



SPEC[®] CINT2006 Result

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Sugon

SPECint[®]_rate2006 = 428

I620-G15 (Intel Xeon E5-2637 v2, 3.50 GHz)

SPECint_rate_base2006 = 411

CPU2006 license: 9046

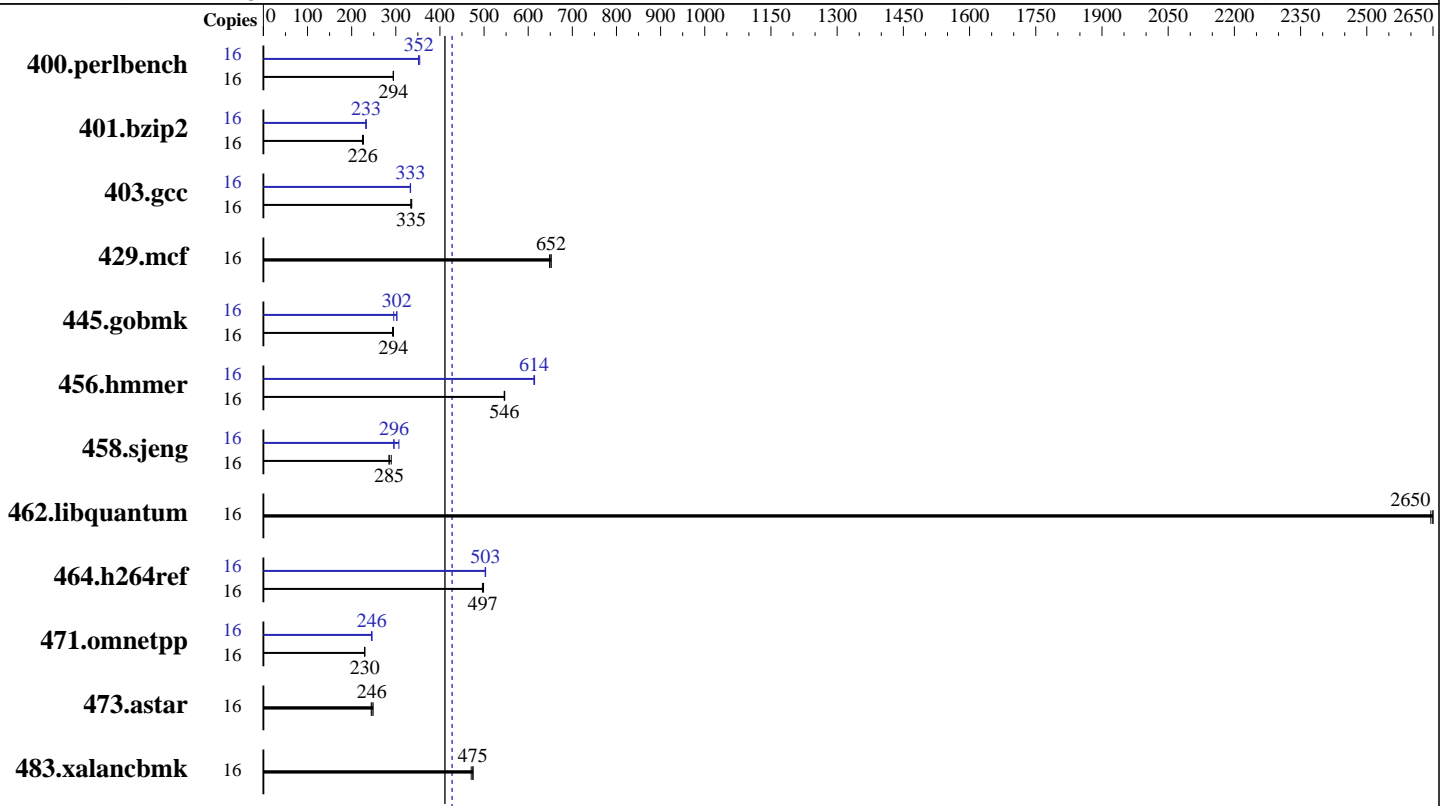
Test sponsor: Sugon

Tested by: Sugon

Test date: Jan-2014

Hardware Availability: Jan-2014

Software Availability: Jan-2014



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Hardware

CPU Name: Intel Xeon E5-2637 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 3500
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 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 PC3-14900R-13, ECC)
 Disk Subsystem: 1 X 2 TB SATA 7200 RPM, RAID 0
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.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 (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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	531	294	<u>531</u>	<u>294</u>	530	295	16	441	354	<u>444</u>	<u>352</u>	445	351
401.bzip2	16	<u>684</u>	<u>226</u>	688	224	681	227	16	665	232	<u>664</u>	<u>233</u>	663	233
403.gcc	16	<u>385</u>	<u>335</u>	383	336	385	334	16	<u>387</u>	<u>333</u>	387	333	386	334
429.mcf	16	<u>224</u>	<u>652</u>	225	648	224	652	16	<u>224</u>	<u>652</u>	225	648	224	652
445.gobmk	16	570	295	573	293	<u>570</u>	<u>294</u>	16	<u>556</u>	<u>302</u>	555	302	568	295
456.hammer	16	274	546	<u>273</u>	<u>546</u>	273	547	16	243	613	243	614	<u>243</u>	<u>614</u>
458.sjeng	16	680	285	<u>679</u>	<u>285</u>	668	290	16	656	295	<u>654</u>	<u>296</u>	630	307
462.libquantum	16	<u>125</u>	<u>2650</u>	125	2650	125	2650	16	<u>125</u>	<u>2650</u>	125	2650	125	2650
464.h264ref	16	713	496	710	499	<u>712</u>	<u>497</u>	16	704	503	703	504	<u>704</u>	<u>503</u>
471.omnetpp	16	436	229	<u>435</u>	<u>230</u>	435	230	16	407	246	408	245	<u>407</u>	<u>246</u>
473.astar	16	<u>457</u>	<u>246</u>	460	244	452	249	16	<u>457</u>	<u>246</u>	460	244	452	249
483.xalancbmk	16	234	471	<u>233</u>	<u>475</u>	232	475	16	234	471	<u>233</u>	<u>475</u>	232	475

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/cpu2006/config/sysinfo.rev6874
\$Rev: 6874 \$ \$Date:: 2013-11-20 #\$ 654bd3fcf53b06faef0efe54ed011998
running on cpu2006 Tue Jan 7 20:11:33 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 E5-2637 v2 @ 3.50GHz
2 "physical id"s (chips)
16 "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  : 8
physical 0: cores 1 2 3 4
physical 1: cores 1 2 3 4
cache size : 15360 KB
```

From /proc/meminfo

```
MemTotal:      264504588 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)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

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 Jan 7 20:08

SPEC is set to: /home/cpu2006

```
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/vg_cpu2006-lv_home
                ext4      1.8T  98G  1.6T   6% /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. V8.100A 10/31/2013

Memory:

16x Hynix Semiconductor HMT42GR7AFR4C-RD 16 GB 1 rank 1866 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

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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

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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-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(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

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 other inquiries, please contact webmaster@spec.org.

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