## SPECint®_rate2006 = 981

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECint Rate</th>
<th>SPECint °_base2006</th>
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<td>471.omnetpp</td>
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<td>473.astar</td>
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<tr>
<td>483.xalancbmk</td>
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</tbody>
</table>

### Hardware

- **CPU Name:** Intel Xeon E5-2658A v3
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.90 GHz
- **CPU MHz:** 2200
- **FPU:** Integrated
- **CPU(s) enabled:** 24 cores, 2 chips, 12 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1,2 chip
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core
- **L3 Cache:** 30 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
- **Disk Subsystem:** 1 x 500 GB SATA, 7200 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

Huawei CH121 V3 (Intel Xeon E5-2658A v3)

SPECint_rate2006 = 981
SPECint_rate_base2006 = 950

Results Table

| Benchmark   | Base |       |       |       | Base |       |       |       | Peak |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |�

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.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 $ e86d10257265a6e4d596a3cee98f191
running on localhost.localdomain Wed Mar 11 05:11:21 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"

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Huawei
Huawei CH121 V3 (Intel Xeon E5-2658A v3)

**SPEC CINT2006 Result**

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<tr>
<td>CPU2006 license: 3l75</td>
<td>Test date: Mar-2015</td>
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<td>Test sponsor: Huawei</td>
<td>Hardware Availability: Sep-2014</td>
</tr>
<tr>
<td>Tested by: Huawei</td>
<td>Software Availability: Sep-2013</td>
</tr>
</tbody>
</table>

**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 : 12
- siblings : 24
- 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: 264272692 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.localdomain 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 Mar 11 05:00

SPEC is set to: /spec

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dev/sda1</td>
<td>ext4</td>
<td>268G</td>
<td>154G</td>
<td>100G</td>
<td>61%</td>
<td>/</td>
</tr>
</tbody>
</table>

Additional information from dmidecode:

- BIOS Insyde Corp. 1.13 08/12/2014
- Memory:
  - 8x NO DIMM NO DIMM 3 rank
  - 8x Samsung M393A2G40DB0-CPB 16 GB 2133 MHz 1 rank
  - 8x Samsung M393A2G40DB0-CPB 16 GB 2133 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:

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SPEC CINT2006 Result

Huawei

Huawei CH121 V3 (Intel Xeon E5-2658A v3)

SPECint_rate2006 = 981
SPECint_rate_base2006 = 950

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei
Test date: Mar-2015
Hardware Availability: Sep-2014
Software Availability: Sep-2013

General Notes (Continued)

echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
The Huawei CH121 V3 and Huawei CH222 V3
are electronically equivalent.
The results have been measured on a Huawei CH121 V3 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:
-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 -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

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Huawei CH121 V3 (Intel Xeon E5-2658A v3)

Huawei

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

Peak Compiler Invocation (Continued)

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

C++ benchmarks:
icpc -m32

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)
-03(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)
-03(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 -03 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

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### 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

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### 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:


You can also download the XML flags sources by saving the following links:
- [http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.4.xml](http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.4.xml)

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For other inquiries, please contact webmaster@spec.org.

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