



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®\_rate2006 = Not Run

PowerEdge R420 (Intel Xeon E5-2450, 2.10 GHz)

SPECint\_rate\_base2006 = 541

CPU2006 license: 55

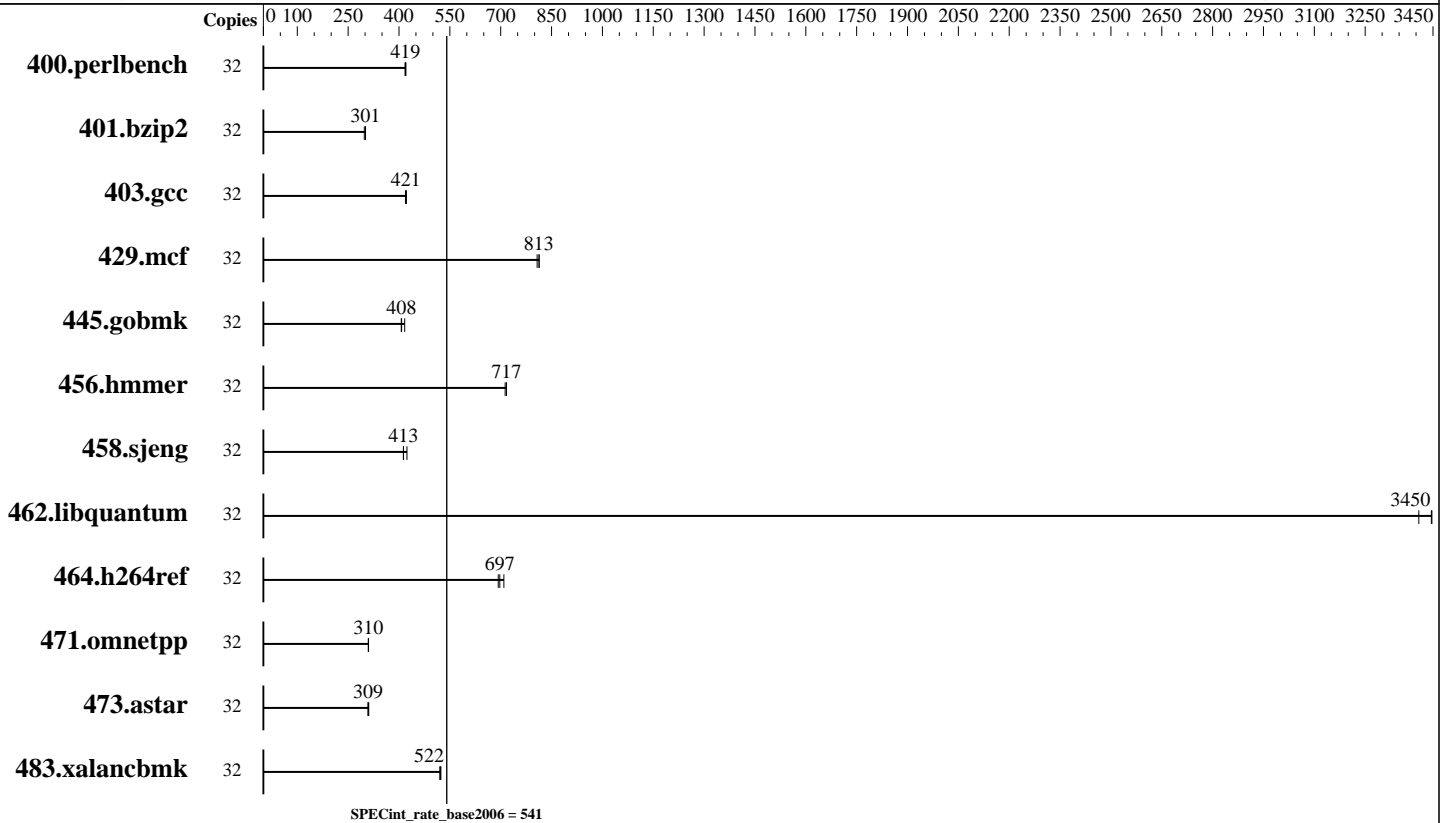
Test date: Mar-2013

Test sponsor: Dell Inc.

