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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>263</td>
<td>37.1</td>
<td>262</td>
<td>37.3</td>
<td>261</td>
<td>37.4</td>
<td></td>
<td></td>
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<tr>
<td>401.bzip2</td>
<td>414</td>
<td>23.3</td>
<td>414</td>
<td>23.3</td>
<td>414</td>
<td>23.3</td>
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<tr>
<td>403.gcc</td>
<td>252</td>
<td>31.9</td>
<td>252</td>
<td>31.9</td>
<td>253</td>
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<tr>
<td>429.mcf</td>
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<td>65.1</td>
<td>137</td>
<td>66.5</td>
<td>139</td>
<td>65.7</td>
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<tr>
<td>445.gobmk</td>
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<td>26.7</td>
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<td>26.7</td>
<td>394</td>
<td>26.7</td>
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<tr>
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<td>79.3</td>
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<td>79.3</td>
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<td>458.sjeng</td>
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<td>30.3</td>
<td>400</td>
<td>30.2</td>
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<td></td>
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<tr>
<td>462.libquantum</td>
<td>6.31</td>
<td>3280</td>
<td>6.48</td>
<td>3200</td>
<td>6.03</td>
<td>3440</td>
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<td>464.h264ref</td>
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<tr>
<td>471.omnetpp</td>
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<td>22.8</td>
<td>275</td>
<td>22.8</td>
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<tr>
<td>473.astar</td>
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<td>29.4</td>
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<td>29.5</td>
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<td>29.3</td>
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<td></td>
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<tr>
<td>483.xalancbmk</td>
<td>115</td>
<td>60.0</td>
<td>114</td>
<td>60.3</td>
<td>115</td>
<td>59.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
M Computers s.r.o.

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

**SPEC CINT2006 Result**

**SPECint2006 =** Not Run  
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**CPU2006 license:** 4204  
**Test date:** Aug-2017  
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**Software Availability:** Apr-2017

---

**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)
M Computers s.r.o.

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

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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 = "/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
### SPEC CINT2006 Result

**M Computers s.r.o.**

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

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#### Base Other Flags

**C benchmarks:**

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:


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For questions about this result, please contact the tester.

For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.


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