



SPEC® CINT2006 Result

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Huawei

SPECint® rate2006 = 808

Huawei CH220 (Intel Xeon E5-2667 v2)

SPECint_rate_base2006 = 776

CPU2006 license: 3175

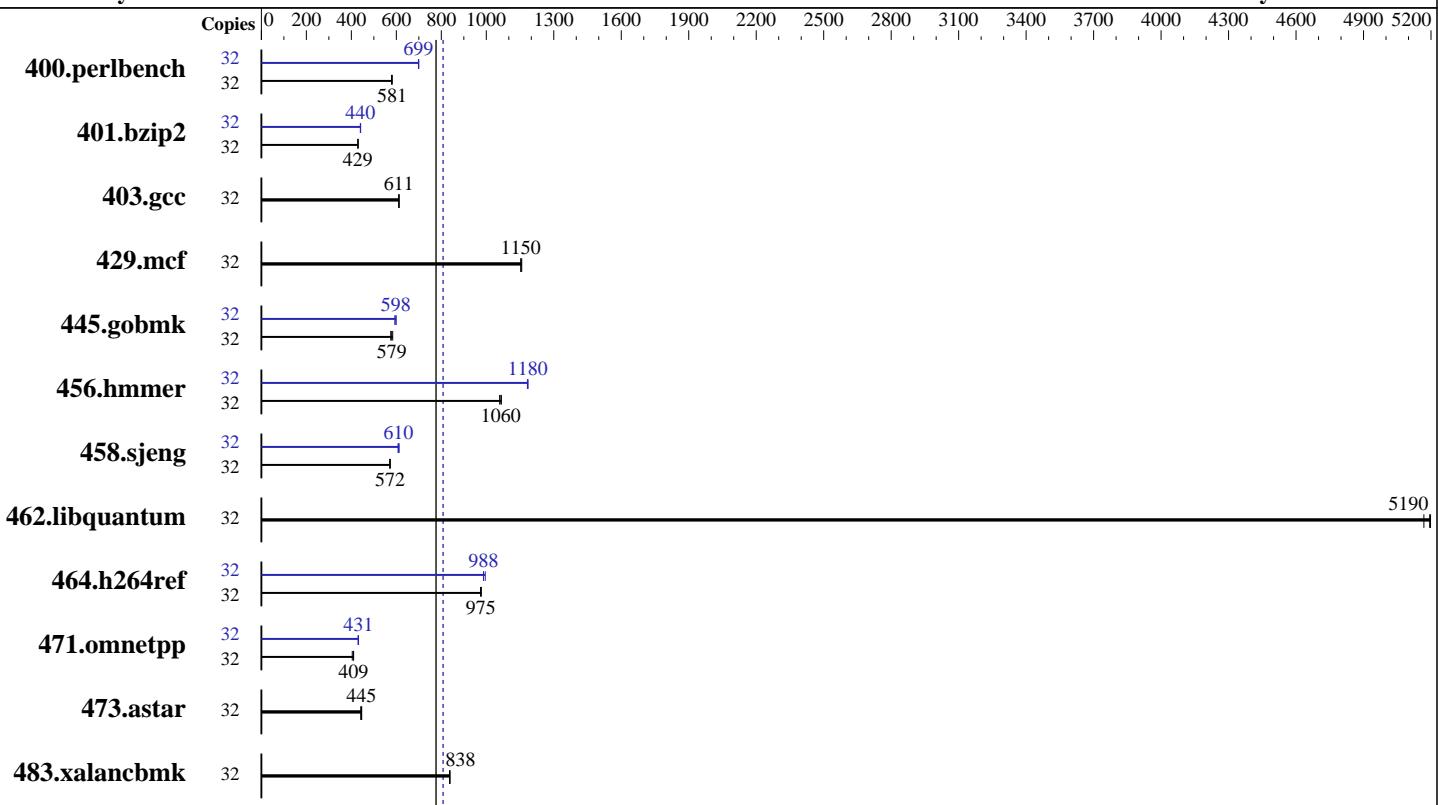
Test date: Sep-2014

Test sponsor: Huawei

Hardware Availability: Sep-2013

Tested by: Huawei

Software Availability: Nov-2013



| SPECint_rate2006 = 808 | | SPECint_rate_base2006 = 776 | |
|------------------------|---|-----------------------------|--|
| Hardware | | | Software |
| CPU Name: | Intel Xeon E5-2667 v2 | Operating System: | Red Hat Enterprise Linux Server release 6.5 (Santiago) |
| CPU Characteristics: | Intel Turbo Boost Technology up to 4.00 GHz | | 2.6.32-431.el6.x86_64 |
| CPU MHz: | 3300 | Compiler: | C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux |
| FPU: | Integrated | Auto Parallel: | No |
| CPU(s) enabled: | 16 cores, 2 chips, 8 cores/chip, 2 threads/core | File System: | ext4 |
| CPU(s) orderable: | 1,2 chip | System State: | Run level 3 (multi-user) |
| Primary Cache: | 32 KB I + 32 KB D on chip per core | Base Pointers: | 32-bit |
| Secondary Cache: | 256 KB I+D on chip per core | Peak Pointers: | 32/64-bit |
| L3 Cache: | 25 MB I+D on chip per chip | Other Software: | Microquill SmartHeap V10.0 |
| Other Cache: | None | | |
| Memory: | 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC) | | |
| Disk Subsystem: | 1 x 300 GB SATA, 7200RPM | | |
| Other Hardware: | None | | |



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Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|----------------|--------|------------|-------------|------------|-------------|------------|------------|--------|------------|-------------|------------|-------------|------------|------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 32 | 538 | 581 | 540 | 579 | 538 | 581 | 32 | 448 | 698 | 447 | 700 | 447 | 699 |
| 401.bzip2 | 32 | 719 | 430 | 719 | 429 | 719 | 429 | 32 | 700 | 441 | 701 | 440 | 701 | 440 |
| 403.gcc | 32 | 421 | 612 | 422 | 611 | 421 | 611 | 32 | 421 | 612 | 422 | 611 | 421 | 611 |
| 429.mcf | 32 | 253 | 1150 | 253 | 1150 | 252 | 1160 | 32 | 253 | 1150 | 253 | 1150 | 252 | 1160 |
| 445.gobmk | 32 | 584 | 575 | 579 | 579 | 575 | 584 | 32 | 566 | 593 | 562 | 598 | 560 | 599 |
| 456.hammer | 32 | 280 | 1070 | 280 | 1060 | 282 | 1060 | 32 | 252 | 1180 | 252 | 1180 | 252 | 1180 |
| 458.sjeng | 32 | 679 | 571 | 677 | 572 | 676 | 573 | 32 | 635 | 610 | 632 | 612 | 637 | 608 |
