



# SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ZTE

### SPECint®\_rate2006 = 933

## R5300 G3 (Intel Xeon E5-2660 v3)

### SPECint\_rate\_base2006 = 900

CPU2006 license: 3834

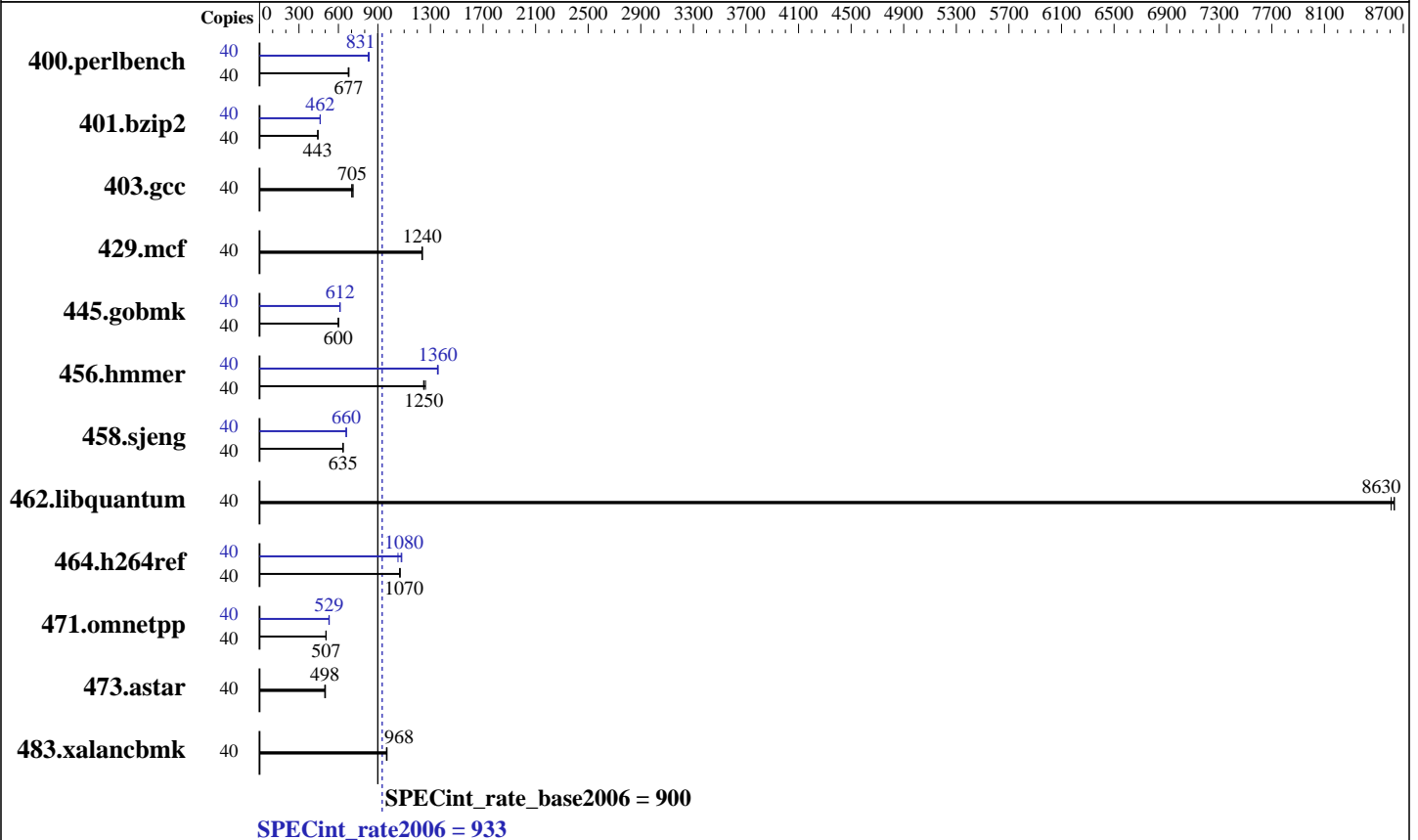
Test sponsor: ZTE

Tested by: ZTE

Test date: Apr-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014



### Hardware

CPU Name: Intel Xeon E5-2660 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 20 cores, 2 chips, 10 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: 25 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, 10K RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 7.0(Maipo) 3.10.0-121.el7.x86\_64  
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: xfs  
 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

ZTE

SPECint\_rate2006 = 933

R5300 G3 (Intel Xeon E5-2660 v3)

