



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®_rate2006 = 1360

PowerEdge FC630 (Intel Xeon E5-2699 v3, 2.30 GHz)

SPECint_rate_base2006 = 1320

CPU2006 license: 55

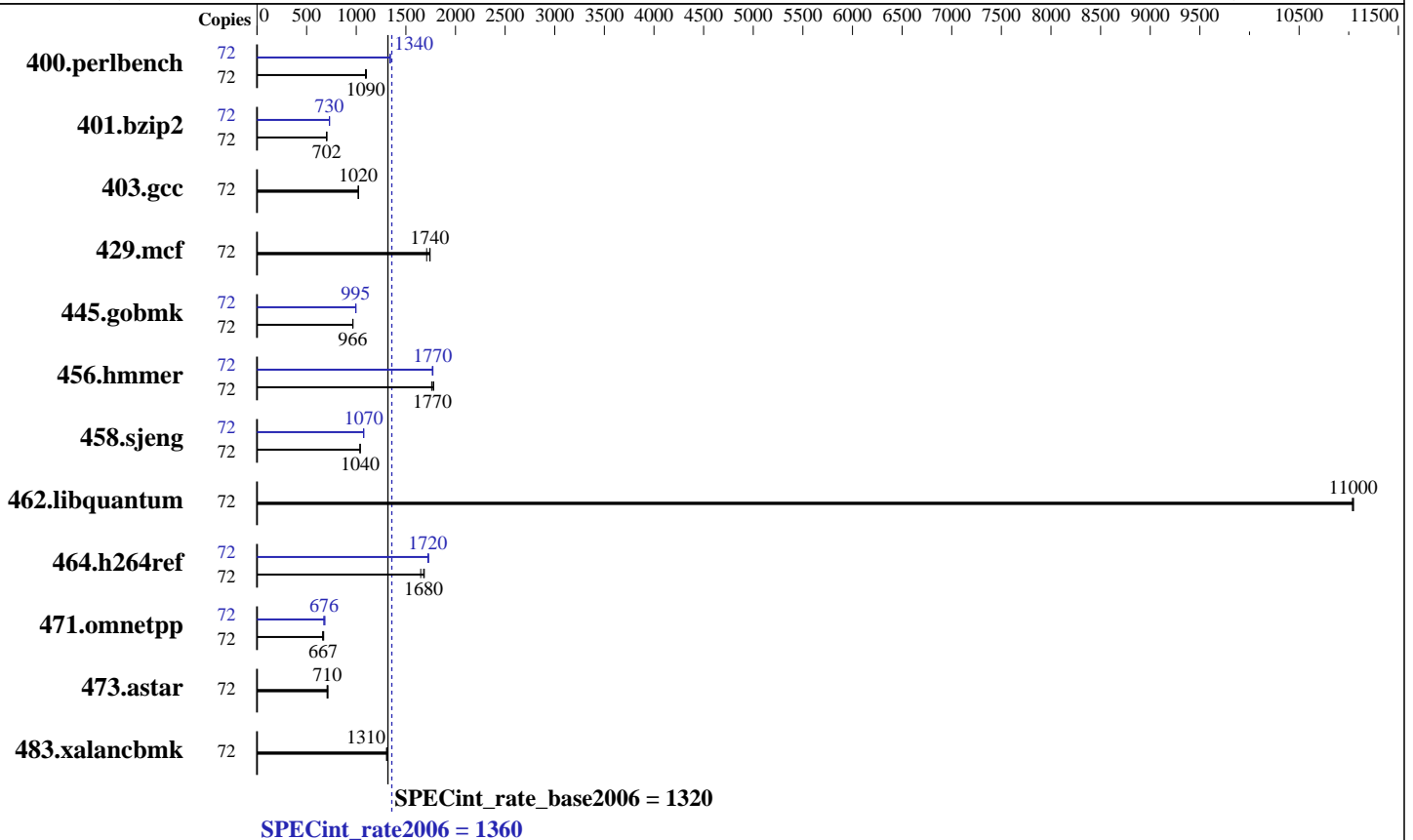
Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Dec-2014

Tested by: Dell Inc.

