



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

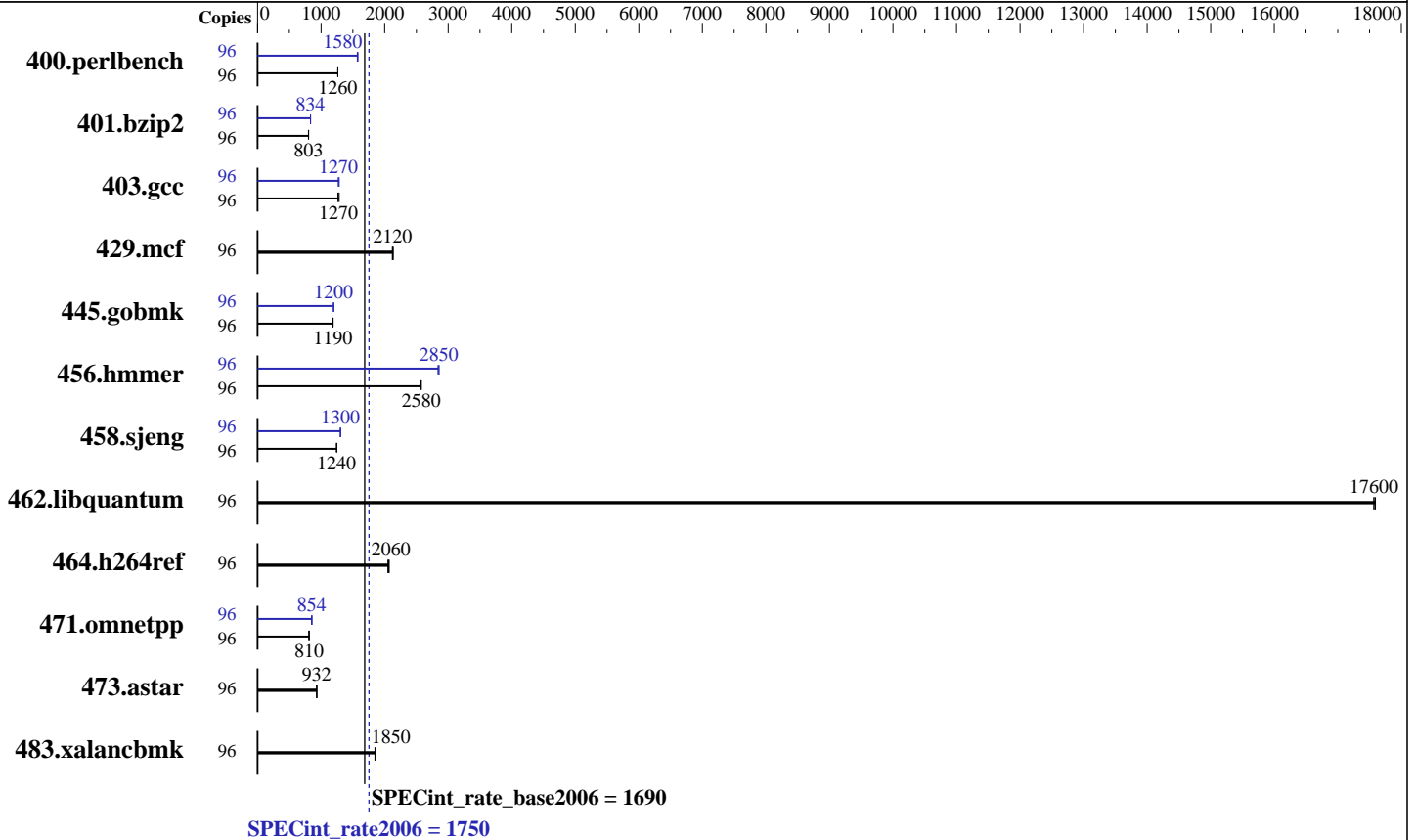
Test date: Apr-2015

Test sponsor: Dell Inc.

Hardware Availability: Jun-2015

Tested by: Dell Inc.

Software Availability: Oct-2014



Hardware

CPU Name: Intel Xeon E7-4830 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 2.70 GHz
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 48 cores, 4 chips, 12 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 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: 30 MB I+D on chip per chip
 Other Cache: None
 Memory: 512 GB (32 x 16 GB 2Rx4 PC4-2133P-R, running at 1333 MHz)
 Disk Subsystem: 1 x 200 GB SAS6 SSD
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12
 3.12.28-4-default
 Compiler: C/C++: Version 15.0.0.090 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 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

Test date: Apr-2015

Test sponsor: Dell Inc.

