Huawei RH2288 V3 (Intel Xeon E5-2630L v4) SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>400.perlbench</td>
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<td>471.omnetpp</td>
</tr>
<tr>
<td>473.astar</td>
</tr>
<tr>
<td>483.xalancbmk</td>
</tr>
</tbody>
</table>

**Hardware**

- CPU: Intel Xeon E5-2630L v4
- CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz
- CPU MHz: 1800
- 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 PC4-2400T-R, running at 2133 MHz)
- Disk Subsystem: 1 x 500 GB SATA, 7200 RPM

**Software**

- Operating System: Red Hat Enterprise Linux Server release 7.2 (Maipo) 3.10.0-327.el7.x86_64
- 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: 32/64-bit
- Peak Pointers: 32/64-bit
- Other Software: Microquill SmartHeap V10.2
Huawei RH2288 V3(Intel Xeon E5-2630L v4)

Huawei

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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

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

Other Hardware: None

Results Table

<table>
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<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Seconds</th>
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<td>40</td>
<td>NC</td>
<td>NC</td>
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<td>NC</td>
</tr>
</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 ES mode
Set Patrol Scrub to Disable
Sysinfo program /spec16/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Fri May 6 23:54:25 2016

Spec compliant
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

Huawei RH2288 V3(Intel Xeon E5-2630L v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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

Platform Notes (Continued)

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 E5-2630L v4 @ 1.80GHz
- 2 "physical id"s (chips)
- 40 "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: 10
  - siblings: 20
  - physical 0: cores 0 2 3 4 8 9 10 11 12
  - physical 1: cores 0 1 3 4 8 9 10 11 12
- cache size: 25600 KB

From /proc/meminfo
- MemTotal: 263567004 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"
  - Redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
  - 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 May 6 08:37
SPEC is set to: /spec16

This result is non-compliant.
Huawei RH2288 V3 (Intel Xeon E5-2630L v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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

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)

Filesystem   Type  Size  Used  Avail  Use%  Mounted on
/dev/sda3    xfs   431G  48G  384G   11%  /

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 Insysde Corp. 3.12 03/05/2016
Memory:
8x Samsung M393A2G40EB1-CRC 16 GB 1 rank 2400 MHz, configured at 2133 MHz
8x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz, configured at 2133 MHz

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec16/libs/32:/spec16/libs/64:/spec16/sh"

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
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runcase command invoked through numactl i.e.:
umactl --interleave=all runspec <etc>

Base Compiler Invocation

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

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
Huawei RH2288 V3 (Intel Xeon E5-2630L v4)

| SPECint_rate2006 | NC |
| SPECint_rate_base2006 | NC |

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: May-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 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>.

### Base Portability Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
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</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX -ia32</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>-D_FILE_OFFSET_BITS=64</td>
</tr>
<tr>
<td>403.gcc</td>
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<td>462.libquantum</td>
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<td>483.xalancbmk</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX</td>
</tr>
</tbody>
</table>

### Base Optimization Flags

- C benchmarks:
  - xCORE-AVX2
  - ipo
  - -O3
  - -prec-div
  - -opt-prefetch
  - -opt-mem-layout-trans

- C++ benchmarks:
  - xCORE-AVX2
  - ipo
  - -O3
  - -prec-div
  - -opt-prefetch
  - -opt-mem-layout-trans

### Base Other Flags

- C benchmarks:
  - -Dalloca=_alloca

### Peak Compiler Invocation

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

  400.perlbench: icc -m64
```
Huawei RH2288 V3 (Intel Xeon E5-2630L v4)

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: May-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 available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

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_OFFSETBITS=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)
-ipo(pass 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

Non Compliant
Huawei RH2288 V3(Intel Xeon E5-2630L v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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

Test date: May-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 available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Peak Optimization Flags (Continued)

429.mcf: basepeak = yes
445.gobmk: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-prof-use(pass 2) -par-num-threads=1(pass 2) -ansi-alias
-opt-mem-layout-trans=3
456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32
458.sjeng: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll14
-auto-ilp32
462.libquantum: basepeak = yes
464.h264ref: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll12
-ansi-alias

C++ benchmarks:
471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 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 -lsmartheap
473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca
### Huawei

**Huawei RH2288 V3 (Intel Xeon E5-2630L v4)**

<table>
<thead>
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<th>SPECint_rate2006</th>
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**CPU2006 license:** 3175

**Test date:** May-2016

**Test sponsor:** Huawei

**Tested by:** Huawei

**Hardware Availability:** Mar-2016

**Software Availability:** Mar-2016

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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).**

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

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

Tested with SPEC CPU2006 v1.2.


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