Software Availability: Jan-2014



Hardware

CPU Name: Intel Xeon E5-2699 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 36 cores, 2 chips, 18 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 45 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (8 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: 1 x 500 GB 7200 RPM SATA
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
 2.6.32-431.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1360

PowerEdge FC630 (Intel Xeon E5-2699 v3, 2.30 GHz)

SPECint_rate_base2006 = 1320

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Dec-2014

Tested by: Dell Inc.

Software Availability: Jan-2014

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	72	638	1100	643	1090	643	1090	72	525	1340	524	1340	524	1340
401.bzip2	72	989	703	990	702	990	702	72	951	730	952	730	953	729
403.gcc	72	568	1020	567	1020	568	1020	72	568	1020	567	1020	568	1020
429.mcf	72	384	1710	377	1740	377	1740	72	384	1710	377	1740	377	1740
445.gobmk	72	782	966	782	966	782	966	72	759	995	759	995	758	996
456.hammer	72	380	1770	377	1780	382	1760	72	379	1770	380	1770	380	1770
458.sjeng	72	839	1040	839	1040	839	1040	72	810	1080	811	1070	812	1070
462.libquantum	72	135	11000	135	11000	135	11000	72	135	11000	135	11000	135	11000
464.h264ref	72	949	1680	966	1650	945	1690	72	921	1730	925	1720	925	1720
471.omnetpp	72	681	661	675	667	670	672	72	657	685	668	674	665	676
473.astar	72	712	710	716	706	707	715	72	712	710	716	706	707	715
483.xalancbmk	72	379	1310	380	1310	380	1310	72	379	1310	380	1310	380	1310

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"

Platform Notes

BIOS settings:
 Snoop Mode set to Cluster on Die
 Virtualization Technology disabled
 Execute Disable disabled
 System Profile set to Custom
 Memory Patrol Scrub set to Disabled
 Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
 \$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
 running on localhost.localdomain Sun Oct 26 13:32:32 2014

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) CPU E5-2699 v3 @ 2.30GHz
 2 "physical id"s (chips)

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1360

PowerEdge FC630 (Intel Xeon E5-2699 v3, 2.30 GHz)

SPECint_rate_base2006 = 1320

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Dec-2014

Tested by: Dell Inc.

Software Availability: Jan-2014

Platform Notes (Continued)

72 "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 : 18
siblings  : 36
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 23040 KB
```

```
From /proc/meminfo
MemTotal:      132054380 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.5 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54
EST 2013 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Oct 26 13:26
```

```
SPEC is set to: /root/cpu2006-1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        ext4  437G  9.7G  405G   3% /
```

```
Additional information from dmidecode:
BIOS Dell Inc. 1.0.1 10/15/2014
Memory:
16x 000000000000 Not Specified 2133 MHz 1 rank
8x 00CE00B300CE M393A2G40DB0-CPB 16 GB 2133 MHz 2 rank
```

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1360

PowerEdge FC630 (Intel Xeon E5-2699 v3, 2.30 GHz)

SPECint_rate_base2006 = 1320

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Dec-2014

Tested by: Dell Inc.

Software Availability: Jan-2014

General Notes (Continued)

```
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32

Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32

400.perlbench: icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1360

PowerEdge FC630 (Intel Xeon E5-2699 v3, 2.30 GHz)

SPECint_rate_base2006 = 1320

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Dec-2014

Tested by: Dell Inc.

Software Availability: Jan-2014

Peak Compiler Invocation (Continued)

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:

`icpc -m32`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-auto-ilp32`

401.bzip2: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-opt-prefetch -auto-ilp32 -ansi-alias`

403.gcc: `basepeak = yes`

429.mcf: `basepeak = yes`

445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
`-ansi-alias -opt-mem-layout-trans=3`

456.hmmer: `-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

458.sjeng: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-unroll4 -auto-ilp32`

462.libquantum: `basepeak = yes`

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1360

PowerEdge FC630 (Intel Xeon E5-2699 v3, 2.30 GHz)

SPECint_rate_base2006 = 1320

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Dec-2014

Tested by: Dell Inc.

Software Availability: Jan-2014

Peak Optimization Flags (Continued)

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak 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-ic14.0-official-linux64-revC.html>
<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revC.xml>
<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.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 Wed Dec 3 10:33:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 December 2014.