Huawei

Huawei RH5885H V3 (Intel Xeon E7-4820 v4)

SPECint®_rate2006 =  Not Run
SPECint_rate_base2006 = 1240

CPU2006 license: 3175
Test date:  Aug-2016
Test sponsor:  Huawei
Hardware Availability:  May-2015
Tested by:  Huawei
Software Availability:  Nov-2015

<table>
<thead>
<tr>
<th>SPECint Rate</th>
<th>SPECint_rate_base2006 = 1240</th>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>80</td>
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<tr>
<td>401.bzip2</td>
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<tr>
<td>403.gcc</td>
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<td>456.hmmer</td>
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<td>462.libquantum</td>
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<tr>
<td>473.astar</td>
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</tbody>
</table>

CPU Name: Intel Xeon E7-4820 v4
Operating System: Red Hat Enterprise Linux Server release 7.2 (Maipo) 3.10.0-327.el7.x86_64
Compiler: 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

Software

Hardware

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Compiler</th>
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Huawei

Huawei RH5885H V3 (Intel Xeon E7-4820 v4)

SPEC CINT2006 Result

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1240

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

Results Table

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<thead>
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</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"
Turbo mode set with:
cpupower -c all frequency-set -g performance

Platform Notes

BIOS configuration:
Set Power Efficiency Mode to Performance
Set Lock_step to disabled
Baseboard Management Controller used to adjust the fan speed to 100%
Set C-State to C0/C1
Sysinfo program /home/spec/config/sysinfo.rev6914

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 E7-4820 v4 @ 2.00GHz
Huawei RH5885H V3 (Intel Xeon E7-4820 v4)

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CPU2006 license: 3175
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Platform Notes (Continued)

- 4 "physical id"s (chips)
- 80 "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 : 10`
  - `siblings : 20`
  - Physical 0: cores 0 1 2 3 4 8 9 10 11 12
  - Physical 1: cores 0 1 2 3 4 8 9 10 11 12
  - Physical 2: cores 0 1 2 3 4 8 9 10 11 12
  - Physical 3: cores 0 1 2 3 4 8 9 10 11 12
- Cache size: 25600 KB

From /proc/meminfo
- MemTotal: 528079208 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
- os-release:
  - NAME="Red Hat Enterprise Linux Server"
  - VERSION="7.2 (Maipo)"
  - ID="rhel"
  - ID_LIKE="fedora"
  - VERSION_ID="7.2"
  - PRETTY_NAME="Red Hat Enterprise Linux Server 7.2 (Maipo)"
  - ANSI_COLOR="0;31"
  - CPE_NAME="cpe:/o:redhat:enterprise_linux:7.2:GA:server"
- redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
- system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)

Uname -a:
- Linux RH5885HV3 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29 EDT 2015
- x86_64 x86_64 x86_64 GNU/Linux

Run-level 3 Aug 24 10:12

SPEC is set to: /home/spec

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 1000G 8.0G 992G 1% /home

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 American Megatrends Inc. 5.11 02/05/2016
Memory:
- 64x NO DIMM NO DIMM
- 32x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1333 MHz

Continued on next page
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Platform Notes (Continued)

(End of data from sysinfo program)
Regarding the sysinfo display about the memory installed, the correct amount of memory is 512 GB and the dmidecode description should have two lines reading as:
64x NO DIMM NO DIMM
32x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1333 MHz

General Notes

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

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1
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/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`

Base Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -D_FILE_OFFSET_BITS=64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
Huawei

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Test date: Aug-2016
Hardware Availability: May-2015
Software Availability: Nov-2015

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

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

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-V1.2-BDW-RevG.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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