Huawei
Huawei RH1288 V3(Intel Xeon E5-2623 v4)

SPECfp®_rate2006 = NC
SPECfp_rate_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 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>.

Copies

410.bwaves
416.gamess
433.milc
434.zeusmp
435.gromacs
436.cactusADM
437.leslie3d
444.namd
447.dealII
450.soplex
453.povray
454.calculix
459.GemsFDTD
465.tonto
472.lbm
481.wrf
482.sphinx3
Huawei RH1288 V3 (Intel Xeon E5-2623 v4)

**SPECfp_rate2006 = NC**  
**SPECfp_rate_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.**

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Xeon E5-2623 v4</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td>Intel Turbo Boost Technology up to 3.20 GHz</td>
</tr>
<tr>
<td>CPU MHz:</td>
<td>2600</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>8 cores, 2 chips, 4 cores/chip, 2 threads/core</td>
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<tr>
<td>CPU(s) orderable:</td>
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<tr>
<td>Primary Cache:</td>
<td>32 KB I+D on chip per core</td>
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<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
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<tr>
<td>L3 Cache:</td>
<td>10 MB I+D on chip per chip</td>
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<tr>
<td>Other Cache:</td>
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<tr>
<td>Memory:</td>
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<tr>
<td>Disk Subsystem:</td>
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<tr>
<td>Other Hardware:</td>
<td>None</td>
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### Software

<table>
<thead>
<tr>
<th>Feature</th>
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</thead>
<tbody>
<tr>
<td>Operating System:</td>
<td>Red Hat Enterprise Linux Server release 7.0 (64bit)</td>
</tr>
</tbody>
</table>
| Compiler:                            | C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;  
 Fortran: Version 16.0.0.101 of Intel Fortran 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:                      | None                                                |
**SPEC CFP2006 Result**

**Huawei**

Huawei RH1288 V3 (Intel Xeon E5-2623 v4)

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<td>433.milc</td>
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</tr>
</tbody>
</table>

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

**Submit Notes**

A 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 Performance
- Set Snoop Mode to ES mode
- Set Patrol Scrub to Disable

---

Non-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](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).
Huawei RH1288 V3(Intel Xeon E5-2623 v4)  

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Platform Notes (Continued)

Sysinfo program /spec16/config/sysinfo.rev6914  
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1  
runtime on localhost.localdomain Mon Mar  7 12:17:28 2016  

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 E5-2623 v4 @ 2.60GHz  
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 : 4  
siblings : 8  
physical 0: cores 0 1 2 3  
physical 1: cores 0 1 2 3  
cache size : 10240 KB  

From /proc/meminfo  
MemTotal: 163571200 kB  
HugePages_Total: 0  
Hugepagesize: 2048 kB  

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

Continued on next page
Huawei

Huawei RH1288 V3(Intel Xeon E5-2623 v4)

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Platform Notes (Continued)

Platform Notes (Continued)

run-level 3 Mar 5 04:55

SPEC is set to: /spec16

Filesystem          Type  Size  Used  Avail  Use% Mounted on
/dev/sda3           xfs   443G   39G  404G   9%  /

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 2133 MHz
8x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz, configured at 2133 MHz

(End of data from sysinfo program)

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
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:  
icc  -m64

C++ benchmarks:  
icpc  -m64

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 SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64 -nofor_main
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
### Huawei RH1288 V3 (Intel Xeon E5-2623 v4)

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<tr>
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<th>SPECfp_rate_base2006</th>
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- **Test sponsor:** Huawei  
- **Tested by:** Huawei  
- **Hardware Availability:** Mar-2016  
- **Software Availability:** Mar-2016  

**Base Optimization Flags (Continued)**

Benchmarks using both Fortran and C:
- `-xCORE-AVX2`  
- `-ipo`  
- `-no-prec-div`  
- `-opt-prefetch`  
- `-ansi-alias`  
- `-opt-mem-layout-trans=3`

**Peak Compiler Invocation**

- **C benchmarks:**  
  - `icc  -m64`
- **C++ benchmarks:**  
  - `icpc  -m64`
- **Fortran benchmarks:**  
  - `ifort  -m64`

Benchmarks using both Fortran and C:
- `icc  -m64 ifort  -m64`

**Peak Portability Flags**

Same as Base Portability Flags

**Peak Optimization Flags**

- **C benchmarks:**
  - `433.milc: basepeak = yes`
  - `70.1bm: basepeak = yes`
  - `482.sphinx3: basepeak = yes`

- **C++ benchmarks:**
  - `444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -fno-alias -auto-ilp32`

---

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Huawei

SPEC CFP2006 Result

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SPECfp_rate_base2006 = NC

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

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

Peak Optimization Flags (Continued)

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xCORE-AVX2(p=2) -prof-gen:threadsafe=1(pass 1)
-ipo(p=2) -O3(p=2) -no-prec-div(p=2)
-par-num-threads=1(pass 1) -opt-mem:layout-trans=3(pass 2)
-prof-use(pass 2) -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes
416.gamess: -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) -unroll2
-inl-lin-evel=0 -scalar-rep-

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
454.calculix: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: -xCORE-AVX2(p=2) -prof-gen:threadsafe=pass 1
-ipo(p=2) -O3(p=2) -no-prec-div(p=2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll14 -auto
-inl-lin-e-callicc -opt-malloc-options=3

Non-Compliant

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**SPEC CFP2006 Result**

### Huawei

**Huawei RH1288 V3(Intel Xeon E5-2623 v4)**

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

### Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

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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