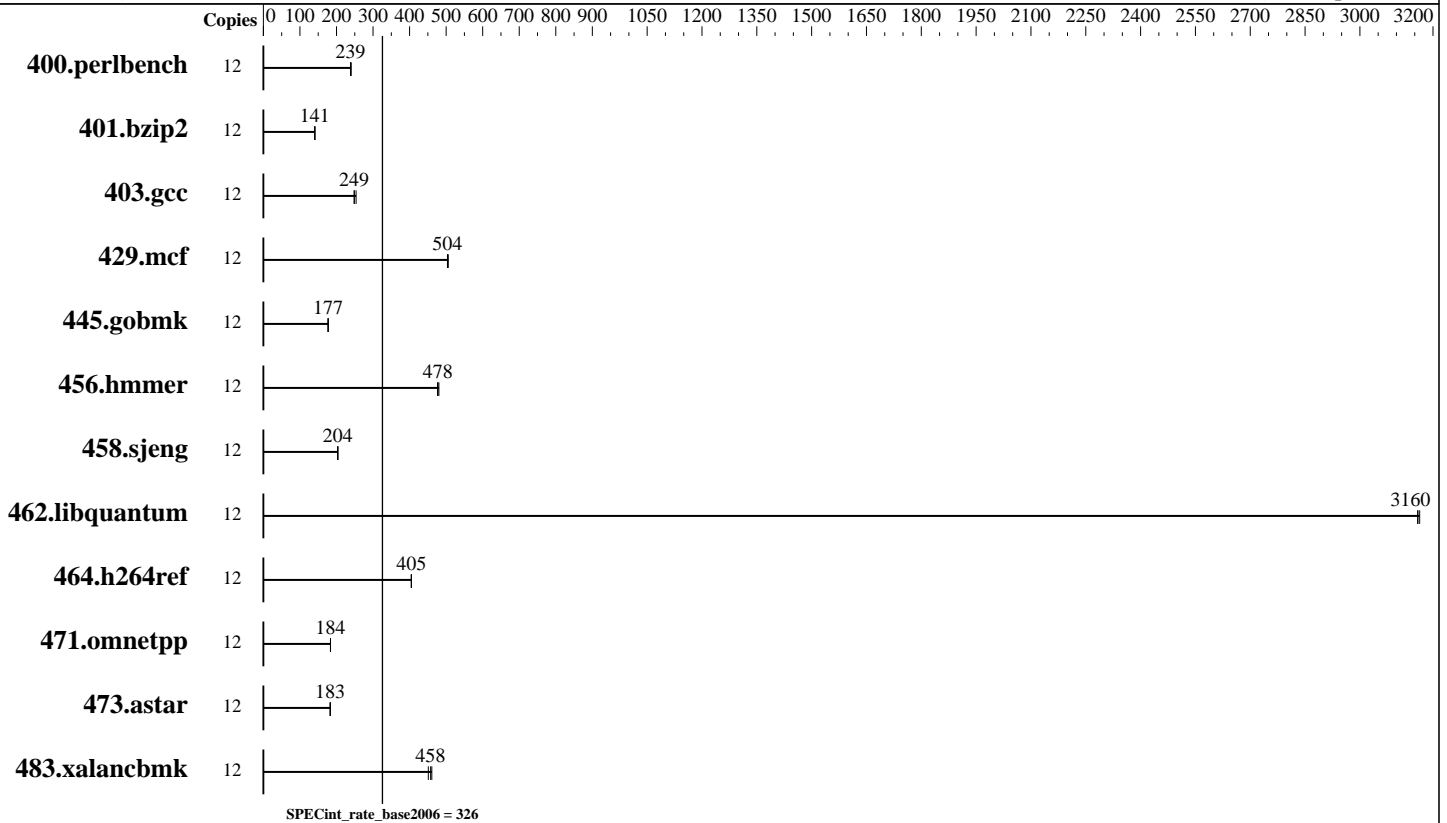
Test sponsor: HPE

Tested by: HPE

Test date: Nov-2017

Hardware Availability: Oct-2017

Software Availability: Sep-2017



Hardware

CPU Name: Intel Xeon Bronze 3104
 CPU Characteristics:
 CPU MHz: 1700
 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: 8.25 MB I+D on chip per chip
 Other Cache: None
 Memory: 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R, running at 2133)
 Disk Subsystem: 1 x 960 GB SATA SSD, RAID 0
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12 (x86_64) SP3
 Kernel 4.4.73-5-default
 Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
 Auto Parallel: No
 File System: xfs
 System State: Run level 3 (mutli-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 DL380 Gen10

(1.70 GHz, Intel Xeon Bronze 3104)

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Nov-2017

Hardware Availability: Oct-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	12	492	238	488	240	<u>491</u>	<u>239</u>							
401.bzip2	12	823	141	<u>823</u>	<u>141</u>	823	141							
403.gcc	12	<u>389</u>	<u>249</u>	381	254	389	249							
429.mcf	12	<u>217</u>	<u>504</u>	217	504	216	506							
445.gobmk	12	711	177	<u>710</u>	<u>177</u>	710	177							
456.hammer	12	<u>234</u>	<u>478</u>	233	480	235	476							
458.sjeng	12	713	204	713	204	<u>713</u>	<u>204</u>							
462.libquantum	12	<u>78.7</u>	<u>3160</u>	78.7	3160	78.6	3160							
464.h264ref	12	656	405	655	405	<u>656</u>	<u>405</u>							
471.omnetpp	12	409	184	<u>409</u>	<u>184</u>	408	184							
473.astar	12	<u>460</u>	<u>183</u>	461	183	460	183							
483.xalancbmk	12	<u>181</u>	<u>458</u>	183	451	180	461							

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
Workload Profile set to Custom
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10
(1.70 GHz, Intel Xeon Bronze 3104)

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Nov-2017

Hardware Availability: Oct-2017

Software Availability: Sep-2017

Platform Notes (Continued)

Sub-NUMA Clustering set to Disabled
Sysinfo program /home/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-b7s1 Wed Nov 29 09:42:16 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) Bronze 3104 CPU @ 1.70GHz
 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 1 2 3 4 5
physical 1:    : cores 0 1 2 3 4 5
cache size     : 8448 KB
```

```
From /proc/meminfo
MemTotal:      197751480 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP3
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 3
# 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-SP3"
VERSION_ID="12.3"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP3"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp3"
```

```
uname -a:
Linux linux-b7s1 4.4.73-5-default #1 SMP Tue Jul 4 15:33:39 UTC 2017
(b7ce4e4) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Nov 29 09:41
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(1.70 GHz, Intel Xeon Bronze 3104)

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Nov-2017

Hardware Availability: Oct-2017

Software Availability: Sep-2017

Platform Notes (Continued)

SPEC is set to: /home/cpu2006

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda4	xfs	852G	40G	813G	5%	/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 U30 10/11/2017

Memory:

24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz, configured at 2133 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/lib/ia32:/home/cpu2006/lib/intel64:/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_2017/linux/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/compilers_and_libraries_2017/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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2018 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(1.70 GHz, Intel Xeon Bronze 3104)

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test sponsor: HPE

Tested by: HPE

Test date: Nov-2017

Hardware Availability: Oct-2017

Software Availability: Sep-2017

Base Portability Flags (Continued)

483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/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.

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.