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.

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

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: xfs
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.2
Huawei

Huawei XH628 V3(Intel Xeon E5-2609 v4)

SPECint2006 = NC
SPECint_base2006 = NC

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

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 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 Snoop Mode to ES mode
Set Patrol Scrub to Disable
Sysinfo program /spec16/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Thu Mar 24 18:07:14 2016

This section contains SUT (System Under Test) info as seen by
Continued on next page

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 <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>.

Non-Compliant
Huawei XH628 V3(Intel Xeon E5-2609 v4) SPECint2006 = NC
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 available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

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 E5-2609 v4 @ 1.70GHz
2 "physical id"s (chips)
16 "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: 8
siblings: 8
physical 0: cores 0 2 3 4 5 6 7
physical 1: cores 0 2 3 4 5 6

From /proc/meminfo
MemTotal: 263571176 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 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 23 15:06

SPEC is set to: /spec16
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 443G 14G 429G 4% /

Continued on next page
Non-compliant
SPEC CINT2006 Result

Huawei

Huawei XH628 V3(Intel Xeon E5-2609 v4)

SPECint2006 = NC
SPECint_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Test date: Mar-2016
Tested by: Huawei
Software Availability: Mar-2016
Hardware 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 available as required by <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>.

Platform Notes (Continued)

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. 3.09 02/22/2016
Memory:
8x Samsung M393A2G40EB1-CRC 16 GB 1 rank 2400 MHz, configured at 1867 MHz
8x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz, configured at 1867 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec 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 = "16"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
umactl --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
Huawei

Huawei XH628 V3 (Intel Xeon E5-2609 v4)

**SPECint2006** = NC

**SPECint_base2006** = NC

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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](http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2) and the SPEC Open Systems Group policy on [general availability](https://www.spec.org/osg/policy.html#AppendixC).

### 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` `-no-prec-div` `-parallel` `-opt-prefetch` `-auto-p32`

**C++ benchmarks:**
- `-xCORE-AVX2` `-ipo` `-O3` `-no-prec-div` `-opt-prefetch` `-auto-p32` `-Wl,-z,muldefs` `-L/sh -lsmartheap64`

### Base Other Flags

**C benchmarks:**
- `-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`

**C++ benchmarks (except as noted below):**
- `icpc` `-m32` `-L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

Continued on next page
Huawei

Huawei XH628 V3(Intel Xeon E5-2609 v4)

**SPECint2006 = NC**

**SPECint_base2006 = NC**

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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. 

**Peak Compiler Invocation (Continued)**

473.astar: icpc -m64

**Peak Portability Flags**

<table>
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<tr>
<th>Benchmark</th>
<th>Flags</th>
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<tr>
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<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64</td>
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<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64</td>
</tr>
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<td>429.mcf</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64</td>
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<tr>
<td>445.gobmk</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64</td>
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<tr>
<td>458.sjeng</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64</td>
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<td>462.libquantum</td>
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<td>471.omnetpp</td>
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<td>483.xalancbmk</td>
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**Peak Optimization Flags**

**C benchmarks:**

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<tr>
<td>400.perlbench</td>
<td>-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 -opt-malloc-options=3 -auto-ilp32 -ansi-alias</td>
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<tr>
<td>401.bzip2</td>
<td>-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</td>
</tr>
<tr>
<td>429.mcf</td>
<td>-xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>basepeak = yes</td>
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Continued on next page
Huawei
Huawei XH628 V3(Intel Xeon E5-2609 v4)

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

Huawei XH628 V3(Intel Xeon E5-2609 v4)
SPECint2006 = NC
SPECint_base2006 = NC

CPU2006 license: 3175
Test date: Mar-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

Peak Optimization Flags (Continued)

456.hmmer: basepeak = yes
458.sjeng: -xCORE-AVX2 (pass 2) -prof-gen:threadsafe (pass 2)
            -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 -lsmartheap
473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
          -auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64
483.xalancbk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
              -ansi-alias
              -Wl,-z,muldefs -L/sh -lsmartheap

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

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Non-Compliant
Huawei XH628 V3 (Intel Xeon E5-2609 v4)

| SPECint2006 = | NC |
| SPECint_base2006 = | NC |

CPU2006 license: 3175  
Test sponsor: Huawei  
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For questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.  
Originally published on 19 April 2016.