Huawei

Huawei RH5885H v3 (Intel Xeon E7-4890 v2)

| SPECfp®_rate2006 = | Not Run |
| SPECfp_rate_base2006 = | 1730 |

CPU2006 license: 13
Test sponsor: Huawei
Tested by: Huawei

Test date: Feb-2014
Hardware Availability: Feb-2014
Software Availability: Nov-2013

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECfp_rate_base2006</th>
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<tr>
<td>410.bwaves</td>
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<td>1410</td>
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<td>416.gamess</td>
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<td>433.milc</td>
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<td>435.gromacs</td>
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<td>444.namd</td>
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<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
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<tbody>
<tr>
<td>CPU Name:</td>
<td>Operating System:</td>
</tr>
<tr>
<td>Hardware</td>
<td>Red Hat Enterprise Linux Server release 6.5</td>
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<tr>
<td>Characteristics:</td>
<td>(Santiago)</td>
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<tr>
<td>CPU Turbo Boost Technology up to 3.40 GHz</td>
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<tr>
<td>CPU MHz:</td>
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<tr>
<td>2800</td>
<td>C/C++: Version 14.0.0.080 of Intel C++ Studio XE</td>
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<tr>
<td>FPU:</td>
<td>for Linux;</td>
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<td>Integrated</td>
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<td>CPU(s) enabled:</td>
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<tr>
<td>60 cores, 4 chips, 15 cores/chip, 2 threads/core</td>
<td></td>
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<td>CPU(s) orderable:</td>
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<tr>
<td>2,4 chips</td>
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<tr>
<td>Primary Cache:</td>
<td>File System:</td>
</tr>
<tr>
<td>32 KB I + 32 KB D on chip per core</td>
<td>ext4</td>
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<tr>
<td>Secondary Cache:</td>
<td>Continued on next page</td>
</tr>
<tr>
<td>256 KB I+D on chip per core</td>
<td>Continued on next page</td>
</tr>
</tbody>
</table>

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
Huawei RH5885H v3 (Intel Xeon E7-4890 v2)

CPU2006 license: 13
Test sponsor: Huawei
Tested by: Huawei
Test date: Feb-2014
Hardware Availability: Feb-2014
Software Availability: Nov-2013

L3 Cache: 37.5 MB I+D on chip per chip
Other Cache: None
Memory: 512 GB (64 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 300 GB SAS, 10 K RPM
Other Hardware: None

System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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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 Lock_step to disabled
Huawei

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SPECfp_rate2006 =  Not Run
SPECfp_rate_base2006 = 1730

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Platform Notes (Continued)

Sysinfo program /spec/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on speccpu Mon Feb 10 17:55:52 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 E7-4890 v2 @ 2.80GHz
  4 "physical id"s (chips)
  120 "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 : 15
siblings : 30
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
physical 2: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
physical 3: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
cache size : 38400 KB

From /proc/meminfo
MemTotal: 529098344 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/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:
Linux speccpu 2.6.32-431.e16.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013
 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 10 17:43
SPEC is set to: /spec
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext4 241G 8.6G 220G 4% /

Additional information from dmidecode:
BIOS American Megatrends Inc. BLISV099 02/09/2014
Memory:
  64x 8 GB
  12x Hynix HMT31GR7AFR4C-H9 8 GB 1333 MHz 2 rank
  52x Hynix HMT31GR7BFR4C-H9 8 GB 1333 MHz 2 rank

Continued on next page
Huawei

Huawei RH5885H v3 (Intel Xeon E7-4890 v2)

SPEC CFP2006 Result

SPECfp_rate2006 = Not Run
SPECfp_rate_base2006 = 1730

Platform Notes (Continued)

32x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

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

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Files system page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
umactl --interleave=all runspec <etc>

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
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

Continued on next page
SPEC CFP2006 Result

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Base Portability Flags (Continued)

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

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-revE.20121120.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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