



# SPEC® CINT2006 Result

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**Huawei**

**SPECint\_rate2006 = Not Run**

**Huawei RH2288 V3 (Intel Xeon E5-2699 v3)**

**SPECint\_rate\_base2006 = 1340**

**CPU2006 license:** 3175

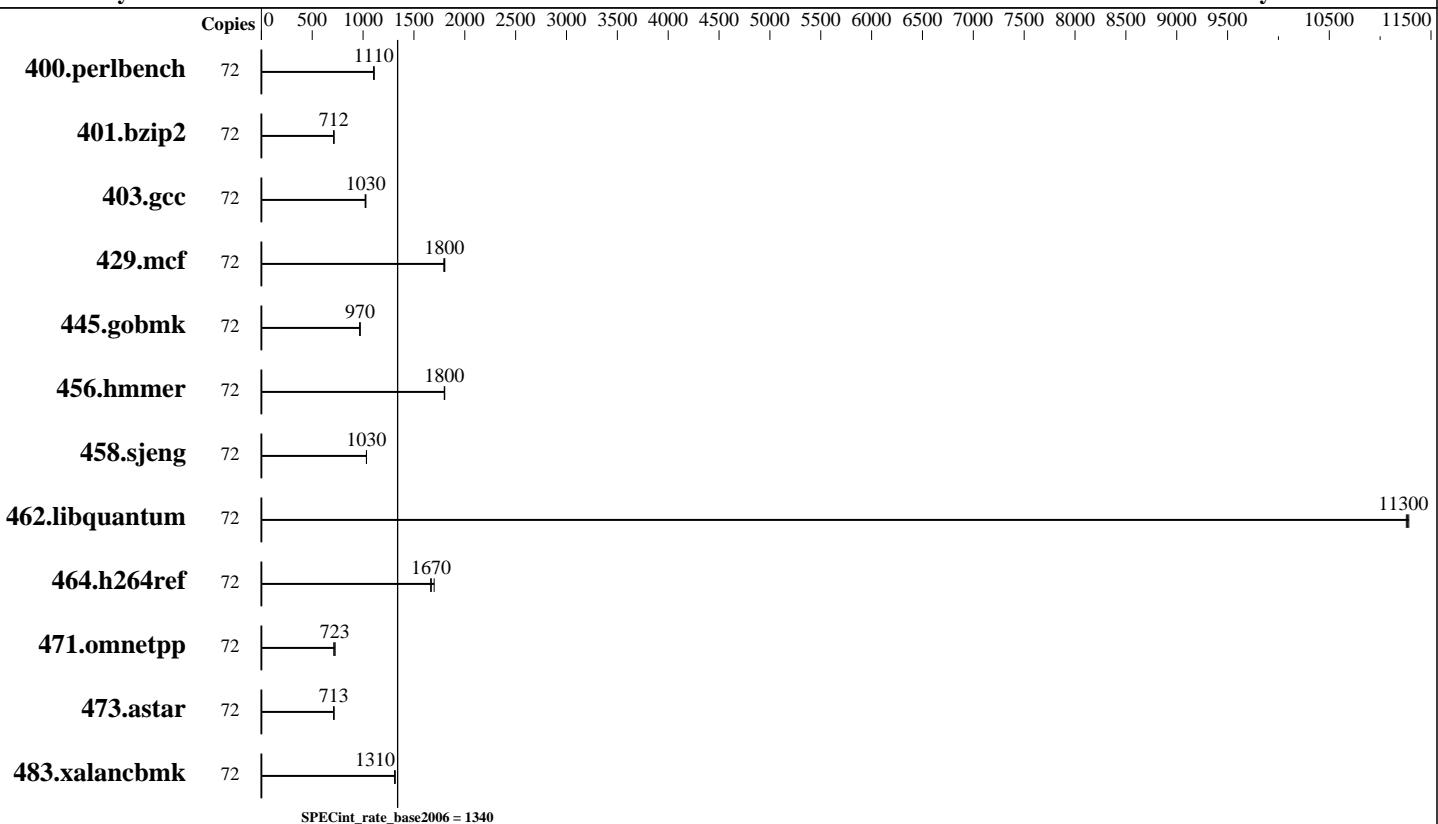
**Test date:** Aug-2014

**Test sponsor:** Huawei

**Hardware Availability:** Sep-2014

**Tested by:** Huawei

**Software Availability:** Nov-2013



## Hardware

CPU Name: Intel Xeon E5-2699 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 36 cores, 2 chips, 18 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: 45 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)  
 Disk Subsystem: 1 x 300 GB SAS, 10000RPM  
 Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)  
 Compiler: 2.6.32-431.el6.x86\_64  
 Auto Parallel: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-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	72	635	1110	<b>636</b>	<b>1110</b>	637	1100							
401.bzip2	72	<b>975</b>	<b>712</b>	976	712	974	713							
403.gcc	72	568	1020	565	1030	<b>565</b>	<b>1030</b>							
429.mcf	72	<b>365</b>	<b>1800</b>	366	1790	364	1800							
445.gobmk	72	778	971	<b>778</b>	<b>970</b>	781	967							
456.hmmer	72	373	1800	373	1800	<b>373</b>	<b>1800</b>							
458.sjeng	72	844	1030	<b>843</b>	<b>1030</b>	843	1030							
462.libquantum	72	132	11300	<b>132</b>	<b>11300</b>	133	11300							
464.h264ref	72	938	1700	<b>954</b>	<b>1670</b>	957	1660							
471.omnetpp	72	<b>623</b>	<b>723</b>	632	711	622	723							
473.astar	72	708	714	<b>709</b>	<b>713</b>	711	711							
483.xalancbmk	72	379	1310	<b>379</b>	<b>1310</b>	378	1320							

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 configuration:

Set Power Efficiency Mode to Custom

Set Snoop Mode to COD

Baseboard Management Controller used to adjust the fan speed to 100%

Sysinfo program /spec/config/sysinfo.rev6818

\$Rev: 6818 \$ \$Date::: 2012-07-17 #\\$ e86d102572650a6e4d596a3cee98f191

running on localhost.localdomain Thu Jan 2 02:00:44 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 E5-2699 v3 @ 2.30GHz

2 "physical id"s (chips)

72 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The

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

```
cpu cores : 18
siblings   : 36
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 23040 KB
```

```
From /proc/meminfo
MemTotal:      264269740 kB
HugePages_Total:       0
Hugepagesize:     2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.5 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54
EST 2013 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Jan 2 01:58
```

```
SPEC is set to: /spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal      ext4  268G  106G  148G  42%  /
```

Additional information from dmidecode:

```
BIOS Insyde Corp. 1.13 08/08/2014
Memory:
 8x NO DIMM NO DIMM      3 rank
 8x Samsung M393A2G40DB0-CPB 16 GB 2133 MHz 1 rank
 8x Samsung M393A2G40DB0-CPB 16 GB 2133 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 = "/spec/libs/32:/spec/libs/64:/spec/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/redhat_transparent_hugepage/enabled
```

Filesystem page cache cleared with:

```
echo 1> /proc/sys/vm/drop_caches
```

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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

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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