



SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 3800B, Intel Xeon Platinum 8153, 2.00GHz

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 5700

CPU2006 license: 19

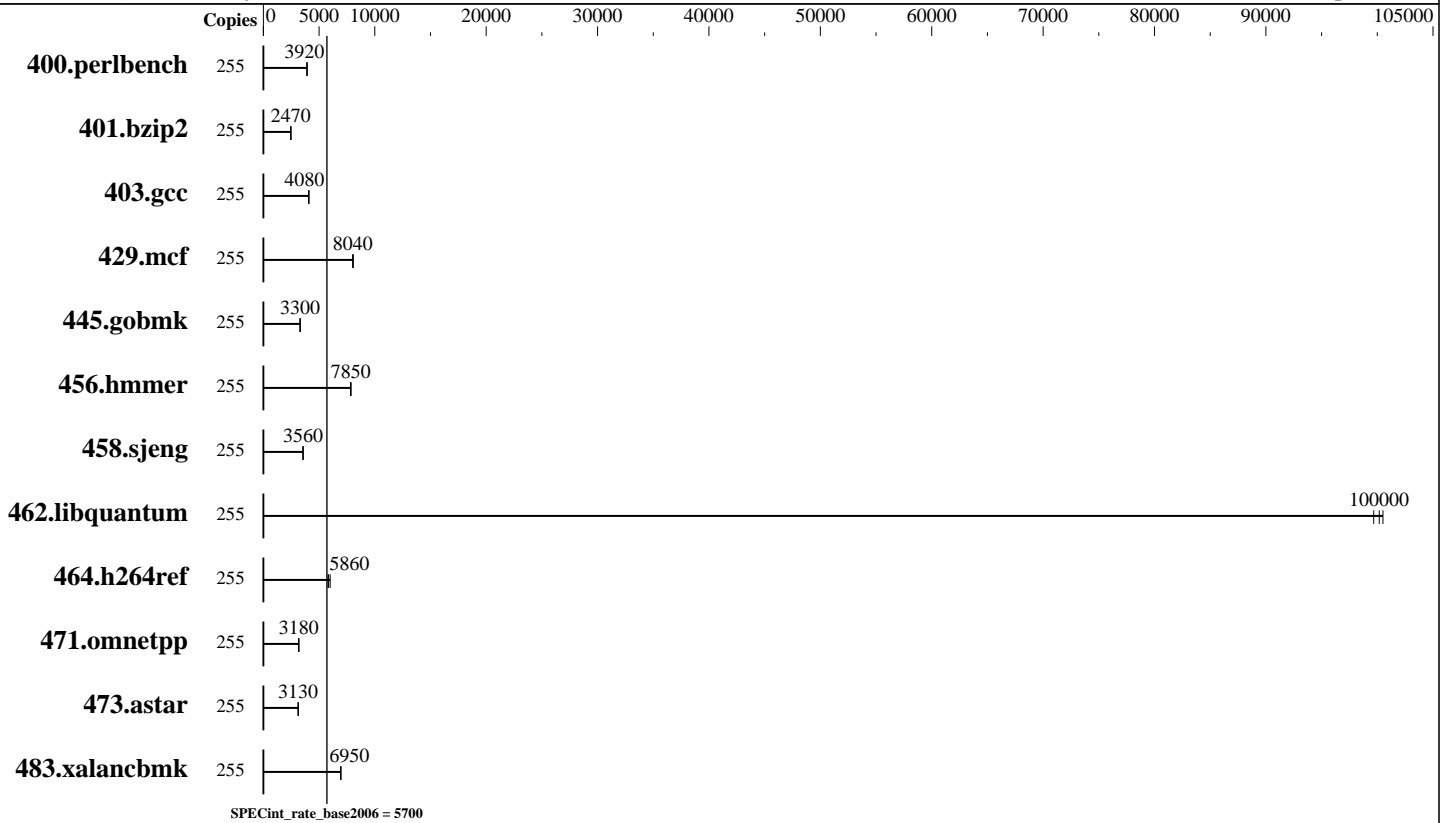
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2017

Hardware Availability: Jul-2017

Software Availability: Sep-2017



Hardware

CPU Name: Intel Xeon Platinum 8153
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 128 cores, 8 chips, 16 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4,6,8 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: 1536 GB (96 x 16 GB 2Rx4 PC4-2666V-R)
 Disk Subsystem: 768 GB tmpfs
 Other Hardware: 1 x SAS HDD, 600 GB, 10.5K RPM, used for swap

