SPEC® CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6130, 2.10GHz

$SPECint^{®}\_rate2006 =$ Not Run
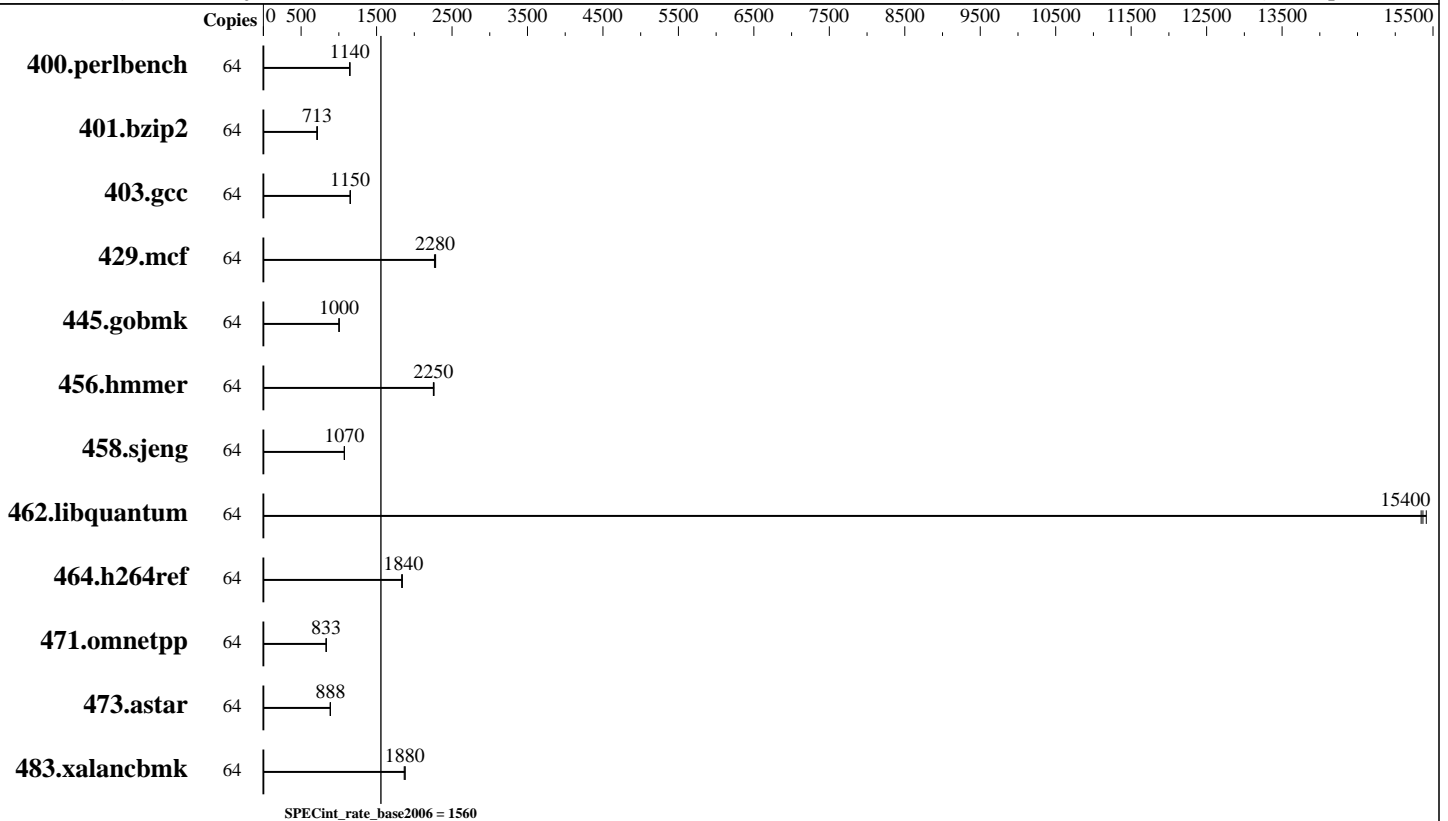
SPECint_rate_base2006 = 1560

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

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

Benchmark	Copies	Result
400.perlbench	64	1140
401.bzip2	64	713
403.gcc	64	1150
429.mcf	64	2280
445.gobmk	64	1000
456.hmmer	64	2250
458.sjeng	64	1070
462.libquantum	64	15400
464.h264ref	64	1840
471.omnetpp	64	833
473.astar	64	888
483.xalancbmk	64	1880

SPECint_rate_base2006 = 1560

Hardware

CPU Name:	Intel Xeon Gold 6130
CPU Characteristics:	Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	32 cores, 2 chips, 16 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:	22 MB I+D on chip per chip
Other Cache:	None
Memory:	384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)
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

SPEC CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6130, 2.10GHz

SPECint_rate2006 =   Not Run

SPECint_rate_base2006 = 1560

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

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

Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	546	1140	**546**	**1140**	545	1150							
401.bzip2	64	863	716	871	709	**867**	**713**							
403.gcc	64	448	1150	**447**	**1150**	447	1150							
429.mcf	64	**256**	**2280**	257	2270	256	2280							
445.gobmk	64	670	1000	669	1000	**669**	**1000**							
456.hmmer	64	264	2260	265	2250	**265**	**2250**							
458.sjeng	64	722	1070	**722**	**1070**	721	1070							
462.libquantum	64	**86.3**	**15400**	86.0	15400	86.4	15300							
464.h264ref	64	769	1840	773	1830	**770**	**1840**							
471.omnetpp	64	**480**	**833**	480	833	481	832							
473.astar	64	**506**	**888**	505	889	508	885							
483.xalancbmk	64	237	1870	235	1880	**235**	**1880**							

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=1-63
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:
Link Frequency Select = 10.4 GT/s
HWPM Support = Disabled
Intel Virtualization Technology = Disabled
```

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6130, 2.10GHz

SPECint_rate2006 =   Not Run

SPECint_rate_base2006 = 1560

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Aug-2017

Hardware Availability: Jul-2017

Software Availability: Apr-2017

Platform Notes (Continued)

```
    Sub NUMA Clustering = Enabled
    IMC Interleaving = 1-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-vv4c Thu Aug 17 02:21:23 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) Gold 6130 CPU @ 2.10GHz
          2 "physical id"s (chips)
          64 "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 : 16
          siblings  : 32
          physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
          physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
       cache size : 22528 KB

    From /proc/meminfo
       MemTotal:        394412256 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-vv4c 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
```

SPEC CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6130, 2.10GHz

SPECint_rate2006 =   Not Run

SPECint_rate_base2006 = 1560

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

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

Platform Notes (Continued)

```
    (9464f67) x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Aug 16 20:27

  SPEC is set to: /home/memory/SPECcpu
    Filesystem      Type   Size  Used Avail Use% Mounted on
    tmpfs          tmpfs  752G  4.6G  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 Samsung M393A2G40EB2-CTD 16 GB 2 rank 2666 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
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6130, 2.10GHz

SPECint_rate2006 =   Not Run

SPECint_rate_base2006 = 1560

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)

```
  401.bzip2: -D_FILE_OFFSET_BITS=64
    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

SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6130, 2.10GHz

SPECint_rate2006 =   Not Run

SPECint_rate_base2006 = 1560

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Aug-2017

Hardware Availability: Jul-2017

Software Availability: Apr-2017

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 13:42:44 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 September 2017.