SPEC® CINT2006 Result

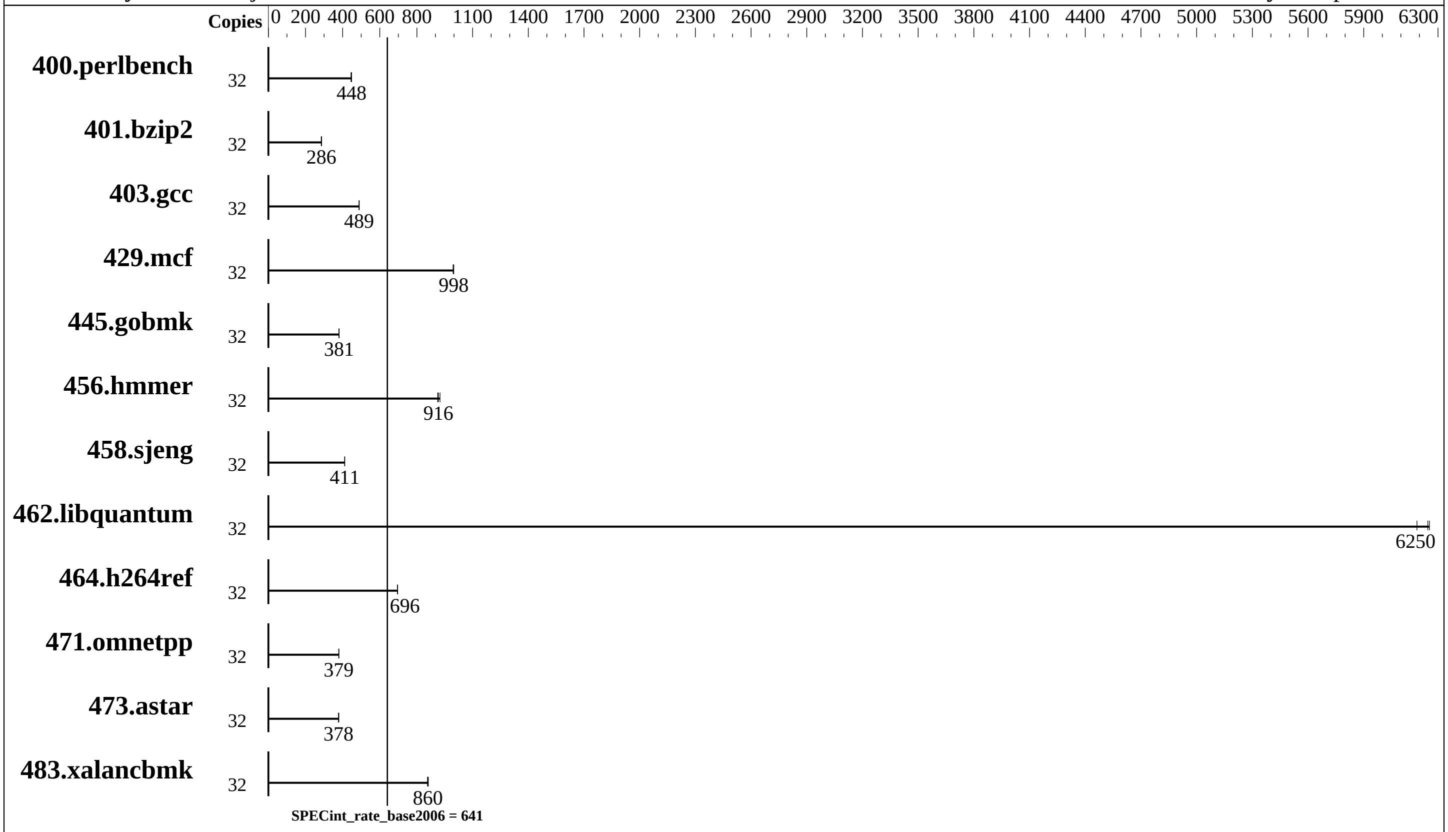
Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Silver 4108, 1.80GHz

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 641

CPU2006 license:	19	**Test date:**	Aug-2017
Test sponsor:	Fujitsu	**Hardware Availability:**	Jul-2017
Tested by:	Fujitsu	**Software Availability:**	Apr-2017



