



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R630 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint®_rate2006 = 689

SPECint_rate_base2006 = 666

CPU2006 license: 55

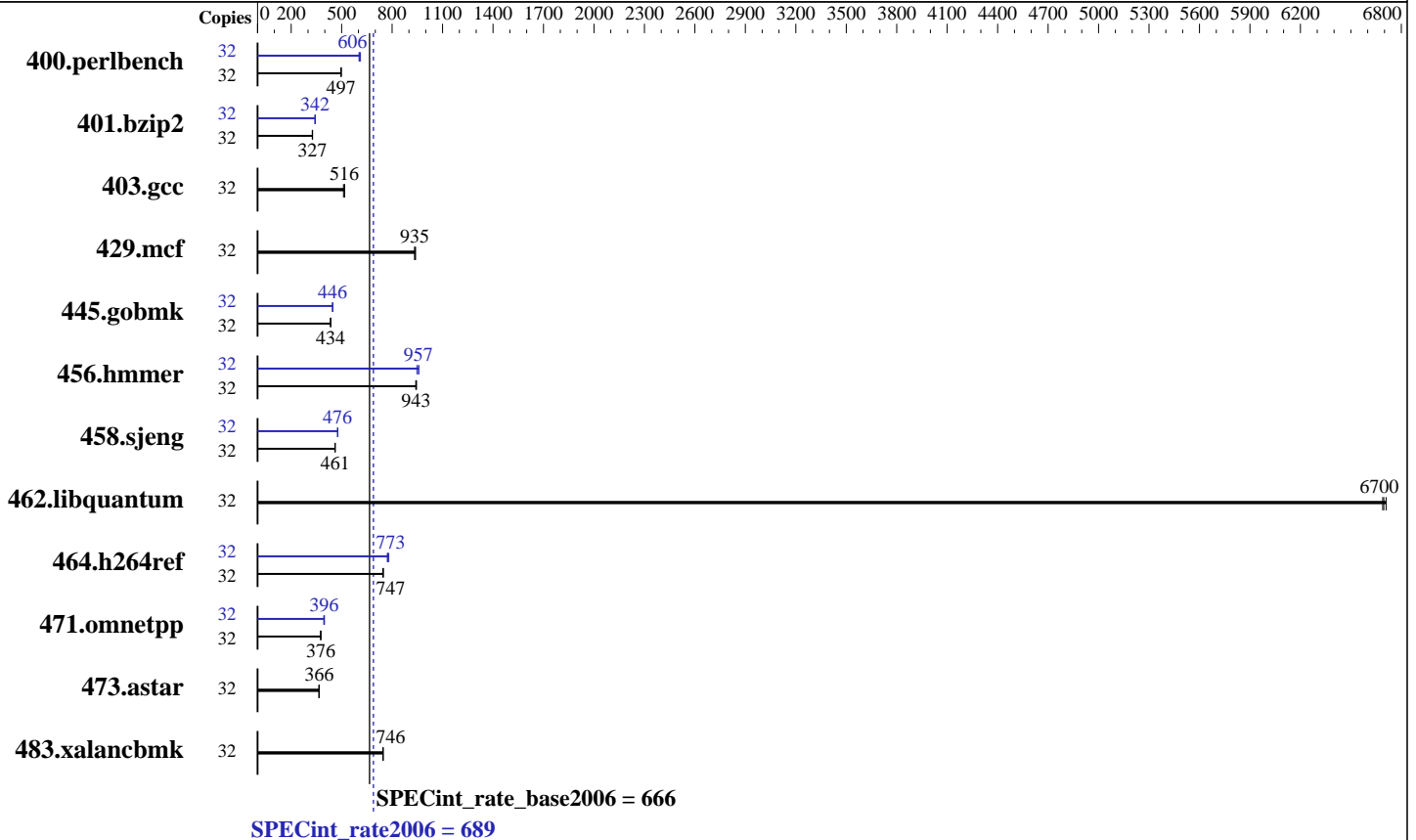
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Jun-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E5-2630 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)
 Disk Subsystem: 1 x 1000 GB 7200 RPM SATA
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) 3.0.76-0.11-default
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext2
 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 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 689

PowerEdge R630 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate_base2006 = 666

CPU2006 license: 55

Test date: Jun-2014

Test sponsor: Dell Inc.