SPECint\_rate\_base2006 = 900

CPU2006 license: 3834

Test sponsor: ZTE

Tested by: ZTE

Test date: Apr-2015

Hardware Availability: Sep-2014

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	40	574	681	<u>577</u>	<u>677</u>	579	675	40	469	834	472	827	<u>470</u>	<u>831</u>
401.bzip2	40	<u>871</u>	<u>443</u>	868	444	871	443	40	<u>836</u>	<u>462</u>	838	461	836	462
403.gcc	40	<u>456</u>	<u>705</u>	452	712	459	701	40	<u>456</u>	<u>705</u>	452	712	459	701
429.mcf	40	294	1240	<u>295</u>	<u>1240</u>	295	1240	40	294	1240	<u>295</u>	<u>1240</u>	295	1240
445.gobmk	40	<u>700</u>	<u>600</u>	700	599	698	601	40	685	613	<u>685</u>	<u>612</u>	687	611
456.hammer	40	<u>298</u>	<u>1250</u>	296	1260	299	1250	40	275	1360	276	1350	<u>275</u>	<u>1360</u>
458.sjeng	40	763	635	760	636	<u>762</u>	<u>635</u>	40	734	660	733	660	<u>733</u>	<u>660</u>
462.libquantum	40	96.0	8630	<u>96.0</u>	<u>8630</u>	96.3	8610	40	96.0	8630	<u>96.0</u>	<u>8630</u>	96.3	8610
464.h264ref	40	<u>828</u>	<u>1070</u>	828	1070	831	1070	40	<u>822</u>	<u>1080</u>	840	1050	818	1080
471.omnetpp	40	<u>493</u>	<u>507</u>	496	504	493	507	40	471	531	473	528	<u>473</u>	<u>529</u>
473.astar	40	<u>564</u>	<u>498</u>	560	501	565	497	40	<u>564</u>	<u>498</u>	560	501	565	497
483.xalancbmk	40	286	965	<u>285</u>	<u>968</u>	285	970	40	286	965	<u>285</u>	<u>968</u>	285	970

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:

Turbo boost Technology enabled

Virtualization Technology disabled

Hyper Threading Technology enabled

Sysinfo program /home/speccpu/config/sysinfo.rev6914

\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ 2b55956e7c0e338e808a36a21505f13a

running on localhost.localdomain Mon Jan 20 23:54:19 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 E5-2660 v3 @ 2.60GHz

2 "physical id"s (chips)

40 "processors"

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

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

<http://www.spec.org/>

Page 2



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ZTE

SPECint\_rate2006 = 933

R5300 G3 (Intel Xeon E5-2660 v3)

SPECint\_rate\_base2006 = 900

CPU2006 license: 3834

Test sponsor: ZTE

Tested by: ZTE

Test date: Apr-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## Platform Notes (Continued)

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

```
cpu cores : 5
siblings : 10
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 12800 KB
```

From /proc/meminfo

```
MemTotal: 263822288 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

From /etc/\*release\* /etc/\*version\*

```
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server
```

uname -a:

```
Linux localhost.localdomain 3.10.0-121.el7.x86_64 #1 SMP Tue Apr 8 10:48:19
EDT 2014 x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Jan 19 16:04

SPEC is set to: /home/speccpu

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 225G 155G 71G 69% /home
```

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 INSYDE Corp. UBF00.00.04\_SVN0 03/01/2015

Memory:

```
16x Micron 36ADS2G72PZ-2G1A1 16 GB 2 rank 2133 MHz
8x NO DIMM Unknown
```

(End of data from sysinfo program)

The Sysinfo run date says Jan 2014 rather than Apr 2015 because the operator forgot to change the BIOS's default time before testing. The testing time should be Apr. 2015.



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ZTE

SPECint\_rate2006 = 933

R5300 G3 (Intel Xeon E5-2660 v3)

SPECint\_rate\_base2006 = 900

CPU2006 license: 3834

Test sponsor: ZTE

Tested by: ZTE

Test date: Apr-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## General Notes

Environment variables set by runspec before the start of the run:

```
LD_LIBRARY_PATH = "/home/speccpu/libs/32:/home/speccpu/libs/64:/home/speccpu/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
```

## 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
```



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

**ZTE**

**SPECint\_rate2006 = 933**

**R5300 G3 (Intel Xeon E5-2660 v3)**

**SPECint\_rate\_base2006 = 900**

**CPU2006 license:** 3834

**Test sponsor:** ZTE

**Tested by:** ZTE

**Test date:** Apr-2015

**Hardware Availability:** Sep-2014

**Software Availability:** Sep-2014

## 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

## 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: basepeak = yes

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: -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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ZTE

SPECint\_rate2006 = 933

R5300 G3 (Intel Xeon E5-2660 v3)

SPECint\_rate\_base2006 = 900

CPU2006 license: 3834

Test sponsor: ZTE

Tested by: ZTE

Test date: Apr-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## Peak Optimization Flags (Continued)

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)  
-unroll2 -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

## 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/ZTE-Platform-Flags-V2.0.html>

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/ZTE-Platform-Flags-V2.0.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 Tue May 5 15:14:48 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 5 May 2015.