Hardware

CPU Name:	Intel Xeon Silver 4108
CPU Characteristics:	Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz:	1800
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	11 MB I+D on chip per chip
Other Cache:	None
Memory:	384 GB (24 x 16 GB 2Rx4 PC4-2666V-R, running at 2400 MHz)
Disk Subsystem:	752 GB tmpfs
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 12 SP2 4.4.21-69-default
Compiler:	C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
Auto Parallel:	No
File System:	tmpfs
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	Not Applicable
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	32	702	445	697	448	**698**	**448**							
401.bzip2	32	**1081**	**286**	1085	285	1077	287							
403.gcc	32	527	489	**527**	**489**	526	490							
429.mcf	32	292	998	**292**	**998**	293	995							
445.gobmk	32	**881**	**381**	881	381	881	381							
456.hmmer	32	**326**	**916**	327	912	323	924							
458.sjeng	32	942	411	**941**	**411**	941	411							
462.libquantum	32	106	6250	**106**	**6250**	107	6190							
464.h264ref	32	**1018**	**696**	1018	696	1019	695							
471.omnetpp	32	527	380	528	379	**527**	**379**							
473.astar	32	592	380	**594**	**378**	595	378							
483.xalancbmk	32	258	857	**257**	**860**	256	861							

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"
Kernel Boot Parameter set with : nohz_full=1-31
Turbo mode set with :
cpupower -c all frequency-set -g performance
Tmpfs filesystem can be set with:
mkdir /home/memory
mount -t tmpfs -o size=752g,rw tmpfs /home/memory
Process tunning setting:
echo 10000000 > /proc/sys/kernel/sched_min_granularity_ns
echo 15000000 > /proc/sys/kernel/sched_wakeup_granularity_ns
echo 0 > /proc/sys/kernel/numa_balancing
cpu idle state set with:
cpupower idle-set -d 1
cpupower idle-set -d 2
```

Platform Notes

```
BIOS configuration:
HWPM Support = Disabled
Intel Virtualization Technology = Disabled
Sub NUMA Clustering = Disabled
```

Continued on next page

Platform Notes (Continued)

```
IMC Interleaving = 2-way
LLC Dead Line Alloc = Disabled
Stale AtoS = Enabled
Sysinfo program /home/memory/speccpu/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-zz9i Tue Aug  8 06:30:38 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 4108 CPU @ 1.80GHz
      2 "physical id"s (chips)
      32 "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 : 8
      siblings  : 16
      physical 0: cores 0 1 2 3 4 5 6 7
      physical 1: cores 0 1 2 3 4 5 6 7
   cache size : 11264 KB

From /proc/meminfo
   MemTotal:       394407660 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 linux-zz9i 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
   (9464f67) x86_64 x86_64 x86_64 GNU/Linux
```

Continued on next page

Platform Notes (Continued)

```
run-level 3 Aug 7 23:15

SPEC is set to: /home/memory/speccpu
   Filesystem     Type   Size  Used Avail Use% Mounted on
   tmpfs          tmpfs  752G  4.1G  748G   1% /home/memory
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 FUJITSU // American Megatrends Inc. V5.0.0.12 R1.4.1 for D3383-A1x
  06/19/2017
  Memory:
   24x Hynix HMA42GR7BJR4N-VK 16 GB 2 rank 2666 MHz, configured at 2400 MHz

(End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/memory/speccpu/lib/ia32:/home/memory/speccpu/lib/intel64:/home/memory/speccpu/sh10.2"

 Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
 memory using Redhat Enterprise Linux 7.2
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/transparent_hugepage/enabled
 Filesystem page cache cleared with:
 shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run
 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`

Continued on next page

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Silver 4108, 1.80GHz

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 641

CPU2006 license: 19		**Test date:**	Aug-2017
Test sponsor:	Fujitsu	**Hardware Availability:**	Jul-2017
Tested by:	Fujitsu	**Software Availability:**	Apr-2017

Base Portability Flags (Continued)

403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
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-revF.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-SKL-RevA.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/Fujitsu-Platform-Settings-V1.2-SKL-RevA.xml

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 Wed Sep 20 13:42:45 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 September 2017.