Huawei RH5885H v3 (Intel Xeon E7-4830 v2)

| SPECfp_rate2006 = | NC |
| SPECfp_rate_base2006 = | NC |

CPU2006 license: 3175
Test date: May-2014
Test sponsor: Huawei
Hardware Availability: Feb-2014
Tested by: Huawei
Software Availability: Nov-2013

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COPIES

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<td>482.sphinx3</td>
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SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation
Huawei RH5885H v3 (Intel Xeon E7-4830 v2)

**SPECfp_rate2006** = NC  
**SPECfp_rate_base2006** = NC

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon E7-4830 v2</td>
<td>Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)</td>
</tr>
<tr>
<td>CPU Characteristics: Intel Turbo Boost Technology up to 2.70 GHz</td>
<td>Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux; Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux</td>
</tr>
<tr>
<td>CPU MHz: 2200</td>
<td>Auto Parallel: No</td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td>File System: ext4</td>
</tr>
<tr>
<td>CPU(s) enabled: 40 cores, 4 chips, 10 cores/chip, 2 threads/core</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>CPU(s) orderable: 2.4 chips</td>
<td>Base Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Secondary Cache: 256 KB I+D on chip per core</td>
<td>Other Software: None</td>
</tr>
<tr>
<td>L3 Cache: 20 MB I+D on chip per chip</td>
<td></td>
</tr>
<tr>
<td>Other Cache: None</td>
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</tr>
<tr>
<td>Memory: 512 GB (64 x 8 GB 2Rx4 PC3-10600R-9, ECC)</td>
<td></td>
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<tr>
<td>Disk Subsystem: 2 x 300 GB SAS, 10K RPM</td>
<td></td>
</tr>
<tr>
<td>Other Hardware: None</td>
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</table>

**Non-Compliant**

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Huawei or Intel.
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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"
Huawei RH5885H v3 (Intel Xeon E7-4830 v2)

SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: May-2014
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Platform Notes

BIOS configuration:
Set Power Efficiency Mode to Performance
Set Lock_step to disabled
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Tue May  6 08:47:18 2014

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 E7-4830 v2 @ 2.20GHz
4 "physical id"s (chips)
80 "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 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
physical 2: cores 0 1 2 3 4 8 9 10 11 12
physical 3: cores 0 1 2 3 4 8 9 10 11 12
cache size : 20480 KB

From /proc/meminfo
MemTotal:       529103328 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

HugePages_Total:       0
Hugepagesize:       2048 kB

From /usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)

uname -a:

Continued on next page
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Huawei

Huawei RH5885H v3 (Intel Xeon E7-4830 v2)

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### Base Compiler Invocation

**C benchmarks:**
- `icc -m64`

**C++ benchmarks:**
- `icpc -m64`

**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`
- `435.gromacs -DSPEC_CPU_LP64 -nofor_main`
- `436.cactusADM -DSPEC_CPU_LP64 -nofor_main`
- `437.leslie3d -DSPEC_CPU_LP64 -nofor_main`
- `444.namd -DSPEC_CPU_LP64`
- `447.dealII -DSPEC_CPU_LP64`
- `450.soplex -DSPEC_CPU_LP64`
- `453.povray -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`
- `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:**
- `xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias`
- `opt-mem-layout-trans=3`

Continued on next page
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Huawei or Intel.

Base Optimization Flags (Continued)

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

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -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:
ifort -m64

Peak Portability Flags

Same as Base Portability Flags
Huawei

Huawei RH5885H v3 (Intel Xeon E7-4830 v2)

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Peak Optimization Flags

C benchmarks:
433.milc: -xAVX (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -opt-mem-layout-trans=3 (pass 2)
-prof-use (pass 2) -auto-ilp32

470.lbm: basepeak = yes
482.sphinx3: basepeak = yes

C++ benchmarks:
444.namd: -xAVX (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -opt-mem-layout-trans=3 (pass 2)
-prof-use (pass 2) -fno-alias -auto-ilp32

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xAVX (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -opt-mem-layout-trans=3 (pass 2)
-prof-use (pass 2) -unroll4 -ansi-alias

Fortran benchmarks:
410.bwaves: basepeak = yes
416.gamess: -xAVX (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -prof-use (pass 2) -unroll2
-inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes
437.leslie3d: -xAVX -ipo -O3 -no-prec-div -opt-prefetch
459.GemsFDTD: basepeak = yes

465.tonto: -xAVX (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -prof-use (pass 2) -unroll4 -auto
-inline-callloc -opt-malloc-options=3

Continued on next page
Huawei RH5885H v3 (Intel Xeon E7-4830 v2)  

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**Peak Optimization Flags (Continued)**

Benchmarks using both Fortran and C:

- 435.gromacs: `-xAVX (pass 2)` `-prof-gen (pass 2)` `-ipo (pass 2)` `-03 (pass 2)` `-no-prec-div (pass 2)` `-opt-fem-layout-tran=3 (pass 2)` `-prof-use (pass 2)` `-prof-bench` `-auto-ilp32`
- 436.cactusADM: `basepeak = yes`
- 454.calculix: `basepeak = yes`
- 481.wrf: `-xAVX` `-ipo` `-03` `-prec-div` `-auto-ilp32`

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


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


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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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Non-Compliant