Hardware Availability: Mar-2013

Tested by: Dell Inc.

Software Availability: Feb-2013



## Hardware

CPU Name: Intel Xeon E5-2450  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz  
 CPU MHz: 2100  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 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: 96 GB (12 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: 2 x 300 GB 15000 RPM SAS, RAID 0  
 Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 2.6.32-358.el6.x86\_64  
 Compiler: C/C++: Version 13.0.0.133 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 = Not Run

PowerEdge R420 (Intel Xeon E5-2450, 2.10 GHz)

SPECint\_rate\_base2006 = 541

CPU2006 license: 55

Test date: Mar-2013

Test sponsor: Dell Inc.

Hardware Availability: Mar-2013

Tested by: Dell Inc.

Software Availability: Feb-2013

## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	32	744	420	748	418	<b>746</b>	<b>419</b>									
401.bzip2	32	1025	301	<b>1025</b>	<b>301</b>	1037	298									
403.gcc	32	<b>612</b>	<b>421</b>	611	422	615	419									
429.mcf	32	359	813	<b>359</b>	<b>813</b>	361	807									
445.gobmk	32	805	417	825	407	<b>823</b>	<b>408</b>									
456.hammer	32	416	717	<b>416</b>	<b>717</b>	419	713									
458.sjeng	32	914	424	938	413	<b>937</b>	<b>413</b>									
462.libquantum	32	195	3410	<b>192</b>	<b>3450</b>	192	3450									
464.h264ref	32	998	709	1022	693	<b>1016</b>	<b>697</b>									
471.omnetpp	32	645	310	<b>646</b>	<b>310</b>	646	310									
473.astar	32	723	311	<b>726</b>	<b>309</b>	728	309									
483.xalancbmk	32	422	524	<b>423</b>	<b>522</b>	424	520									

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

Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on R420 Wed Mar 27 10:08:56 2013

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 E5-2450 0 @ 2.10GHz  
2 "physical id"s (chips)  
32 "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 : 8  
siblings : 16

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = Not Run

PowerEdge R420 (Intel Xeon E5-2450, 2.10 GHz)

SPECint\_rate\_base2006 = 541

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Mar-2013

Hardware Availability: Mar-2013

Software Availability: Feb-2013

## Platform Notes (Continued)

```

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:      99025832 kB
HugePages_Total: 0
Hugepagesize:  2048 kB

```

```

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

```

```

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

```

```

uname -a:
Linux R420 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013 x86_64
x86_64 x86_64 GNU/Linux

```

run-level 3 Mar 27 10:08

```

SPEC is set to: /root/cpu2006-1.2
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda2        ext4      546G  12G  507G   3% /

```

Additional information from dmidecode:

```

BIOS Dell Inc. 1.5.2 03/11/2013
Memory:
5x 00AD00B300AD HMT31GR7BFR4C-PB 8 GB 1600 MHz 2 rank
7x 00AD04B300AD HMT31GR7BFR4C-PB 8 GB 1600 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 RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_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>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = Not Run

PowerEdge R420 (Intel Xeon E5-2450, 2.10 GHz)

SPECint\_rate\_base2006 = 541

CPU2006 license: 55

Test date: Mar-2013

Test sponsor: Dell Inc.

Hardware Availability: Mar-2013

Tested by: Dell Inc.

Software Availability: Feb-2013

## 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:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:

-xSSE4.2 -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

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revA.20120410.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revA.20120410.00.xml>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = Not Run

PowerEdge R420 (Intel Xeon E5-2450, 2.10 GHz)

SPECint\_rate\_base2006 = 541

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Mar-2013

Hardware Availability: Mar-2013

Software Availability: Feb-2013

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 Thu Jul 24 15:30:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 23 April 2013.