M Computers s.r.o.  

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)  

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECfp_base2006</th>
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<tbody>
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<tr>
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**SPECfp_base2006** = 96.3

---

**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

---

**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; Fortran: Version 17.0.4.196 of Intel Fortran Compiler for Linux
- **Auto Parallel:** Yes
- **File System:** xfs
- **System State:** Run level 3

---

Continued on next page
SPEC CFP2006 Result

M Computers s.r.o.

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

SPECfp2006 = Not Run

SPECfp_base2006 = 96.3

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

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

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

<table>
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<tr>
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<th>Ratio</th>
<th>Seconds</th>
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</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 11:09:51 2017

Continued on next page
M Computers s.r.o.

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

| SPECfp2006 = | Not Run |
| SPECfp_base2006 = | 96.3 |

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

Platform Notes (Continued)

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
  - 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:
- 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 583G 11% /

Continued on next page
Platform Notes (Continued)

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,compact,1,0"
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

Fortran benchmarks:
  ifort -m64

Benchmarks using both Fortran and C:
  icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
SPEC CFP2006 Result

M Computers s.r.o.

HPC S2600WF (Intel Xeon Silver 4112, 2.60 GHz)

SPECfp2006 = Not Run
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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

Base Portability Flags (Continued)

435. gromacs: -DSPEC_CPU_LP64 -nofor_main
436. cactusADM: -DSPEC_CPU_LP64 -nofor_main
437. lesie3d: -DSPEC_CPU_LP64
444. namd: -DSPEC_CPU_LP64 -nofor_main
447. dealII: -DSPEC_CPU_LP64
450. soplex: -DSPEC_CPU_LP64
453. povray: -DSPEC_CPU_LP64
454. calculix: -DSPEC_CPU_LP64 -nofor_main
459. GemsFDTD: -DSPEC_CPU_LP64
463. tonto: -DSPEC_CPU_LP64
470. lbm: -DSPEC_CPU_LP64
481. wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482. sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

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

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

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