SPEC® CINT2006 Result

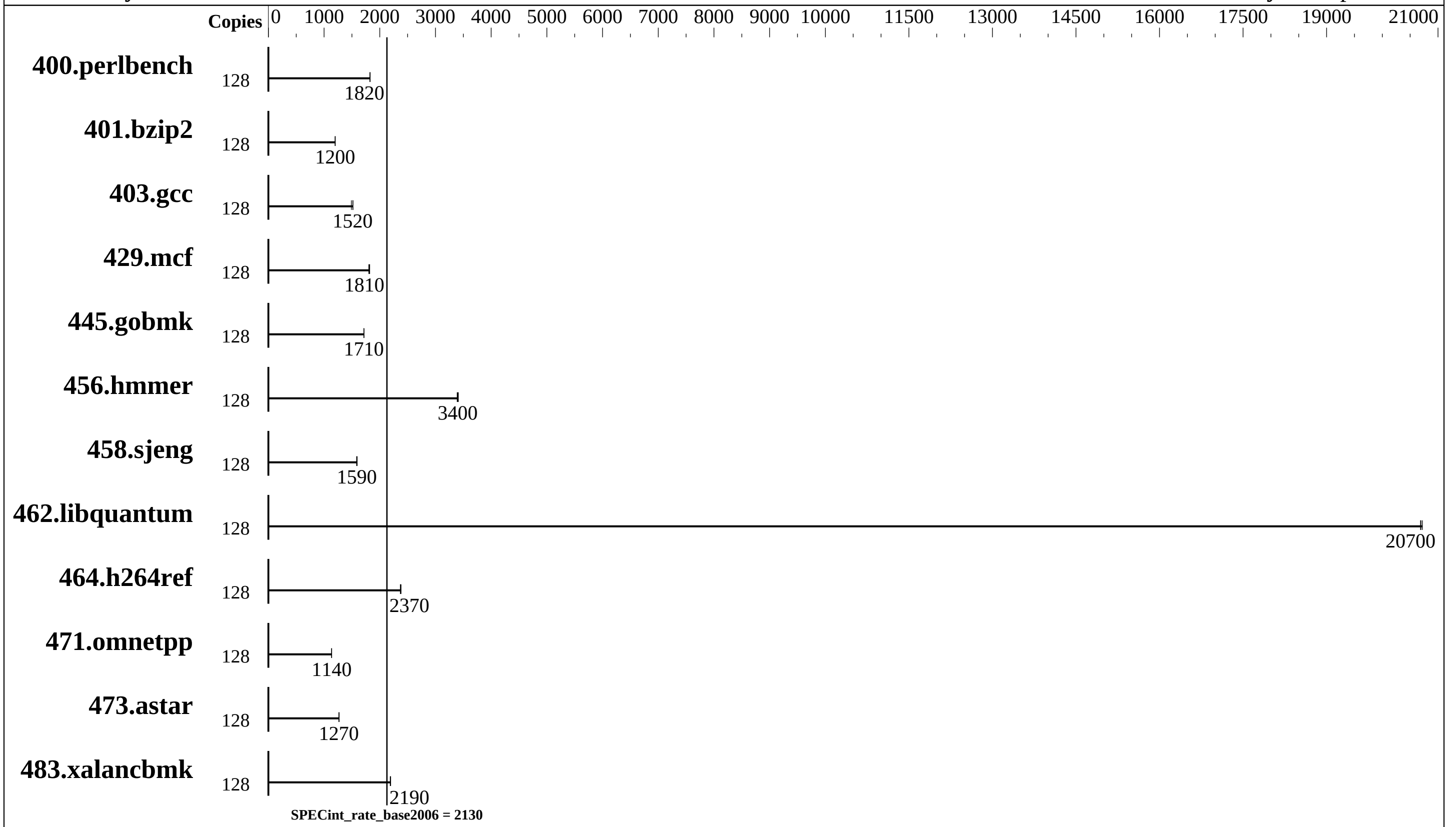
Hewlett Packard Enterprise
(Test Sponsor: HPE)

ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7551)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 2130

CPU2006 license: 3		**Test date:**	Dec-2017
Test sponsor:	HPE	**Hardware Availability:**	Nov-2017
Tested by:	HPE	**Software Availability:**	Sep-2017



Hardware

CPU Name:	AMD EPYC 7551
CPU Characteristics:	AMD Turbo CORE technology up to 3.00 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	64 cores, 2 chips, 32 cores/chip, 2 threads/core
CPU(s) orderable:	1, 2 chip(s)
Primary Cache:	64 KB I + 32 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core
L3 Cache:	64 MB I+D on chip per chip, 8 MB shared / 4 cores
Other Cache:	None
Memory:	1 TB (16 x 64 GB 4Rx4 PC4-2666V-L)
Disk Subsystem:	1 x 400 GB SAS 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 4.5.2.1 of x86 Open64 Compiler Suite (from AMD)
Auto Parallel:	No
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	Not Applicable
Other Software:	MicroQuill SmartHeap 10.0 32-bit Library for Linux

Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	128	**685**	**1820**	686	1820	685	1830							
401.bzip2	128	1031	1200	**1030**	**1200**	1028	1200							
403.gcc	128	692	1490	679	1520	**680**	**1520**							
429.mcf	128	647	1800	**643**	**1810**	642	1820							
445.gobmk	128	783	1720	**783**	**1710**	783	1710							
456.hmmer	128	350	3410	352	3390	**351**	**3400**							
458.sjeng	128	**974**	**1590**	972	1590	978	1580							
462.libquantum	128	128	20700	**128**	**20700**	128	20700							
464.h264ref	128	**1194**	**2370**	1196	2370	1189	2380							
471.omnetpp	128	705	1140	704	1140	**704**	**1140**							
473.astar	128	707	1270	**709**	**1270**	709	1270							
483.xalancbmk	128	404	2190	402	2200	**403**	**2190**							

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

```
The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.
```

Operating System Notes

```
Set vm/nr_hugepages=86016 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages
```

Platform Notes

```
 BIOS Configuration:
  Thermal Configuration set to Maximum Cooling
  Performance Determinism set to Power Deterministic
  Memory Patrol Scrubbing set to Disabled
  Workload Profile set to General Throughput Compute
  Minimum Processor Idle Power Core C-State set to C6 State
  Processor Power and Utilization Monitoring set to Disabled
```

General Notes

```
Environment variables set by runspec before the start of the run:
HUGETLB_LIMIT = "896"
LD_LIBRARY_PATH = "/home/cpu2006/amd1603-rate-libs-revB/32:/home/cpu2006/amd1603-rate-libs-revB/64"
```

Continued on next page

General Notes (Continued)

```
The binaries were built with the x86 Open64 Compiler Suite,
which is only available from (and supported by) AMD at
http://developer.amd.com/tools-and-sdks/cpu-development/x86-open64-compiler-suite/
```

Base Compiler Invocation

C benchmarks:
 opencc

C++ benchmarks:
 openCC

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
483.xalancbmk:	-DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
 -Ofast -CG:local_sched_alg=1 -INLINE:aggressive=ON -IPA:plimit=8000
 -IPA:small_pu=100 -HP:bd=2m:heap=2m -mso -LNO:prefetch=2
 -march=bdver1 -mno-fma4 -mno-xop -mno-tbm

C++ benchmarks:
 -Ofast -m32 -INLINE:aggressive=on -CG:cmp_peep=on -D__OPEN64_FAST_SET
 -march=bdver1 -mno-fma4 -mno-xop -mno-tbm
 -L/root/work/libraries/SmartHeap-10/lib -lsmartheap

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/x86-openflags-rate-revA-I.html
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-AMD-V1.2-EPYC-revD.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/x86-openflags-rate-revA-I.xml
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-AMD-V1.2-EPYC-revD.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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