## SPECint\textregistered\_rate2006 = 980

### Huawei RH1288 V3 (Intel Xeon E5-2658A v3)

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.el7.x86_64</td>
</tr>
<tr>
<td>CPU Characteristics: Intel Xeon E5-2658A v3</td>
<td>Compiler: C++ Version 15.0.0.090 of Intel C++ 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: xfs</td>
</tr>
<tr>
<td>CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>CPU(s) orderable: 1.2 chip</td>
<td>Base Pointers: 32-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: Microquill SmartHeap V10.0</td>
</tr>
<tr>
<td>L3 Cache: 30 MB I+D on chip per chip</td>
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<tr>
<td>Other Cache: None</td>
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<tr>
<td>Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)</td>
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<tr>
<td>Disk Subsystem: 1 x 500 GB SATA, 7200 RPM</td>
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<tr>
<td>Other Hardware: None</td>
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</table>

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<tr>
<th>SPECint\textregistered_rate2006</th>
<th>SPECint\textregistered_rate_base2006</th>
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<tbody>
<tr>
<td>980</td>
<td>939</td>
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Huawei RH1288 V3 (Intel Xeon E5-2658A v3)

SPECint_rate2006 = 980
SPECint_rate_base2006 = 939

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

Results Table

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<th>Ratio</th>
<th>Seconds</th>
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<td>1020</td>
<td>327</td>
<td>1010</td>
<td>48</td>
<td>326</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 Custom
Set Snoop Mode to COD
Set Patrol Scrub to Disable
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Sun Mar 22 06:21:29 2015

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 E5-2658A v3 @ 2.20GHz
2 "physical id"s (chips)
48 "processors"

Continued on next page
Huawei RH1288 V3 (Intel Xeon E5-2658A v3)

SPECint_rate2006 = 980
SPECint_rate_base2006 = 939

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

Platform Notes (Continued)

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 : 6
- siblings : 12
- physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
- physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
- cache size : 15360 KB

From /proc/meminfo
- MemTotal: 263575160 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
- os-release:
  - 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

run-level 3 Mar 22 06:19

SPEC is set to: /spec
- Filesystem   Type Size Used Avail Use% Mounted on
  /dev/sda2     xfs  445G 209G  236G  47% /

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. 1.23 11/19/2014
Memory:
- 8x Micron 36ASF2G72PZ-2G1A2 16 GB 1 rank 2133 MHz
- 8x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)
Huawei RH1288 V3 (Intel Xeon E5-2658A v3)

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**CPU2006 license:** 3175  
**Test sponsor:** Huawei  
**Tested by:** Huawei  
**Test date:** Mar-2015  
**Hardware Availability:** Mar-2015  
**Software Availability:** Sep-2014

### 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 i5-4670K CPU + 16GB memory using RedHat EL 7.0  
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  
runcspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

### Base Compiler Invocation

**C benchmarks:**  
```
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

**C++ benchmarks:**  
```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

### Base Portability Flags

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

### Base Optimization Flags

**C benchmarks:**  
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3
```

**C++ benchmarks:**  
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3 -W1,-z,muldefs -L/sh -lsmartheap
```

### Base Other Flags

**C benchmarks:**  
```
403.gcc: -Dalloca=_alloca
```

---

Standard Performance Evaluation Corporation  
info@spec.org  
http://www.spec.org/
Huawei RH1288 V3 (Intel Xeon E5-2658A v3)

SPECint_rate2006 = 980
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CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: Mar-2015
Hardware Availability: Mar-2015
Software Availability: Sep-2014

Peak Compiler Invocation

C benchmarks (except as noted below):
  icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

  400.perlbench: icc -m64
  401.bzip2: icc -m64
  456.hmmer: icc -m64
  458.sjeng: icc -m64

C++ benchmarks:
  icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

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

Peak Optimization Flags

C benchmarks:

  400.perlbench: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3

  456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

  458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32

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Huawei RH1288 V3 (Intel Xeon E5-2658A v3)

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SPECint_rate_base2006 = 939

CPU2006 license: 3175
Test sponsor: Huawei
Test date: Mar-2015
Tested by: Huawei
Hardware Availability: Mar-2015
Software Availability: Sep-2014

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes
464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:
471.omnetpp: -xCORE-AVX2(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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.4.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.4.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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