Huawei

Huawei CH121 V3 (Intel Xeon E5-2697 v4)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

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

Test date: Feb-2016
Hardware Availability: Mar-2016
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

**Copies**

- 400.perlbench
- 401.bzip2
- 403.gcc
- 429.mcf
- 445.gobmk
- 456.hmmer
- 458.sjeng
- 462.libquantum
- 464.h264ref
- 471.omnetpp
- 473.astar
- 483.xalancbmk

**Hardware**

- CPU Name: Intel Xeon E5-2697 v4
- CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
- CPU MHz: 2300
- FPU: Integrated
- CPU(s) enabled: 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: 45 MB I+D on chip per chip
- Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)
- Disk Subsystem: 1 x 600GB SAS, 10000 RPM
- Other Hardware: None

**Software**

- Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)
- Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux
- Auto Parallel: No
- File System: xfs
- System State: Run level 3 (multi-user)
- Base Pointers: 32-bit
- Peak Pointers: 32/64-bit
- Other Software: Microquill SmartHeap V10.2
Huawei

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**SPEC CINT2006 Result**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tr>
<td>483.xalancbmk</td>
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<td>NC</td>
<td>NC</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 Performance
- Set Snoop Mode to COD mode
- Set Patrol Scrub to Disable

Sysinfo program /spec/spec16/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Wed Nov 5 22:14:50 2014

This section contains SUT (System Under Test) info as seen by

Continued on next page

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by [SPEC CPU rule 1.3.2](http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2) and the SPEC Open Systems Group policy on [Appendix C](https://www.spec.org/osg/policy.html#AppendixC).
Huawei

Huawei CH121 V3 (Intel Xeon E5-2697 v4)

**SPEC CINT2006 Result**

**Huawei CH121 V3 (Intel Xeon E5-2697 v4)**

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<td>Tested by:</td>
<td>Huawei</td>
</tr>
<tr>
<td><strong>SPECint_rate2006</strong></td>
<td>NC</td>
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<tr>
<td><strong>SPECint_rate_base2006</strong></td>
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</tr>
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<td>Test date:</td>
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<td>Mar-2016</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Mar-2016</td>
</tr>
</tbody>
</table>

**Platform Notes (Continued)***

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 E5-2697 v4 @ 2.30GHz
- 2 "physical id"s (chips)
- 72 "processors"
- cores, siblings (Caution: counting them is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
- cpu cores : 9
- siblings : 18
- physical 0: cores 0 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
- physical 1: cores 0 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
- cache size : 23040 KB

From /proc/meminfo

- MemTotal: 263564176 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: cpe:/o:redhat:enterprise_linux:7.0:ga:server
- 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

**SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by [SPEC CPU rule 1.3.2](http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2) and the SPEC Open Systems Group policy on general availability.**
## SPEC CINT2006 Result

### Huawei

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### General Notes

- **Environment variables set by runspec before the start of the run:**
  - `LD_LIBRARY_PATH` = "/spec/spec16/libs/32:/spec/spec16/libs/64:/spec/spec16/sh"

- **Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7, 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

- **Base Compiler Invocation**
  - **C benchmarks:**
    - `icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`
  - **C++ benchmarks:**
    - `icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`
Huawei CH121 V3 (Intel Xeon E5-2697 v4)

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Non-Compliant
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Peak Compiler Invocation (Continued)

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

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

Peak Portability Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64</td>
</tr>
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<tr>
<td>400.perlbench</td>
<td>-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -opt-prefetch -auto-ilp32 -ansi-alias</td>
</tr>
<tr>
<td>403.gcc</td>
<td>-xCORE-AVX2 -ipo -03 -no-prec-div</td>
</tr>
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</table>
## SPEC CINT2006 Result

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### Peak Optimization Flags (Continued)

**C benchmarks:**

- **403.gcc:** -Dalloca=_alloca

**C++ benchmarks:**

- **471.omnetpp:** -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/sh -lsmartheap

### 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-ic16.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.xml

Non-Compliant