SPEC® CINT2006 Result

Sugon

I620-G10 (Intel Xeon E5-2660 v2, 2.20 GHz)

SPECint®_rate2006 = 744
SPECint_rate_base2006 = 718

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

Test date: Nov-2013
Hardware Availability: Nov-2013
Software Availability: Nov-2013

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<tr>
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<td>483.xalancbmk</td>
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</table>

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) 3.0.76-0.11-default
Compiler: C/C++ Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel: No
File System: ext3
System State: Run level 3 (Full multiuser with network)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0

Hardware

CPU Name: Intel Xeon E5-2660 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 20 cores, 2 chips, 10 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: 25 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2R4d PC3-14900R-13, ECC)
Disk Subsystem: 4 x 450 GB SAS 10K RPM, RAID0
Other Hardware: None
## Results Table

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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"

## Platform Notes

BIOS Configuration:
- Intel Virtualization technology set to disabled
- Power Technology set to performance
- Turbo boost set to enabled
- DDR Speed set to force 1866
- Sysinfo program /home/spec/config/sysinfo.rev6818

$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on linux-tn7k Mon Nov 18 21:25:59 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 E5-2660 v2 @ 2.20GHz
  - 2 "physical id"s (chips)
  - 40 "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 : 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
- cache size : 25600 KB

From /proc/meminfo
- MemTotal: 264516912 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
- SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
- SuSE-release:
- SUSE Linux Enterprise Server 11 (x86_64)
- VERSION = 11
- PATCHLEVEL = 3

uname -a:
- Linux linux-tn7k 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013 (ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 18 21:09 last=S

SPEC is set to: /home/spec

Filesystem Type Size Used Avail Use% Mounted on
/dev/md124p1 ext3 784G 77G 668G 11% /home/spec

Additional information from dmidecode:
- BIOS American Megatrends Inc. 3.0a 10/10/2013
- Memory:
  - 16x 16 GB
  - 16x Hynix Semiconductor HMT42GR7AFR4C 16 GB 1866 MHz

(End of data from sysinfo program)
There is a error in sysinfo output. There are only 16 DIMMs in this system. The cause of this error is the sysinfo itself. The sysinfo of revision 6818 can't identify the correct memory information.
The memory information should be:
- Memory:
  - 16x Hynix Semiconductor HMT42GR7AFR4C 16 GB 1866 MHz
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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 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>

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
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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

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

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Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref:
-xSSE4.2(pas 2) -prof-gen(pas 1) -ipo(pas 2)
-03(pas 2) -no-prec-div(pas 2) -prof-use(pas 2)
-unroll12 -ansi-alias

C++ benchmarks:

471.omnetpp:
-xSSE4.2(pas 2) -prof-gen(pas 1) -ipo(pas 2)
-03(pas 2) -no-prec-div(pas 2) -prof-use(pas 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/sh -lsmartheap

475.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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