**SPEC® CINT2006 Result**

**Sugon**  
W760-G30 (Intel Xeon Gold 6132)  

**SPECint®2006 =** 74.6  
**SPECint_base2006 =** 71.4  

<table>
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<th>Dec-2017</th>
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**CPU Name:** Intel Xeon Gold 6132  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz  
**CPU MHz:** 2600  
**FPU:** Integrated  
**CPU(s) enabled:** 28 cores, 2 chips, 14 cores/chip  
**CPU(s) orderable:** 1.2 chips  
**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Secondary Cache:** 1 MB I+D on chip per core  
**L3 Cache:** 19.25 MB I+D on chip per core  
**Other Cache:** None  
**Memory:** 384 GB (24 x 16 GB 2Rx8 PC4-2667V-R)  
**Disk Subsystem:** 1 x 4.0 TB SATA, 10K RPM  
**Other Hardware:** None  

| Software Operating System: | SUSE Linux Enterprise Server 12 SP2 4.4.21-69-default  
| Compiler: | C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux  
| Auto Parallel: | Yes  
| File System: | xfs  
| System State: | Run level 5 (Multi User with GUI)  
| Base Pointers: | 32/64-bit  
| Peak Pointers: | 32/64-bit  
| Other Software: | Microquill SmartHeap V10.2  

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**Hardware**  

**Software**
Sugon
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Results Table

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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

Sysinfo program /home/tianywan/benchmarks/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on localhost Sun Mar 5 00:29:25 2017

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) Gold 6132 CPU @ 2.60GHz
2 "physical id"s (chips)
28 "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 : 14
siblings : 14
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
Continued on next page
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Platform Notes (Continued)

cache size : 19712 KB
From /proc/meminfo
   MemTotal: 394873700 kB
   HugePages_Total: 0
   Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
SuSE-release:
   SUSE Linux Enterprise Server 12 (x86_64)
   VERSION = 12
   PATCHLEVEL = 2
   # This file is deprecated and will be removed in a future service pack or
   # release.
   # Please check /etc/os-release for details about this release.
   os-release:
      NAME="SLES"
      VERSION="12-SP2"
      VERSION_ID="12.2"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
   Linux localhost 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
      (9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Mar 2 13:46

SPEC is set to: /home/tianywan/benchmarks/cpu2006
   Filesystem  Type  Size  Used  Avail  Use% Mounted on
   /dev/sda5  xfs  3.6T  348G  3.3T  10%  /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 SMIOS" standard.

   BIOS American Megatrends Inc. 0JGST023 11/06/2017
   Memory:
      24x Samsung M393A2K43CB2-CTD 16 GB 2 rank 2666 MHz

   (End of data from sysinfo program)
   The Hyper Threading is Disabled.
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**General Notes**

Environment variables set by `runspec` before the start of the run:

- `KMP_AFFINITY = "granularity=fine,scatter"
- `LD_LIBRARY_PATH = "/home/tianywan/benchmarks/cpu2006/lib/ia32:/home/tianywan/benchmarks/cpu2006/lib/intel64:/home/tianywan/benchmarks/cpu2006/sh10.2"
- `OMP_NUM_THREADS = "28"

Binarbes compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM

Memory using Redhat Enterprise Linux 7.2

Transparent Huge Pages enabled by default.

Filesystem page cache cleared with:

```
shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run
```

---

**Base Compiler Invocation**

C benchmarks:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```

---

**Base Portability Flags**

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

---

**Base Optimization Flags**

C benchmarks:

```
-xCORE-AVX512 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-auto-p32
```

C++ benchmarks:

```
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64
```
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### Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

### Peak Compiler Invocation

C benchmarks (except as noted below):

```bash
icc -m64
```

400.perlbench: icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
445.gobmk: icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

C++ benchmarks (except as noted below):

```bash
icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
```

473.astar: icpc -m64

### Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

### Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -qopt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div -auto-ilp32 -qopt-prefetch

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Peak Optimization Flags (Continued)

403.gcc: -xCORE-AVX512 -ipo -O3 -no-prec-div -inline-cALLOC
-qqopt-malloc-options=3 -auto-ilp32

429.mcf: -xCORE-AVX512 -ipo -O3 -no-prec-div -parallel
-qqopt-prefetch -auto-p32

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2)

456.hmmer: basepeak = yes

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX512(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -qqopt-ra-region-strategy=block
-Wl,-z,muldefs -L/sh10.2 -lsmartheap

473.astar: -xCORE-AVX512 -ipo -O3 -no-prec-div -qqopt-prefetch
-auto-p32 -Wl,-z,muldefs -L/sh10.2 -lsmartheap64

483.xalancbmk: -xCORE-AVX512 -ipo -O3 -no-prec-div -qqopt-prefetch
-Wl,-z,muldefs -L/sh10.2 -lsmartheap

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-ic17.0-official-linux64-revF.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.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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