Hardware Availability: Sep-2014

Tested by: Dell Inc.

Software Availability: Sep-2014

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	630	496	629	497	629	497	32	511	612	516	606	518	603
401.bzip2	32	945	327	950	325	944	327	32	901	343	903	342	903	342
403.gcc	32	504	511	499	516	498	518	32	504	511	499	516	498	518
429.mcf	32	312	935	311	939	312	934	32	312	935	311	939	312	934
445.gobmk	32	772	435	773	434	773	434	32	752	446	753	446	752	446
456.hammer	32	316	945	317	941	317	943	32	312	958	312	957	315	947
458.sjeng	32	840	461	840	461	840	461	32	813	476	813	476	813	476
462.libquantum	32	99.1	6690	98.8	6710	99.0	6700	32	99.1	6690	98.8	6710	99.0	6700
464.h264ref	32	952	744	948	747	947	747	32	918	772	908	780	916	773
471.omnetpp	32	534	375	532	376	532	376	32	508	394	505	396	503	398
473.astar	32	615	365	614	366	614	366	32	615	365	614	366	614	366
483.xalancbmk	32	295	747	296	746	296	745	32	295	747	296	746	296	745

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 Early Snoop
Virtualization Technology disabled
Execute Disable disabled
System Profile set to Performance
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on linux Mon Jun 30 11:49:29 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 E5-2630 v3 @ 2.40GHz
2 "physical id"s (chips)
32 "processors"

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 689

PowerEdge R630 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate_base2006 = 666

CPU2006 license: 55

Test date: Jun-2014

Test sponsor: Dell Inc.

Hardware Availability: Sep-2014

Tested by: Dell Inc.

Software Availability: Sep-2014

Platform Notes (Continued)

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  : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

From /proc/meminfo

```
MemTotal:      264441016 kB
HugePages_Total:    0
Hugepagesize:     2048 kB
```

/usr/bin/lsb_release -d

```
SUSE Linux Enterprise Server 11 (x86_64)
```

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

```
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 3
```

uname -a:

```
Linux linux 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013 (ccab990)
x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Jun 30 11:48 last=S

SPEC is set to: /root/cpu2006-1.2

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2       ext2  726G  10G  715G   2% /
```

Additional information from dmidecode:

```
BIOS Dell Inc. 0.3.25 06/19/2014
Memory:
16x 002C00B3002C 36ASF2G72PZ-2G1A1 16 GB 1866 MHz
8x Not Specified Not Specified
```

(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/transparent_hugepage/enabled
```

Filesystem page cache cleared with:

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org
http://www.spec.org/

Page 3



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 689

PowerEdge R630 (Intel Xeon E5-2630 v3,
2.40 GHz)

SPECint_rate_base2006 = 666

CPU2006 license: 55

Test date: Jun-2014

Test sponsor: Dell Inc.

Hardware Availability: Sep-2014

Tested by: Dell Inc.

Software Availability: Sep-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 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R630 (Intel Xeon E5-2630 v3,
2.40 GHz)

SPECint_rate2006 = 689

SPECint_rate_base2006 = 666

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Jun-2014

Hardware Availability: Sep-2014

Software Availability: Sep-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 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 689

PowerEdge R630 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECint_rate_base2006 = 666

CPU2006 license: 55

Test date: Jun-2014

Test sponsor: Dell Inc.

Hardware Availability: Sep-2014

Tested by: Dell Inc.

Software Availability: Sep-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-revD.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-revD.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 Feb 11 15:15:32 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 September 2014.