Huawei

Huawei CH225 V3 (Intel Xeon E5-2680 v4)

**SPECint\_rate2006** = NC

**SPECint\_rate\_base2006** = NC

---

**Copies**

| 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 E5-2680 v4
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.30 GHz
- **CPU MHz:** 2400
- **FPU:** Integrated
- **CPU(s) enabled:** 28 cores, 2 chips, 14 cores/chip, 2 threads/core
- **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
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)
- **Disk Subsystem:** 1 x 500 GB SATA, 7200 RPM

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 7.2 (Maipo)
- **Compiler:** C/C++: Version 16.0.0.101 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 V10.2

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**SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.**
Huawei

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SPECint_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Test date: Jul-2016
Hardware Availability: Mar-2016
Tested by: Huawei
Software Availability: Mar-2016

Results Table

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</tbody>
</table>

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 Performance
Set Snoop Mode to COD mode
Set Patrol Scrub to Disable
Sysinfo program /spec16/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Sat Jul 30 15:52:38 2016

This section contains SUT (System Under Test) info as seen by

Continued on next page
Huawei

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Platform Notes (Continued)

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 E5-2680 v4@ 2.40GHz
2 "physical id"s (chips)
56 "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 : 28
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
cache size : 17920 KB

From /proc/meminfo
MemTotal:       263564516 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.2 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.2"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.2 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.2:ga:server"
system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)

uname -a:
Linux localhost.localdomain 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29 EDT 2015 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jul 30 15:50

SPEC is set to: /spec16

Filesystem Type  Size Used Avail Use% Mounted on
/dev/sda2 xfs 535G 11G 525G 2% /
Huawei CH225 V3 (Intel Xeon E5-2680 v4)

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<thead>
<tr>
<th>Base Portability Flags</th>
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<tbody>
<tr>
<td>400.perlbench:</td>
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<tr>
<td>-D_FILE_OFFSET_BITS=64</td>
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<tr>
<td>-DSPEC_CPU_LINUX</td>
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<tr>
<td>401.bzip2:</td>
</tr>
<tr>
<td>-D_FILE_OFFSET_BITS=64</td>
</tr>
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</tr>
<tr>
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</tr>
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<td>464.h264ref:</td>
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<tr>
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<tr>
<td>C benchmarks:</td>
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<tr>
<td>-xCORE-AVX2</td>
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<tr>
<td>-ipo</td>
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<tr>
<td>-O3</td>
</tr>
<tr>
<td>-no-prec-div</td>
</tr>
<tr>
<td>-opt-prefetch</td>
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<tr>
<td>-opt-mem-layout-trans=3</td>
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<td>C++ benchmarks:</td>
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<td>-opt-prefetch</td>
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<tr>
<td>-opt-mem-layout-trans=3</td>
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<tr>
<td>-Wl,-z,muldefs</td>
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<tr>
<td>-L/sh</td>
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<td>-lsmartheap</td>
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<tr>
<th>Base Other Flags</th>
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<tr>
<td>C benchmarks:</td>
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<td>-D alloca=_alloca</td>
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<table>
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<th>Peak Compiler Invocation</th>
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<tr>
<td>C benchmarks (except as noted below):</td>
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<tr>
<td>icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin</td>
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<tr>
<td>400.perlbench: icc -m64</td>
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Continued on next page
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Peak Compiler Invocation (Continued)

401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
458.sjeng: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64
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)
-ipopass 2 -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32
401.bzip2: -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
-auto-ilp32 -ansi-alias
403.gcc: basepeak = yes
Huawei CH225 V3 (Intel Xeon E5-2680 v4)

CPU2006 license: 3175
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Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-genc:threadsafe(pass 1)
  -prof-use(pass 2) -par-num-threads=1(pass 1) -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-genc: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
  -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-genc:threadsafe(pass 1)
  -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
  -par-num-threads=1(pass 1) -prof-use(pass 2) -ansi-alias
  -opt-mem-layout-strategy=block -Wl,-z,muldefs
  -l/sh = /marcheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

32.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
Huawei CH225 V3 (Intel Xeon E5-2680 v4)

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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

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For questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

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