# SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

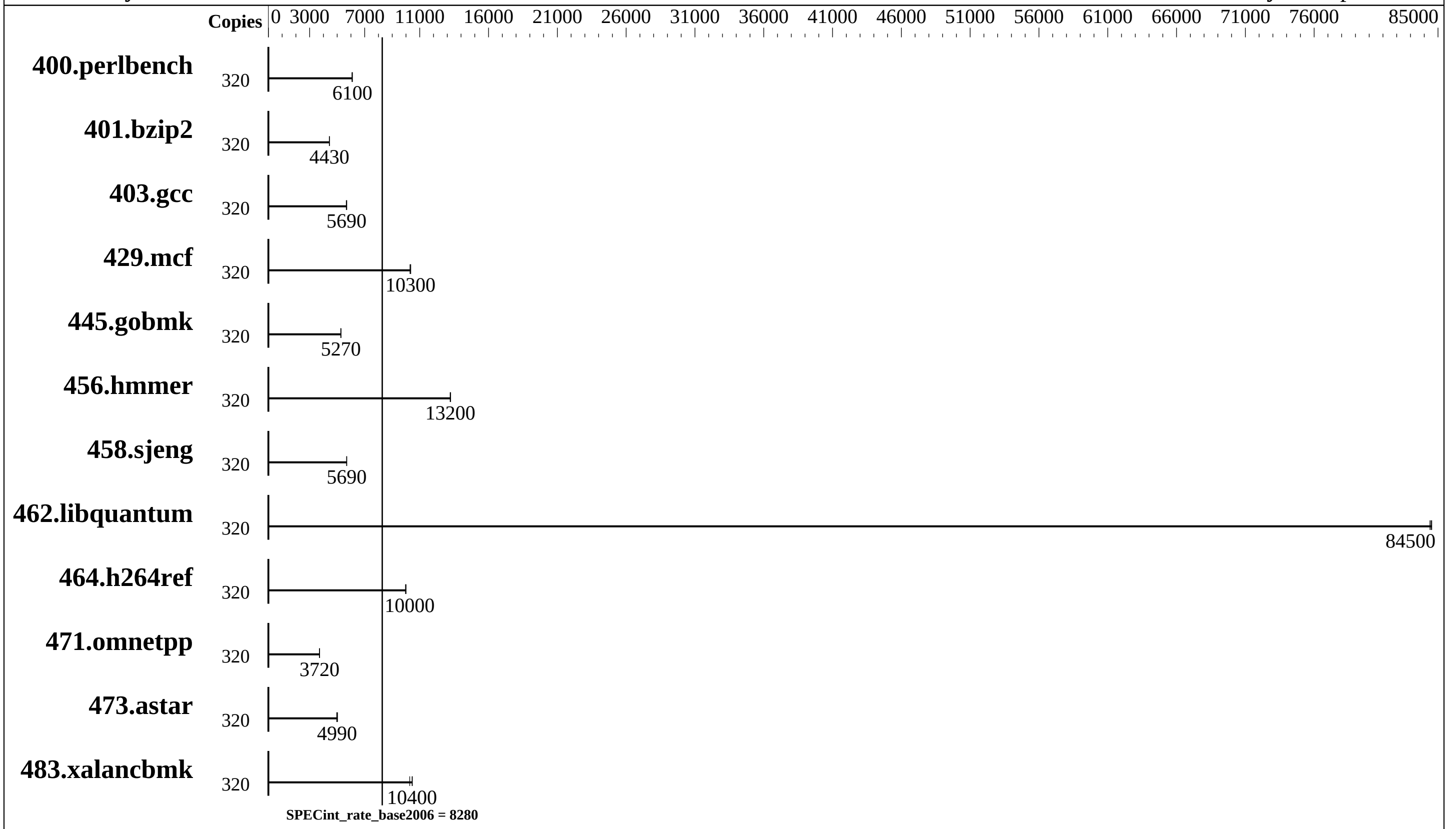
## Huawei

## Kunlun 9016(Intel Xeon E7-8891 v4)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 8280

| | | | |
|---|---|---|---|
| **CPU2006 license:** | 3175 | **Test date:** | May-2017 |
| **Test sponsor:** | Huawei | **Hardware Availability:** | Jan-2016 |
| **Tested by:** | Huawei | **Software Availability:** | Sep-2016 |




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E7-8891 v4 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.50 GHz |
| CPU MHz: | 2800 |
| FPU: | Integrated |
| CPU(s) enabled: | 160 cores, 16 chips, 10 cores/chip, 2 threads/core |
| CPU(s) orderable: | 4,8,16 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: | 60 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 2 TB (128 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz) |
| Disk Subsystem: | 2 x 600 GB SAS, 10K RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 12 (x86_64) SP1 3.12.49-11-default |
| Compiler: | C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux |
| Auto Parallel: | No |
| File System: | ext4 |
| System State: | Run level 5 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V10.2 |

## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 320 | 515 | 6070 | **512** | **6100** | 512 | 6100 | | | | | | | |
| 401.bzip2 | 320 | **696** | **4430** | 696 | 4430 | 698 | 4430 | | | | | | | |
| 403.gcc | 320 | 452 | 5700 | **453** | **5690** | 455 | 5660 | | | | | | | |
| 429.mcf | 320 | 282 | 10300 | **282** | **10300** | 284 | 10300 | | | | | | | |
| 445.gobmk | 320 | 636 | 5280 | 638 | 5260 | **637** | **5270** | | | | | | | |
| 456.hmmer | 320 | 225 | 13200 | 226 | 13200 | **226** | **13200** | | | | | | | |
| 458.sjeng | 320 | **680** | **5690** | 680 | 5690 | 680 | 5690 | | | | | | | |
| 462.libquantum | 320 | **78.5** | **84500** | 78.4 | 84500 | 78.5 | 84400 | | | | | | | |
| 464.h264ref | 320 | **708** | **10000** | 708 | 10000 | 711 | 9960 | | | | | | | |
| 471.omnetpp | 320 | 538 | 3720 | 537 | 3720 | **538** | **3720** | | | | | | | |
| 473.astar | 320 | **450** | **4990** | 447 | 5030 | 452 | 4970 | | | | | | | |
| 483.xalancbmk | 320 | 215 | 10300 | **211** | **10400** | 211 | 10500 | | | | | | | |

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
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-ew80 Tue May  9 07:49:48 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) CPU E7-8891 v4 @ 2.80GHz
      16 "physical id"s (chips)
      320 "processors"
```

Continued on next page

## 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 5 9 10 11 13 18 24 26 28 29
       physical 1: cores 5 9 10 11 13 18 24 26 28 29
       physical 2: cores 5 9 10 11 13 18 24 26 28 29
       physical 3: cores 5 9 10 11 13 18 24 26 28 29
       physical 4: cores 5 9 10 11 13 18 24 26 28 29
       physical 5: cores 5 9 10 11 13 18 24 26 28 29
       physical 6: cores 5 9 10 11 13 18 24 26 28 29
       physical 7: cores 5 9 10 11 13 18 24 26 28 29
       physical 8: cores 5 9 10 11 13 18 24 26 28 29
       physical 9: cores 5 9 10 11 13 18 24 26 28 29
       physical 10: cores 5 9 10 11 13 18 24 26 28 29
       physical 11: cores 5 9 10 11 13 18 24 26 28 29
       physical 12: cores 5 9 10 11 13 18 24 26 28 29
       physical 13: cores 5 9 10 11 13 18 24 26 28 29
       physical 14: cores 5 9 10 11 13 18 24 26 28 29
       physical 15: cores 5 9 10 11 13 18 24 26 28 29
    cache size : 61440 KB

 From /proc/meminfo
    MemTotal:       2117107116 kB
    HugePages_Total:   153600
    Hugepagesize:        2048 kB

 /usr/bin/lsb_release -d
    SUSE Linux Enterprise Server 12 SP1

 From /etc/*release* /etc/*version*
    SuSE-release:
       SUSE Linux Enterprise Server 12 (x86_64)
       VERSION = 12
       PATCHLEVEL = 1
       # 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-SP1"
       VERSION_ID="12.1"
       PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
       ID="sles"
       ANSI_COLOR="0;32"
       CPE_NAME="cpe:/o:suse:sles:12:sp1"

 uname -a:
    Linux linux-ew80 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
    (8d714a0) x86_64 x86_64 x86_64 GNU/Linux
```

Continued on next page

## Platform Notes (Continued)

```
run-level 5 May 9 07:31

SPEC is set to: /spec
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sda3      ext4  1.1T   95G  961G   9% /
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. BLXSV207 04/17/2017
  Memory:
   128x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz, configured at 1600 MHz
   256x NO DIMM NO DIMM

(End of data from sysinfo program)
```

## General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh10.2"

 Binaries compiled on a system with 1x Intel Core i7-4790K CPU + 32GB RAM
 memory using Redhat Enterprise Linux 7.2
 Transparent Huge Pages enabled by default
 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 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

## 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

Continued on next page

## Base Portability Flags (Continued)

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

## Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -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-ic17.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.2-BDW-RevG.20170404.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.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.2-BDW-RevG.20170404.xml


SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.



Tested with SPEC CPU2006 v1.2.
Report generated on Mon Oct 9 12:04:15 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 October 2017.