



SPEC® CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint®2006 = **NC**

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006 = **NC**

CPU2006 license: 3175

Test date: Mar-2016

Test sponsor: Huawei

Hardware Availability: Mar-2016

Tested by: Huawei

Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not
http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2**>SPEC CPU run**
up policy on <https://www.spec.org/osg/policy.html#AppendixC>**>gener**

- 400.perlbench
- 401.bzip2
- 403.gcc
- 429.mcf
- 445.gobmk
- 456.hmmer
- 458.sjeng
- 462.libquantum
- 464.h264ref
- 471.omnetpp
- 473.astar
- 483.xalancbmk

Hardware

CPU Name: Intel Xeon E5-2660 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 28 cores, 2 chips, 14 cores/chip
 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: 35 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)
 Disk Subsystem: 1 x 1000 GB SATA, 7200rpm
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)
 3.10.0-123.el7.x86_64
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.2



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = NC

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Mar-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2 SPEC CPU run up policy on <https://www.spec.org/osg/policy.html#AppendixC> gener

Results Table

Benchmark	Base						Peak						
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	
400.perlbench	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
401.bzip2	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
403.gcc	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
429.mcf	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
445.gobmk	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
456.hammer	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
458.sjeng	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
462.libquantum	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
464.h264ref	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
471.omnetpp	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
473.astar	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
483.xalancbmk	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS configuration:
Set Power Efficiency Mode to Custom
Set Sleep Mode to ES mode
Set Patrol Scrub to Disable
Set Hyper-Threading to Disable
Sysinfo program /spec16/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Sun Jan 26 09:02:19 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = **NC**

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006 = **NC**

CPU2006 license: 3175

Test date: Mar-2016

Test sponsor: Huawei

Hardware Availability: Mar-2016

Tested by: Huawei

Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not
a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU run
up policy on gener

Platform Notes (Continued)

<http://www.spec.org/cpu2006/Docs/config.html#ysinfo>

From /proc/cpuinfo

model name : Intel(R) Xeon(R) CPU E5-2660 v4 @ 2.00GHz

2 "physical id"s (chips)

28 "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 : 14

siblings : 14

physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

cache size : 35840 KB

From /proc/meminfo

MemTotal: 263569784

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)

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 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57

EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 25 17:29

SPEC is set to: /spec16

Filesystem Type Size Used Avail Use% Mounted on

/dev/sda2 ext4 913G 94G 773G 11% /

Additional information from dmidecode:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 =

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Mar-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2 SPEC CPU run up policy on <https://www.spec.org/osg/policy.html#AppendixC> gener

Platform Notes (Continued)

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. 3.09 02/17/2016

Memory:

8x Samsung M393A2G40EB1-CRC 16 GB 1 rank 2400 MHz
8x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by spec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/spec16/libs/32:/spec16/libs/64:/spec16/sh"
OMP_NUM_THREADS = "28"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

The Huawei XH622 V3 and Huawei XH628 V3 and Huawei XH620 V3

are electronically equivalent.

The results have been measured on a Huawei XH620 V3 model

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 =

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Mar-2016

Hardware Availability: Mar-2016

Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not
http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2 SPEC CPU run
<https://www.spec.org/osg/policy.html#AppendixC> gener

Base Portability Flags

```

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_x64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

```

Base Optimization Flags

```

C benchmarks:
-xCORE-AVX2 -ipo -O3 -march=core-avx2 -prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -march=core-avx2 -prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -Wl,-z,relro -Wl,-z,now -Wl,-z,combreloc -Wl,-z,now -Wl,-z,relro -Wl,-z,combreloc -Wl,-z,now -Wl,-z,relro -Wl,-z,combreloc

```

Base Other Flags

```

C benchmark:
402.gemver: -Dalloca=_alloca

```

Peak Compiler Invocation

```

C benchmarks (except as noted below):
icc -m64

400.perlbench: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
445.gobmk: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 =

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Mar-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2 SPEC CPU run up policy on <https://www.spec.org/osg/policy.html#AppendixC> gener

Peak Compiler Invocation (Continued)

C++ benchmarks (except as noted below):

```
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin  
473.astar: icpc -m64
```

Peak Portability Flags

```
400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32  
401.bzip2: -DSPEC_CPU_LP64  
403.gcc: -DSPEC_CPU_LP64  
429.mcf: -DSPEC_CPU_LP64  
445.gobmk: -D_FILE_OFFSET_BITS=64  
456.hmmer: -DSPEC_CPU_LP64  
458.sjeng: -DSPEC_CPU_LP64  
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX  
464.h264ref: -DSPEC_CPU_LP64  
471.omnetpp: -D_FILE_OFFSET_BITS=64  
473.astar: -DSPEC_CPU_LP64  
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)  
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)  
-par-num-threads=1(pass 1) -prof-use(pass 2) -opt-prefetch  
-ansi-alias  
401.bzip2: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)  
-ipo(pass 2) -O3(pass 2) -no-prec-div  
-par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32  
-opt-prefetch -ansi-alias  
403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc  
-opt-malloc-options=3 -auto-ilp32  
429.mcf: -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel  
-opt-prefetch -auto-p32
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = **NC**

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006 = **NC**

CPU2006 license: 3175

Test date: Mar-2016

Test sponsor: Huawei

Hardware Availability: Mar-2016

Tested by: Huawei

Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2 SPEC CPU run up policy on <https://www.spec.org/osg/policy.html#AppendixC> gener

Peak Optimization Flags (Continued)

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-prof-use(pass 2) -par-num-threads=1(pass 1) -ansi-alias

456.hmmer: basepeak = yes

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2)
-opt-ra-region -strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmarheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-autoinc32 -Wl,-z,muldefs -L/sh -lsmarheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -lsmarheap

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-ic16.0-official-linux64.html>

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

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



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = NC

Huawei XH628 V3 (Intel Xeon E5-2660 v4)

SPECint_base2006 = NC

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Mar-2016

Hardware Availability: Mar-2016

Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2 SPEC CPU run up policy on <https://www.spec.org/osg/policy.html#AppendixC> gener

Non-Compliant

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.

Tested with SPEC CPU2006 v1.2.
Report generated on Fri Oct 21 20:09:44 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 April 2016.