



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®\_rate2006 = 227

PowerEdge R220 (Intel Xeon E3-1281 v3, 3.70 GHz)

SPECint\_rate\_base2006 = 220

CPU2006 license: 55

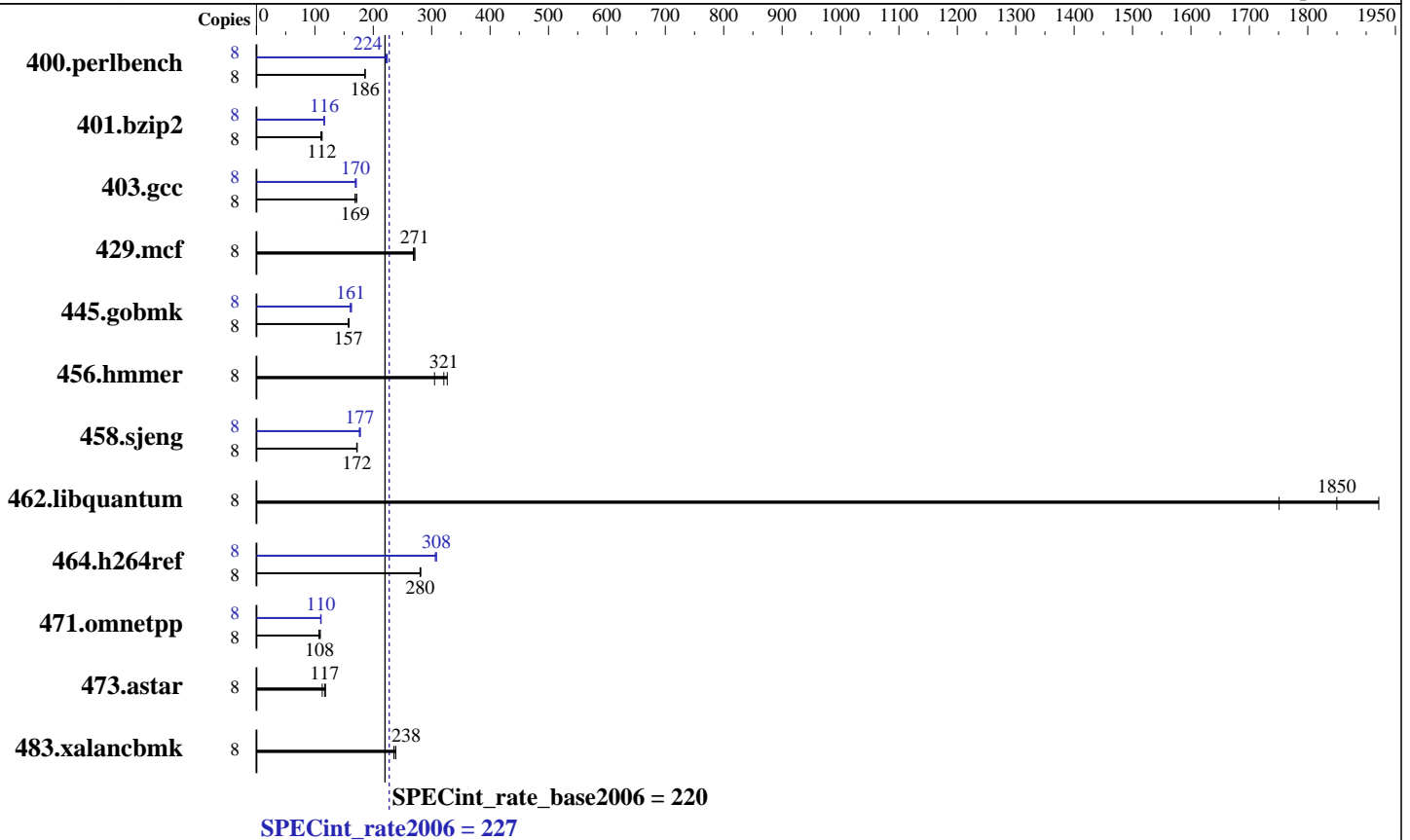
Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-2014

Tested by: Dell Inc.