| 462.libquantum | 32 | 128 | 5190 | 128 | 5170 | 128 | 5200 | 32 | 128 | 5190 | 128 | 5170 | 128 | 5200 |
| 464.h264ref | 32 | 726 | 975 | 727 | 975 | 724 | 978 | 32 | 717 | 987 | 717 | 988 | 711 | 995 |
| 471.omnetpp | 32 | 495 | 404 | 488 | 410 | 489 | 409 | 32 | 465 | 430 | 463 | 432 | 464 | 431 |
| 473.astar | 32 | 504 | 446 | 509 | 442 | 504 | 445 | 32 | 504 | 446 | 509 | 442 | 504 | 445 |
| 483.xalancbmk | 32 | 263 | 838 | 264 | 837 | 264 | 838 | 32 | 263 | 838 | 264 | 837 | 264 | 838 |

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 /spec14/config/sysinfo.rev6818
$Rev: 6818 $ $Date::: 2012-07-17 #$
running on localhost.localdomain Wed Sep 3 19:14:23 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 E5-2667 v2 @ 3.30GHz
  2 "physical id"s (chips)
  32 "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 : 8
  siblings  : 16
```

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Platform Notes (Continued)

```
physical 0: cores 1 2 3 4 8 9 10 11
physical 1: cores 1 2 3 4 8 9 10 11
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)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

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 Sep 1 12:37

SPEC is set to: /spec14
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        ext4  265G   13G  239G   6%  /


Additional information from dmidecode:
BIOS Insyde Corp. RMIBV629 05/12/2014
Memory:
 10x Hynix HMT42GR7AFR4C-RD 16 GB 1866 MHz 2 rank
 8x NO DIMM NO DIMM
 6x 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 = "/spec14/libs/32:/spec14/libs/64:/spec14/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/enable
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>



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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

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

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 -unroll12 -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)
-unroll14 -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)
-unroll12 -ansi-alias

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

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Peak Optimization Flags (Continued)

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-ic14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.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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For other inquiries, please contact webmaster@spec.org.

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