



SPEC® CINT2006 Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen10

(1.70 GHz, Intel Xeon Bronze 3106)

SPECint®2006 = Not Run

SPECint_base2006 = 36.9

CPU2006 license: 3

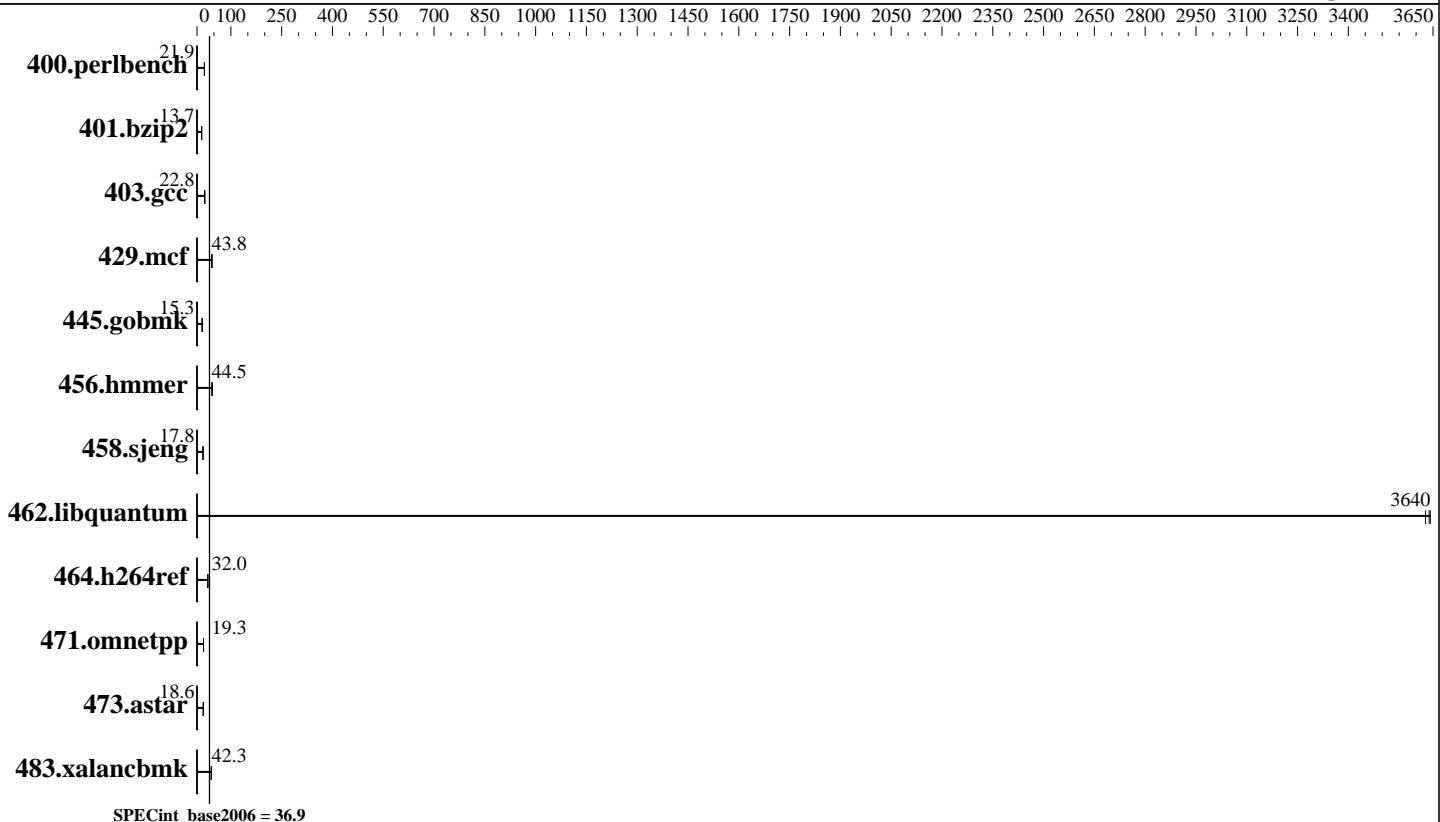
Test sponsor: HPE

Tested by: HPE

Test date: Oct-2017

Hardware Availability: Oct-2017

Software Availability: Apr-2017



Hardware

CPU Name:	Intel Xeon Bronze 3106
CPU Characteristics:	
CPU MHz:	1700
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 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:	11 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:	Red Hat Enterprise Linux Server release 7.3 (Maipo), Kernel 3.10.0-514.6.1.el7.x86_64
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



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	446	21.9	446	21.9	447	21.9						
401.bzip2	706	13.7	705	13.7	705	13.7						
403.gcc	352	22.8	353	22.8	353	22.8						
429.mcf	210	43.5	208	43.8	205	44.5						
445.gobmk	685	15.3	685	15.3	685	15.3						
456.hmmer	210	44.5	210	44.5	210	44.5						
458.sjeng	681	17.8	681	17.8	681	17.8						
462.libquantum	5.69	3640	5.71	3630	5.69	3640						
464.h264ref	692	32.0	694	31.9	692	32.0						
471.omnetpp	324	19.3	324	19.3	324	19.3						
473.astar	378	18.6	378	18.6	378	18.6						
483.xalancbmk	163	42.2	163	42.3	163	42.3						

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 /cpu2006/config/sysinfo.rev6993

Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)

running on DL380-sys2-RHEL73 Fri Oct 27 08:43:04 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>

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Platform Notes (Continued)

```
From /proc/cpuinfo
    model name : Intel(R) Xeon(R) Bronze 3106 CPU @ 1.70GHz
        2 "physical id"s (chips)
        16 "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 : 8
    siblings : 8
    physical 0: cores 0 1 2 3 4 5 6 7
    physical 1: cores 0 1 2 3 4 5 6 7
cache size : 11264 KB
```

```
From /proc/meminfo
MemTotal:      197575344 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 DL380-sys2-RHEL73 3.10.0-514.6.1.el7.x86_64 #1 SMP Sat Dec 10 11:15:38
EST 2016 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Oct 27 08:38
```

```
SPEC is set to: /cpu2006
Filesystem      Type  Size  Used  Avail Use% Mounted on
/dev/sda4        xfs   889G   51G  839G   6% /
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 09/29/2017

Memory:

24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz, configured at 2133 MHz

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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"

LD_LIBRARY_PATH = "/cpu2006/lib/ia32:/cpu2006/lib/intel64:/cpu2006/sh10.2"

OMP_NUM_THREADS = "16"

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-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



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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-revG.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-revG.xml>

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For other inquiries, please contact webmaster@spec.org.

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