Huawei

Huawei RH2288H V2 (Intel Xeon E5-2680 V2)

Hardware

CPU Name: Intel Xeon E5-2680 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core
CPU(s) orderable: 1.2 chips
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 PC3-14900R-13 ,ECC)
Disk Subsystem: 1 x 300 GB SAS,10K RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel: No
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0
## Huawei RH2288H V2 (Intel Xeon E5-2680 V2)

**SPECint_rate2006** = 858  
**SPECint_rate_base2006** = 830

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<td>471.omnetpp</td>
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<td>483.xalancbmk</td>
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<td>875</td>
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</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

Sysinfo program /spec/config/sysinfo.rev6818  
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191  
running on localhost Tue Apr 15 11:29:28 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 E5-2680 V2 @ 2.80GHz  
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

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Huawei RH2288H V2 (Intel Xeon E5-2680 V2)

SPECint_rate2006 = 858
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CPU2006 license: i3
Test sponsor: Huawei
Tested by: Huawei

Platform Notes (Continued)

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
cache size : 25600 KB

From /proc/meminfo
MemTotal: 264478184 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 localhost 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013
x86_64 x86_64 x86_64 GNU/Linux
run-level 3 Apr 14 17:11

SPEC is set to: /spec

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext4 272G 9.8G 248G 4% /

Additional information from dmidecode:
BIOS Insyde Corp. RMIBV629 05/12/2014
Memory:
13x Hynix HMT42GR7AFR4C-RD 16 GB 1866 MHz 2 rank
8x NO DIMM NO DIMM
3x Samsung M393B2G70DB0-CMA 16 GB 1866 MHz 2 rank

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

The Huawei RH2288H v2 and Huawei RH2288 v2 and the Huawei RH1288 v2 models
Continued on next page
Huawei RH2288H V2 (Intel Xeon E5-2680 V2)

SPECint_rate2006 = 858
SPECint_rate_base2006 = 830

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

General Notes (Continued)
are electronically equivalent, and the results have been measured on a Huawei RH2288H v2 model.

Base Compiler Invocation

C benchmarks:
icc  -m32

C++ benchmarks:
icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xsse4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
-xsse4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/sh -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc  -m32

400.perlbench: icc -m64
401.bzip2: icc -m64

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Huawei RH2288H V2 (Intel Xeon E5-2680 V2)

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

**Test date:** Apr-2014
**Hardware Availability:** Sep-2013
**Software Availability:** Nov-2013

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**Peak Compiler Invocation (Continued)**

456.hmmer: icc -m64
458.sjeng: icc -m64

**C++ benchmarks:**
icpc -m32

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**Peak Portability Flags**

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

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**Peak Optimization Flags**

**C benchmarks:**

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: basepeak = yes
429.mcf: basepeak = yes
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3
456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32
462.libquantum: basepeak = yes
464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias

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**Huawei**

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**CPU2006 license:** 13  
**Test date:** Apr-2014

**Test sponsor:** Huawei  
**Hardware Availability:** Sep-2013

**Tested by:** Huawei  
**Software Availability:** Nov-2013

### Peak Optimization Flags (Continued)

**C++ benchmarks:**

- 471.omnetpp: 
  -xSSE4.2(pass 2)  
  -prof-gen(pass 1)  
  -ipo(pass 2)  
  -O3(pass 2)  
  -no-prec-div(pass 2)  
  -prof-use(pass 2)  
  -ansi-alias  
  -opt-ra-region-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

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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-V1.0-IVB-RevG.xml

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