SPEC® CINT2006 Result

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M Computers s.r.o.

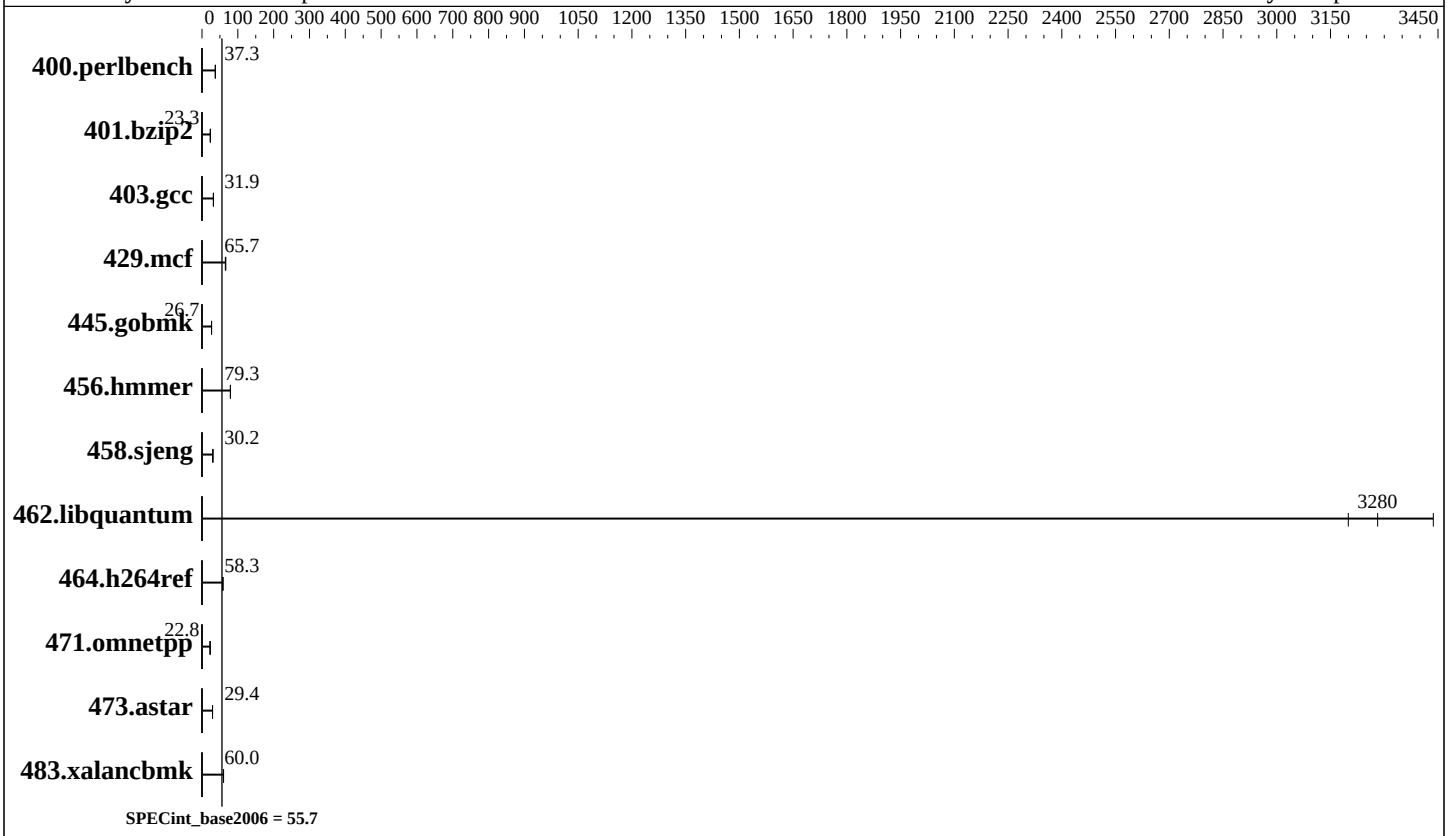
HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

SPECint®2006 = Not Run

SPECint_base2006 = 55.7

CPU2006 license: 4204
Test sponsor: M Computers s.r.o.
Tested by: M Computers s.r.o.

