SPEC® CINT2006 Result
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Huawei

Huawei CH121 (Intel Xeon E5-2630)

SPECint®_rate2006 = 437

SPECint_rate_base2006 = 422
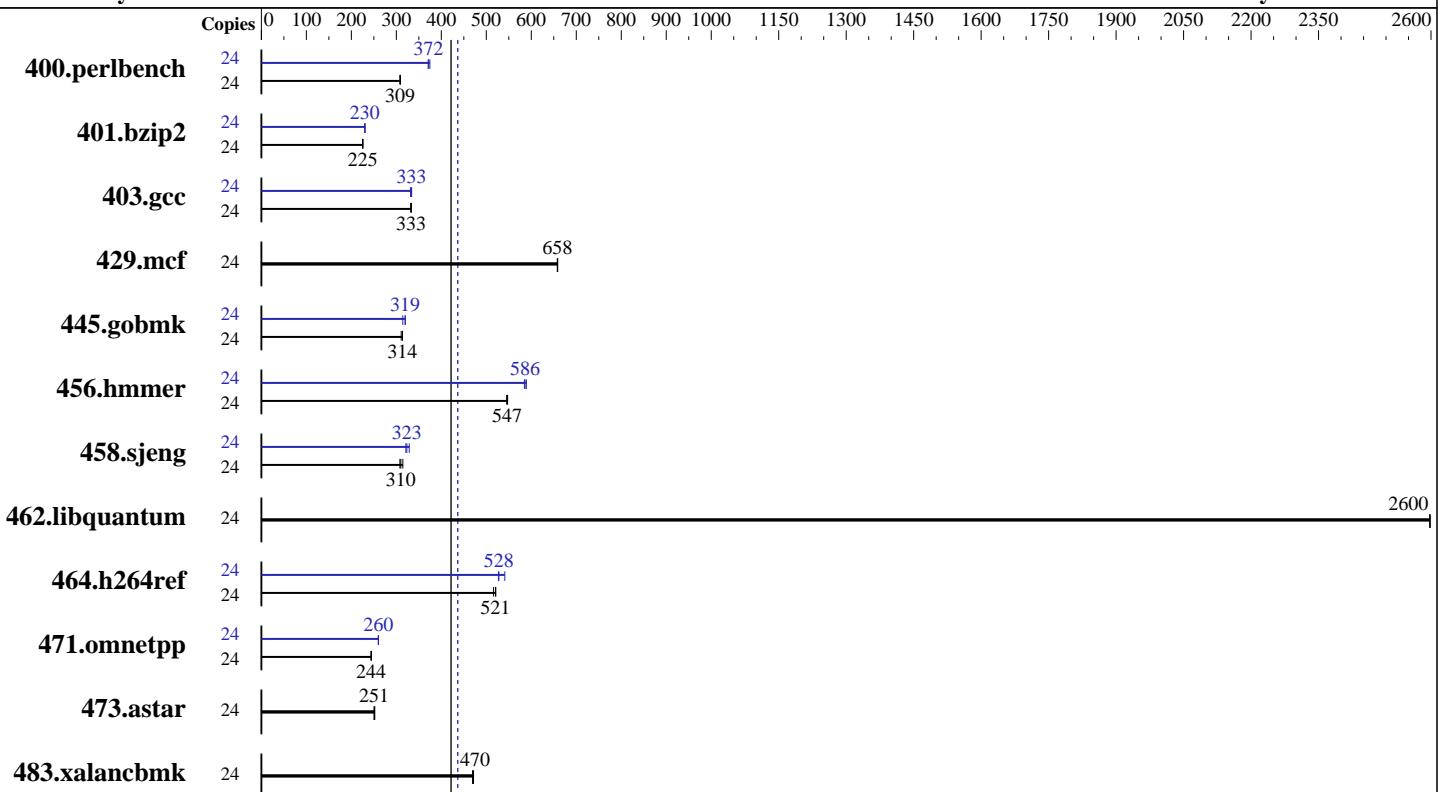
CPU2006 license: 3175	**Test date:** Sep-2014
Test sponsor: Huawei	**Hardware Availability:** Mar-2012
Tested by: Huawei	**Software Availability:** Nov-2013

Copies

400.perlbench — 24: 372, 24: 309
401.bzip2 — 24: 230, 24: 225
403.gcc — 24: 333, 24: 333
429.mcf — 24: 658
445.gobmk — 24: 319, 24: 314
456.hmmer — 24: 586, 24: 547
458.sjeng — 24: 323, 24: 310
462.libquantum — 24: 2600
464.h264ref — 24: 528, 24: 521
471.omnetpp — 24: 260, 24: 244
473.astar — 24: 251
483.xalancbmk — 24: 470

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Hardware

CPU Name: Intel Xeon E5-2630
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2300
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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: 15 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz)
Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
2.6.32-431.el6.x86_64
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

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Results Table

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	762	308	**760**	**309**	758	309	24	626	375	633	371	**631**	**372**
401.bzip2	24	**1029**	**225**	1025	226	1030	225	24	**1006**	**230**	1005	230	1008	230
403.gcc	24	582	332	580	333	**580**	**333**	24	**580**	**333**	578	334	583	332
429.mcf	24	**332**	**658**	332	659	333	658	24	**332**	**658**	332	659	333	658
445.gobmk	24	802	314	**803**	**314**	810	311	24	801	314	787	320	**788**	**319**
456.hmmer	24	**410**	**547**	409	547	411	545	24	383	585	380	589	**382**	**586**
458.sjeng	24	923	314	**937**	**310**	943	308	24	904	321	883	329	**898**	**323**
462.libquantum	24	191	2600	191	2600	**191**	**2600**	24	191	2600	191	2600	**191**	**2600**
464.h264ref	24	1029	516	**1020**	**521**	1020	521	24	**1006**	**528**	981	541	1008	527
471.omnetpp	24	614	244	615	244	**615**	**244**	24	577	260	**576**	**260**	576	260
473.astar	24	**671**	**251**	673	250	668	252	24	**671**	**251**	673	250	668	252
483.xalancbmk	24	353	470	**352**	**470**	351	472	24	353	470	**352**	**470**	351	472

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
    Baseboard Management Controller used to adjust the fan speed to 100%
    Sysinfo program /spec14/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on speccputest Sat Sep 6 23:28:38 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 E5-2630 0 @ 2.30GHz
          2 "physical id"s (chips)
          24 "processors"
       cores, siblings (Caution: counting these is hw and system dependent. The
       following excerpts from /proc/cpuinfo might not be reliable. Use with

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Platform Notes (Continued)

```
    caution.)
       cpu cores : 6
       siblings  : 12
       physical 0: cores 0 1 2 3 4 5
       physical 1: cores 0 1 2 3 4 5
    cache size : 15360 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 speccputest 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 6 23:27

 SPEC is set to: /spec14
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda2       ext4  451G   75G  354G  18% /

 Additional information from dmidecode:
   BIOS Insyde Corp. RMIBV379 03/19/2014
   Memory:
    16x Hynix HMT42GR7MFR4C-PB 16 GB 1333 MHz 2 rank
    8x 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 = "/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/enabled
 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: -xSSE4.2 -ipo -O3 -no-prec-div

       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
```

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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