Software Availability: Sep-2014



## Hardware

CPU Name: Intel Xeon E3-1281 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 4.10 GHz  
 CPU MHz: 3700  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 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: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 32 GB (4 x 8 GB 2Rx8 PC3L-12800E-11)  
 Disk Subsystem: 1 x 300 GB 15000 RPM SAS  
 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 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 227

PowerEdge R220 (Intel Xeon E3-1281 v3, 3.70 GHz)

SPECint\_rate\_base2006 = 220

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-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	8	420	186	<b>420</b>	<b>186</b>	421	186	8	352	222	349	224	<b>350</b>	<b>224</b>
401.bzip2	8	<b>690</b>	<b>112</b>	687	112	700	110	8	664	116	668	116	<b>664</b>	<b>116</b>
403.gcc	8	375	172	<b>380</b>	<b>169</b>	381	169	8	377	171	380	169	<b>379</b>	<b>170</b>
429.mcf	8	<b>269</b>	<b>271</b>	269	271	272	269	8	<b>269</b>	<b>271</b>	269	271	272	269
445.gobmk	8	533	157	529	159	<b>533</b>	<b>157</b>	8	523	161	<b>520</b>	<b>161</b>	515	163
456.hammer	8	<b>233</b>	<b>321</b>	245	305	228	327	8	<b>233</b>	<b>321</b>	245	305	228	327
458.sjeng	8	<b>562</b>	<b>172</b>	561	172	564	172	8	544	178	<b>548</b>	<b>177</b>	549	176
462.libquantum	8	<b>89.6</b>	<b>1850</b>	86.3	1920	94.7	1750	8	<b>89.6</b>	<b>1850</b>	86.3	1920	94.7	1750
464.h264ref	8	629	281	632	280	<b>632</b>	<b>280</b>	8	575	308	<b>575</b>	<b>308</b>	578	306
471.omnetpp	8	<b>463</b>	<b>108</b>	468	107	457	109	8	<b>454</b>	<b>110</b>	454	110	452	111
473.astar	8	<b>481</b>	<b>117</b>	475	118	499	113	8	<b>481</b>	<b>117</b>	475	118	499	113
483.xalancbmk	8	235	235	231	239	<b>232</b>	<b>238</b>	8	235	235	231	239	<b>232</b>	<b>238</b>

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

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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 Configuration:  
 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 Wed Oct 1 19:09:48 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 E3-1281 v3 @ 3.70GHz  
 1 "physical id"s (chips)  
 8 "processors"  
 cores, siblings (Caution: counting these is hw and system dependent. The  
 Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 227

PowerEdge R220 (Intel Xeon E3-1281 v3, 3.70 GHz)

SPECint\_rate\_base2006 = 220

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-2014

Tested by: Dell Inc.

Software Availability: Sep-2014

## Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 4
siblings  : 8
physical 0: cores 0 1 2 3
cache size : 8192 KB
```

From /proc/meminfo

```
MemTotal: 32809896 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

/usr/bin/lbs\_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 Oct 1 18:57 last=S

SPEC is set to: /root/cpu2006-1.2

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        ext2  267G  12G  255G   5% /
```

Additional information from dmidecode:

```
BIOS Dell Inc. 1.3.2 09/11/2014
```

Memory:

```
4x Hynix/Hyundai HMT41GU7AFR8A-PB 8 GB 1600 MHz
```

(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
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 227

PowerEdge R220 (Intel Xeon E3-1281 v3, 3.70 GHz)

SPECint\_rate\_base2006 = 220

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-2014

Tested by: Dell Inc.

Software Availability: Sep-2014

## 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

401.bzip2: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 227

PowerEdge R220 (Intel Xeon E3-1281 v3, 3.70 GHz)

SPECint\_rate\_base2006 = 220

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-2014

Tested by: Dell Inc.

Software Availability: Sep-2014

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
 401.bzip2: -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: -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.hmmer: basepeak = yes

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)  
 -unroll14 -auto-ilp32

462.libquantum: basepeak = yes

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)  
 -unroll12 -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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 227

PowerEdge R220 (Intel Xeon E3-1281 v3, 3.70 GHz)

SPECint\_rate\_base2006 = 220

CPU2006 license: 55

Test date: Oct-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-2014

Tested by: Dell Inc.

Software Availability: Sep-2014

## 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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Wed Nov 5 10:23:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 4 November 2014.