Hardware Availability: Jun-2015

Tested by: Dell Inc.

Software Availability: Oct-2014

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	96	743	1260	742	1260	743	1260	96	594	1580	597	1570	595	1580
401.bzip2	96	1154	803	1157	801	1153	803	96	1112	833	1111	834	1111	834
403.gcc	96	610	1270	602	1280	608	1270	96	607	1270	607	1270	602	1280
429.mcf	96	410	2140	412	2120	412	2120	96	410	2140	412	2120	412	2120
445.gobmk	96	848	1190	848	1190	847	1190	96	842	1200	841	1200	842	1200
456.hammer	96	348	2580	348	2570	348	2580	96	314	2850	314	2850	315	2840
458.sjeng	96	933	1250	933	1240	934	1240	96	890	1300	890	1300	891	1300
462.libquantum	96	113	17600	113	17600	113	17600	96	113	17600	113	17600	113	17600
464.h264ref	96	1029	2060	1025	2070	1036	2050	96	1029	2060	1025	2070	1036	2050
471.omnetpp	96	741	810	744	807	737	815	96	704	852	703	854	702	855
473.astar	96	723	932	723	932	724	931	96	723	932	723	932	724	931
483.xalancbmk	96	356	1860	358	1850	359	1850	96	356	1860	358	1850	359	1850

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:
 Virtualization Technology disabled
 System Profile set to Custom
 CPU Power Management set to Maximum Performance
 Memory Frequency set to Maximum Performance
 Turbo Boost enabled
 Energy Efficient Turbo disabled
 C1E disabled
 C States disabled
 Collaborative CPU Performance Control disabled
 Memory Patrol Scrub disabled
 Memory Refresh Rate set to 1x
 Uncore Frequency set to Maximum
 Energy Efficient Policy set to Performance
 Monitor/MWait enabled

Sysinfo program

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

Test date: Apr-2015

Test sponsor: Dell Inc.

Hardware Availability: Jun-2015

Tested by: Dell Inc.

Software Availability: Oct-2014

Platform Notes (Continued)

```
/root/Desktop/Performance/ic15.0_Aug29_2014/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on linux-6qvx Wed Apr 8 16:03:06 2015
```

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 E7-4830 v3 @ 2.10GHz
 4 "physical id"s (chips)
 96 "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 : 12
siblings : 24
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13
cache size : 30720 KB
```

```
From /proc/meminfo
MemTotal: 529204240 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

```
/usr/bin/lsc_release -d
SUSE Linux Enterprise Server 12
```

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

```
uname -a:
Linux linux-6qvx 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014
(9879bd4) x86_64 x86_64 x86_64 GNU/Linux
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Apr-2015

Hardware Availability: Jun-2015

Software Availability: Oct-2014

Platform Notes (Continued)

run-level 3 Apr 8 16:02 last=5

SPEC is set to: /root/Desktop/Performance/ic15.0_Aug29_2014

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	181G	9.5G	171G	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 Dell Inc. 1.0.1 [MRC_096] 03/27/2015

Memory:

32x 00AD00B300AD Not Specified 16 GB 2 rank 2133 MHz, configured at 1333 MHz
64x 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/Desktop/Performance/ic15.0_Aug29_2014/libs/32:/root/Desktop/Performance/ic15.0_Aug29_2014/libs/64:/root/Desktop/Performance/ic15.0_Aug29_2014/sh*

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

Filesystem page cache cleared with:

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 -L/opt/intel/composer_xe_2015/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

462.libquantum: -DSPEC_CPU_LINUX

483.xalancbmk: -DSPEC_CPU_LINUX



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

Test date: Apr-2015

Test sponsor: Dell Inc.

Hardware Availability: Jun-2015

Tested by: Dell Inc.

Software Availability: Oct-2014

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 -L/opt/intel/composer_xe_2015/lib/ia32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

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



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

Test date: Apr-2015

Test sponsor: Dell Inc.

Hardware Availability: Jun-2015

Tested by: Dell Inc.

Software Availability: Oct-2014

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: -xCORE-AVX2 -ipo -O3 -no-prec-div

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.hmmcr: -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

464.h264ref: basepeak = yes

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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.20150421.html>



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECint_rate2006 = 1750

PowerEdge R930 (Intel Xeon E7-4830 v3, 2.10 GHz)

SPECint_rate_base2006 = 1690

CPU2006 license: 55

Test date: Apr-2015

Test sponsor: Dell Inc.

Hardware Availability: Jun-2015

Tested by: Dell Inc.

Software Availability: Oct-2014

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

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.20150421.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 May 5 15:15:25 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 5 May 2015.