Test date: Aug-2017
Hardware Availability: Jul-2017
Software Availability: Apr-2017



Hardware

CPU Name:	Intel Xeon Silver 4112
CPU Characteristics:	Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz:	2600
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:	1 MB I+D on chip per core
L3 Cache:	8.25 MB I+D on chip per chip
Other Cache:	None
Memory:	384 GB (24 x 16 GB 2Rx8 PC4-2400V-R, running at 2400 MT/s)
Disk Subsystem:	1 x 1600 GB SATA SSD
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 12 SP2 4.4.21-69-default
Compiler:	C/C++: Version 17.0.4.196 of Intel C/C++ Compiler for Linux
Auto Parallel:	Yes
File System:	xfs
System State:	Run level 3
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V11.2

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	263	37.1	**262**	**37.3**	261	37.4						
401.bzip2	414	23.3	**414**	**23.3**	414	23.3						
403.gcc	**252**	**31.9**	252	31.9	253	31.9						
429.mcf	140	65.1	137	66.5	**139**	**65.7**						
445.gobmk	393	26.7	**393**	**26.7**	394	26.7						
456.hmmer	118	79.3	117	79.4	**118**	**79.3**						
458.sjeng	400	30.2	400	30.3	**400**	**30.2**						
462.libquantum	**6.31**	**3280**	6.48	3200	6.03	3440						
464.h264ref	380	58.3	**380**	**58.3**	380	58.2						
471.omnetpp	277	22.6	274	22.8	**275**	**22.8**						
473.astar	**238**	**29.4**	238	29.5	239	29.3						
483.xalancbmk	**115**	**60.0**	114	60.3	115	59.9						

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

Operating System Notes

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

Platform Notes

```
BIOS settings:
Intel(R) Hyper-Threading Tech=Disabled
Patrol Scrub=Disabled
CPU and Power Performance Policy=Performance
Set Fan Profile=Performance
Sysinfo program /spec/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (300de342723409e6453f54e8c50448c3)
running on kvasir Tue Aug 22 15:35:37 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) Silver 4112 CPU @ 2.60GHz
      2 "physical id"s (chips)
      8 "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 : 4
      siblings  : 4
      physical 0: cores 1 2 4 5
```

Continued on next page

Platform Notes (Continued)

```
        physical 1: cores 1 2 4 5
     cache size : 8448 KB

  From /proc/meminfo
     MemTotal:       394667280 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 kvasir 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 3 Aug 22 10:57

  SPEC is set to: /spec
     Filesystem     Type  Size  Used Avail Use% Mounted on
     /dev/sda1      xfs   650G   68G  582G  11% /
  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 Intel Corporation SE5C620.86B.0X.01.0007.060920171037 06/09/2017
    Memory:
     1x Hynix HMA42GR7AFR4N-UH 16 GB 2 rank 2400 MHz
     23x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz

  (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/spec/lib/ia32:/spec/lib/intel64:/spec/sh11.2"
OMP_NUM_THREADS = "8"

 Binaries compiled on a system with 2x Intel Xeon-SP 4112 CPU + 192GB RAM
 memory using Redhat Enterprise Linux 7.3
 Transparent Huge Pages enabled by default.
 Filesystem page cache cleared with:
 echo 1 > /proc/sys/vm/drop_caches
```

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-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-auto-p32
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh11.2 -lsmartheap64
```

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-revF.html`
`http://www.spec.org/cpu2006/flags/MComputers-Platform-Settings-V1.2-revB.20170920.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`
`http://www.spec.org/cpu2006/flags/MComputers-Platform-Settings-V1.2-revB.20170920.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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