SPEC® CINT2006 Result

M Computers s.r.o.

HPC S2600WF (Intel Xeon Silver 4114, 2.20 GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 884
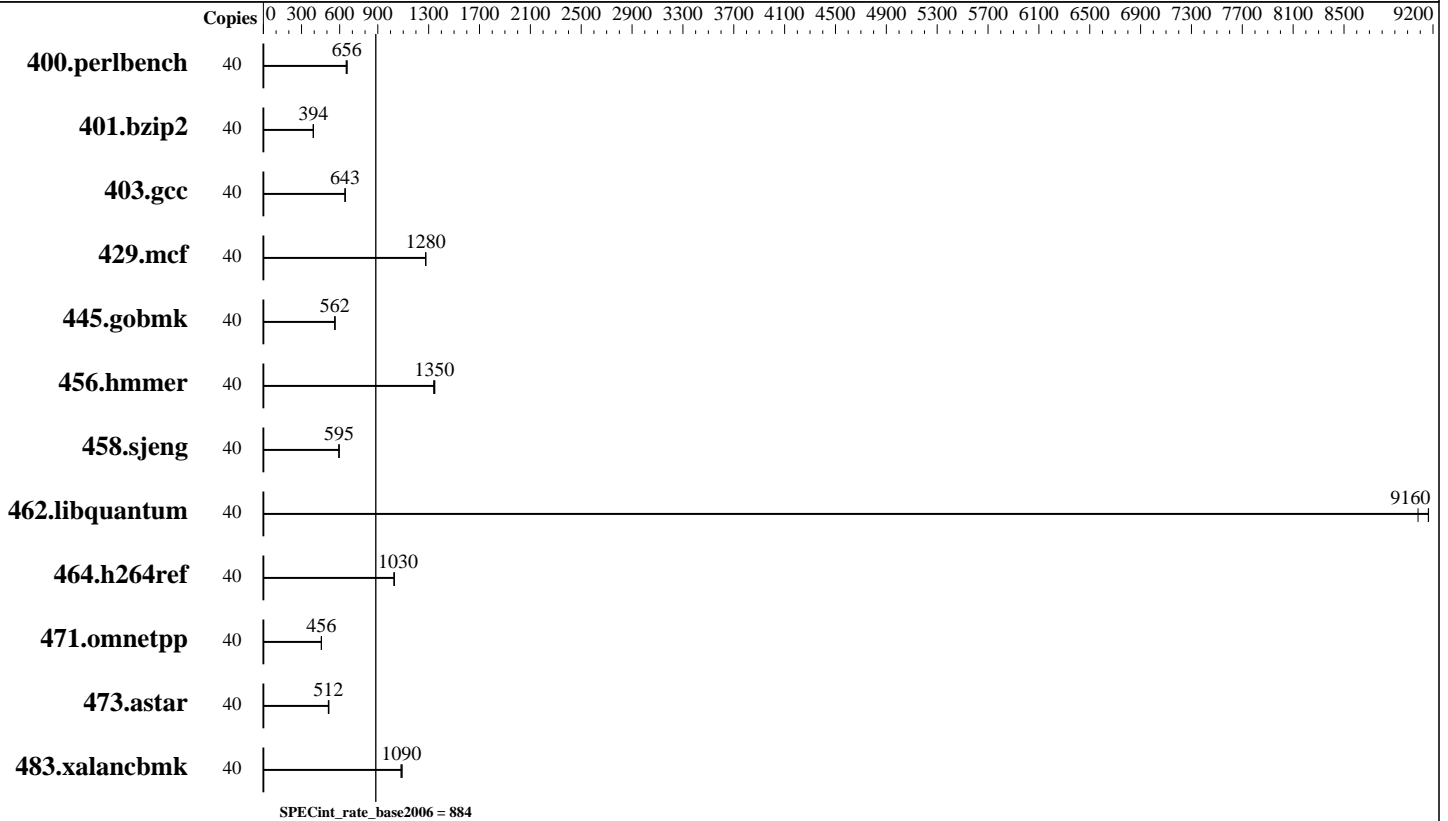
CPU2006 license: 4204
Test sponsor: M Computers s.r.o.
Tested by: M Computers s.r.o.

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

Benchmark	Copies	Result
400.perlbench	40	656
401.bzip2	40	394
403.gcc	40	643
429.mcf	40	1280
445.gobmk	40	562
456.hmmer	40	1350
458.sjeng	40	595
462.libquantum	40	9160
464.h264ref	40	1030
471.omnetpp	40	456
473.astar	40	512
483.xalancbmk	40	1090

SPECint_rate_base2006 = 884

Hardware

CPU Name:	Intel Xeon Silver 4114
CPU Characteristics:	Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	20 cores, 2 chips, 10 cores/chip, 2 threads/core
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:	13.75 MB I+D on chip per chip
Other Cache:	None
Memory:	768 GB (24 x 32 GB 2Rx8 PC4-2666V-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:	No
File System:	xfs
System State:	Run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V11.2

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Results Table

Benchmark	Base						Peak					
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	40	600	651	593	659	**596**	**656**					
401.bzip2	40	980	394	985	392	**981**	**394**					
403.gcc	40	**501**	**643**	501	642	500	644					
429.mcf	40	286	1280	286	1280	**286**	**1280**					
445.gobmk	40	747	562	744	564	**746**	**562**					
456.hmmer	40	**277**	**1350**	279	1340	277	1350					
458.sjeng	40	**814**	**595**	814	595	813	595					
462.libquantum	40	90.4	9170	91.3	9080	**90.4**	**9160**					
464.h264ref	40	860	1030	862	1030	**860**	**1030**					
471.omnetpp	40	548	456	**548**	**456**	547	457					
473.astar	40	550	511	**548**	**512**	545	515					
483.xalancbmk	40	255	1080	**254**	**1090**	253	1090					

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"

Platform Notes

        BIOS settings:
        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 Fri Sep 1 21:47:36 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 4114 CPU @ 2.20GHz
               2 "physical id"s (chips)
               40 "processors"
           cores, siblings (Caution: counting these is hw and system dependent. The

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Platform Notes (Continued)

```
    following excerpts from /proc/cpuinfo might not be reliable.  Use with
    caution.)
       cpu cores : 10
       siblings  : 20
       physical 0: cores 0 1 2 3 4 8 9 10 11 12
       physical 1: cores 0 1 2 3 4 8 9 10 11 12
    cache size : 14080 KB

 From /proc/meminfo
    MemTotal:       791028784 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 31 14:16

 SPEC is set to: /spec
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda1       xfs   650G   81G  570G  13% /
 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:
    24x Kinston 9965640-006.A01G 32 GB 2 rank 2400 MHz
```

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Platform Notes (Continued)

```
  (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/lib/ia32:/spec/lib/intel64:/spec/sh11.2"

 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
 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: -DSPEC_CPU_LINUX_IA32
    462.libquantum: -DSPEC_CPU_LINUX
    483.xalancbmk: -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/sh11.2 -lsmartheap
```

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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
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

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

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