



# SPEC® CINT2006 Result

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Dell Inc.

SPECint®\_rate2006 = Not Run

PowerEdge T320 (Intel Xeon E5-2430, 2.20 GHz)

SPECint\_rate\_base2006 = 205

CPU2006 license: 55

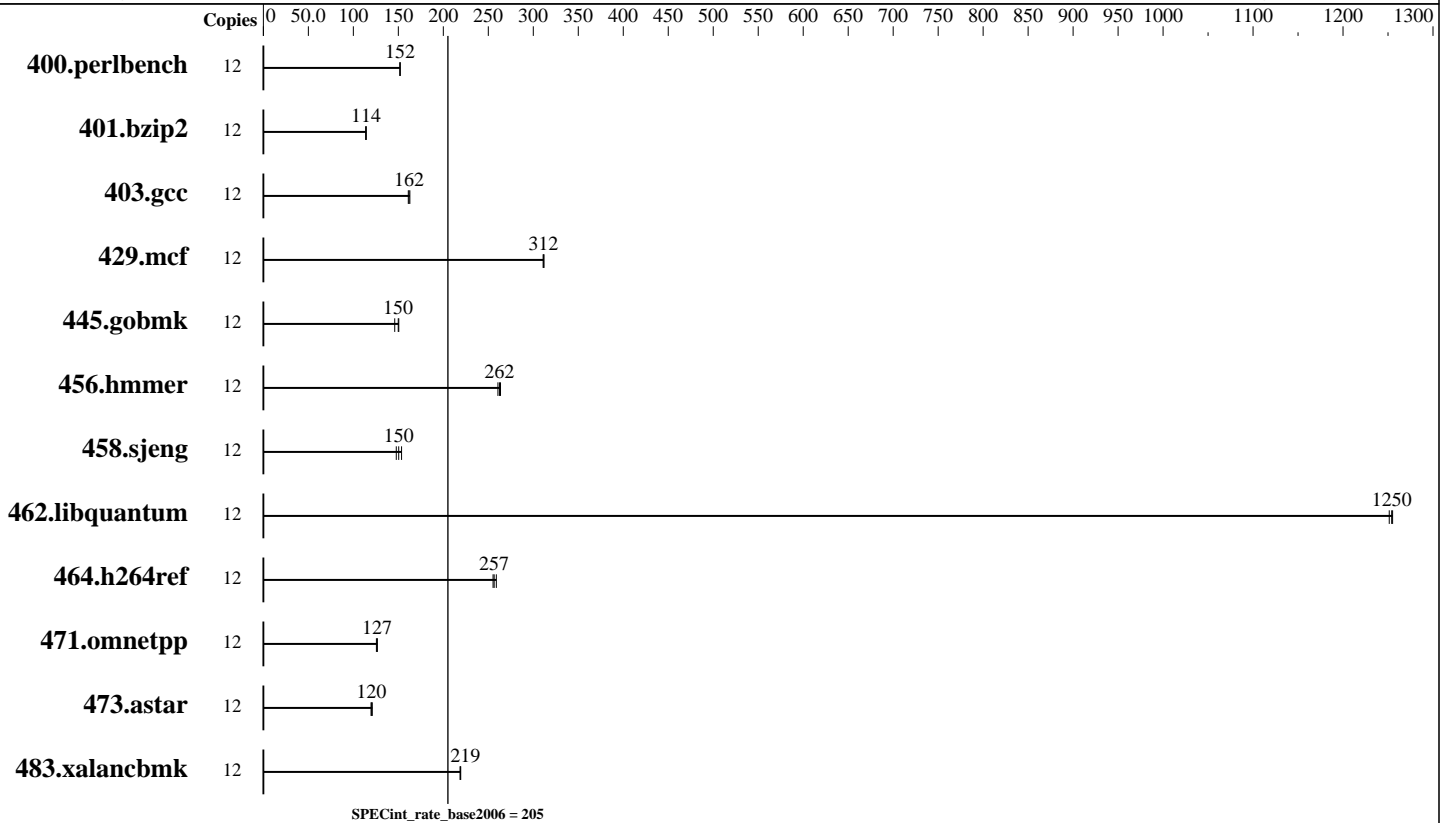
Test date: Mar-2013

Test sponsor: Dell Inc.

Hardware Availability: Mar-2013

Tested by: Dell Inc.

Software Availability: Feb-2013



## Hardware

CPU Name: Intel Xeon E5-2430  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.70 GHz  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 6 cores, 1 chip, 6 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: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (6 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz)  
 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



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	12	<u>772</u>	<u>152</u>	772	152	771	152							
401.bzip2	12	<u>1014</u>	<u>114</u>	1018	114	1014	114							
403.gcc	12	593	163	600	161	<u>597</u>	<u>162</u>							
429.mcf	12	351	312	352	311	<u>351</u>	<u>312</u>							
445.gobmk	12	862	146	836	151	<u>840</u>	<u>150</u>							
456.hammer	12	<u>427</u>	<u>262</u>	425	264	429	261							
458.sjeng	12	983	148	<u>965</u>	<u>150</u>	945	154							
462.libquantum	12	<u>198</u>	<u>1250</u>	199	1250	198	1260							
464.h264ref	12	1040	255	<u>1035</u>	<u>257</u>	1026	259							
471.omnetpp	12	<u>593</u>	<u>127</u>	597	126	593	127							
473.astar	12	696	121	704	120	<u>700</u>	<u>120</u>							
483.xalancbmk	12	377	219	378	219	<u>378</u>	<u>219</u>							

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 T320 Tue Mar 26 11:25:29 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 E5-2430 0 @ 2.20GHz  
1 "physical id"s (chips)  
12 "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 : 6  
siblings : 12

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## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5
cache size : 15360 KB
```

```
From /proc/meminfo
MemTotal:      49380616 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 T320 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 26 11:23
```

```
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. 1.5.1 03/08/2013
Memory:
2x 00AD00B300AD HMT31GR7BFR4C-PB 8 GB 1333 MHz 2 rank
2x 00AD04B300AD HMT31GR7BFR4C-PB 8 GB 1333 MHz 2 rank
2x 00CE00B300CE M393B1K70DH0-CK0 8 GB 1333 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>
```



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## 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>



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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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