SPEC® CINT2006 Result

Sugon

I620-G10 (Intel Xeon E5-2603 v2, 1.80 GHz)

SPEClnt_rate2006 = 185
SPEClnt_rate_base2006 = 179

CPU2006 license: 9046
Test sponsor: Sugon
Tested by: Sugon

Test date: Dec-2013
Hardware Availability: Jan-2014
Software Availability: Jan-2014

CPU Name: Intel Xeon E5-2603 v2
CPU Characteristics:
CPU MHz: 1800
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
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: 10 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC, running at 1333 MHz and CL9)
Disk Subsystem: 1 X 2 TB SATA 7200 RPM, RAID 0
Other Hardware: None

Operating System: Red Hat Enterprise Linux Server release 6.4 (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 (Full multiuser with network)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0
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Results Table

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</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:
Intel Virtualization technology set to disabled
Power Technology set to performance
Turbo boost set to disabled
DDR Speed set to force 1333
Sysinfo program /home/cpu2006/config/sysinfo.rev6874
$Rev: 6874 $ $Date:: 2013-11-20 $$ 654bd3fcf53b06faef0efe54ed011998
running on cpu2006 Sat Dec 21 01:04:54 2013

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 E5-2603 v2 @ 1.80GHz
  2 "physical id"s (chips)
  8 "processors"

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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 : 4
  siblings  : 4
  physical 0: cores 0 1 2 3
  physical 1: cores 0 1 2 3
  cache size : 10240 KB

From /proc/meminfo
  MemTotal:      264502396 kB
  HugePages_Total:     0
  Hugepagesize:    2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
  redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
  system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
  Linux cpu2006 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
  x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 21 01:01

SPEC is set to: /home/cpu2006
  Filesystem    Type    Size  Used Avail Use% Mounted on
  /dev/mapper/vg_cpu2006-lv_home
     ext4    1.8T   63G  1.6T   4% /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. 3.0a 10/10/2013
  Memory:
     16x Hynix Semiconducto HMT42GR7AFR4C 16 GB 1 rank 1333 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
  LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
  Continued on next page
Sugon
I620-G10 (Intel Xeon E5-2603 v2, 1.80 GHz)

SUGON

SPEC CINT2006 Result
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General Notes (Continued)

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>

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
**SPEC CINT2006 Result**

**Sugon**

I620-G10 (Intel Xeon E5-2603 v2, 1.80 GHz)

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CPU2006 license: 9046  
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Tested by: Sugon  
Test date: Dec-2013  
Hardware Availability: Jan-2014  
Software Availability: Jan-2014

### 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**: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ipl32`
- **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`

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Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes
464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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)
-03(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
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/Sugon-Platform-Settings-V1.2-IVB.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/Sugon-Platform-Settings-V1.2-IVB.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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