Software

Operating System: SUSE Linux Enterprise Server 12 SP2 4.4.21-69-default
 Compiler: C/C++: Version 18.0.0.128 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

PRIMEQUEST 3800B, Intel Xeon Platinum 8153,
2.00GHz

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 5700

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

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	255	635	3920	637	3910	636	3920							
401.bzip2	255	998	2470	999	2460	996	2470							
403.gcc	255	505	4070	503	4080	503	4080							
429.mcf	255	289	8040	290	8020	288	8060							
445.gobmk	255	810	3300	810	3300	811	3300							
456.hammer	255	302	7870	304	7830	303	7850							
458.sjeng	255	866	3560	866	3560	866	3560							
462.libquantum	255	52.7	100000	52.6	101000	53.0	99700							
464.h264ref	255	941	5990	972	5810	964	5860							
471.omnetpp	255	502	3180	502	3180	502	3170							
473.astar	255	573	3120	572	3130	572	3130							
483.xalancbmk	255	253	6950	253	6950	253	6950							

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"
Set Kernel Boot Parameter : nohz_full=1-255 isolcpus=1-255
Set CPU frequency governor to maximum performance with:
cpupower -c all frequency-set -g performance
Set tmpfs filesystem with:
mkdir /home/memory
mount -t tmpfs -o size=768g,rw tmpfs /home/memory
Process tuning settings:
echo 1000000 > /proc/sys/kernel/sched_min_granularity_ns
echo 1500000 > /proc/sys/kernel/sched_wakeup_granularity_ns
echo 1 > /proc/sys/kernel/numa_balancing
echo always > /sys/kernel/mm/transparent_hugepage/enabled
cpu idle state set with:
cpupower idle-set -d 2
cpupower idle-set -d 3
set affinity of rcu threads to the cpu0:
for i in `pgrep rcu` ; do taskset -pc 0 $i ; done
```



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 3800B, Intel Xeon Platinum 8153, 2.00GHz

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 5700

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

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

Platform Notes

BIOS configuration:
Intel Virtualization Technology = Disabled
HWPM Support = Disabled
DCU Streamer Prefetcher = Disabled
Stale AtoS = Enabled
LLC dead line alloc = Disabled
Sub NUMA Clustering = Enabled
Fan Control = Full
Sysinfo program /home/memory/speccpu/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-k55j Wed Nov 8 06:21:00 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) Platinum 8153 CPU @ 2.00GHz
 8 "physical id"s (chips)
256 "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
physical 2: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 3: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 4: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 5: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 6: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 7: 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:      1583837096 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
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"
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 3800B, Intel Xeon Platinum 8153,
2.00GHz

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 5700

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

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

Platform Notes (Continued)

```
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-k55j 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 Nov 8 06:03
```

```
SPEC is set to: /home/memory/speccpu  
Filesystem      Type      Size  Used Avail Use% Mounted on  
tmpfs           tmpfs    768G  9.7G  759G   2% /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 V1.0.0.0 R1.21.0 for D3858-A1x          09/15/2017  
Memory:  
45x Hynix HMA42GR7BJR4N-VK 16 GB 2 rank 2666 MHz  
51x 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/icc2018lib/ia32:/home/memory/speccpu/icc2018lib/intel64"
LD_LIBRARY_PATH = "\$LD_LIBRARY_PATH:/home/memory/speccpu/sh10.2"
Binaries compiled on a system with 2x Intel Xeon Platinum 8180 CPU + 384GB RAM
memory using SUSE Linux Enterprise Server 12 SP2
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_2018.0.128/linux/compiler/lib/ia32
C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2018.0.128/linux/compiler/lib/ia32



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 3800B, Intel Xeon Platinum 8153,
2.00GHz

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 5700

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

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

Base Portability Flags

```
400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
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-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX512 -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/Fujitsu-Platform-Settings-V1.2-SKL-RevC.html>
<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/Fujitsu-Platform-Settings-V1.2-SKL-RevC.xml>
<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml>



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

PRIMEQUEST 3800B, Intel Xeon Platinum 8153,
2.00GHz

SPECint_rate2006 = Not Run

SPECint_rate_base2006 = 5700

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2017

Hardware Availability: Jul-2017

Software Availability: Sep-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 Dec 27 12:06:11 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 December 2017.