



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint®_rate2006 = 2750

Huawei CH242 V3 (Intel Xeon E7-8880 v3)

SPECint_rate_base2006 = 2650

CPU2006 license: 3175

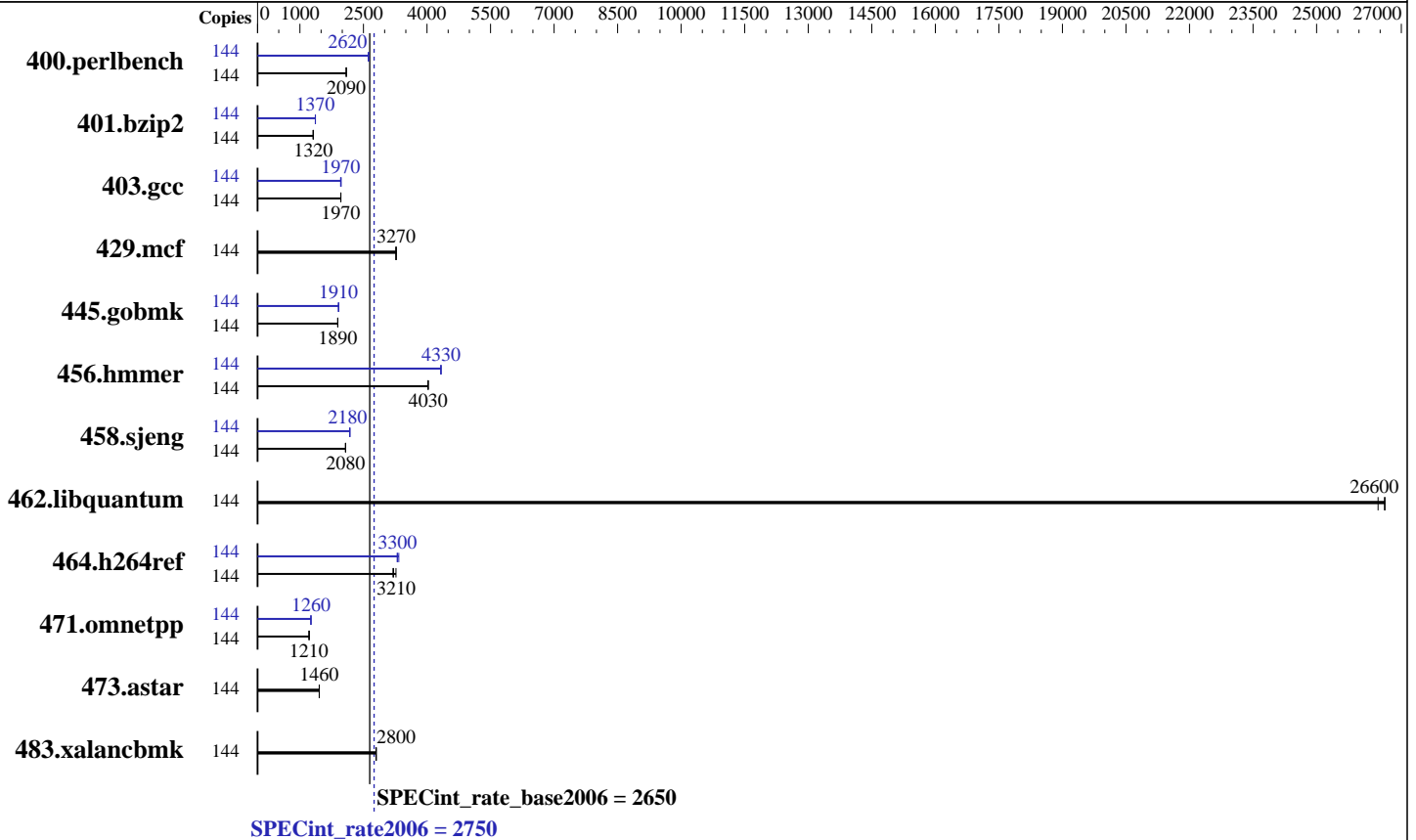
Test date: Aug-2015

Test sponsor: Huawei

Hardware Availability: May-2015

Tested by: Huawei

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E7-8880 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.10 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 72 cores, 4 chips, 18 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 45 MB I+D on chip per chip
 Other Cache: None
 Memory: 512 GB (32 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)
 3.10.0-123.el7.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2750

Huawei CH242 V3 (Intel Xeon E7-8880 v3)

SPECint_rate_base2006 = 2650

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Aug-2015
Hardware Availability: May-2015
Software Availability: Sep-2014

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	144	672	2090	672	2090	671	2100	144	538	2610	537	2620	536	2620
401.bzip2	144	1056	1320	1061	1310	1055	1320	144	1018	1370	1017	1370	1019	1360
403.gcc	144	590	1960	590	1970	589	1970	144	591	1960	588	1970	589	1970
429.mcf	144	402	3270	401	3280	402	3270	144	402	3270	401	3280	402	3270
445.gobmk	144	797	1890	798	1890	797	1890	144	791	1910	790	1910	790	1910
456.hammer	144	333	4030	333	4030	334	4020	144	311	4320	310	4330	310	4330
458.sjeng	144	839	2080	839	2080	838	2080	144	799	2180	800	2180	801	2180
462.libquantum	144	112	26600	112	26600	113	26500	144	112	26600	112	26600	113	26500
464.h264ref	144	992	3210	997	3200	975	3270	144	956	3330	967	3300	965	3300
471.omnetpp	144	741	1210	736	1220	741	1210	144	716	1260	713	1260	713	1260
473.astar	144	695	1460	694	1460	694	1460	144	695	1460	694	1460	694	1460
483.xalancbmk	144	355	2800	355	2800	356	2790	144	355	2800	355	2800	356	2790

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 configuration:
Set Power Efficiency Mode to Custom
Set Lock_step to disabled
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Mon Aug 17 06:18:19 2015

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) CPU E7-8880 v3 @ 2.30GHz
4 "physical id"s (chips)
144 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2750

Huawei CH242 V3 (Intel Xeon E7-8880 v3)

SPECint_rate_base2006 = 2650

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Aug-2015
Hardware Availability: May-2015
Software Availability: Sep-2014

Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 18
siblings  : 36
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 46080 KB
```

```
From /proc/meminfo
MemTotal:      528012860 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server
```

```
uname -a:
Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57
EDT 2014 x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Aug 17 05:05

```
SPEC is set to: /spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2       xfs   440G  233G  207G  53% /
```

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 American Megatrends Inc. BLISZ015 06/09/2015

Memory:
32x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1600 MHz

(End of data from sysinfo program)



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2750

Huawei CH242 V3 (Intel Xeon E7-8880 v3)

SPECint_rate_base2006 = 2650

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2015

Hardware Availability: May-2015

Software Availability: Sep-2014

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
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/composer_xe_2015/lib/ia32

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/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 -opt-prefetch
-opt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmarheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2750

Huawei CH242 V3 (Intel Xeon E7-8880 v3)

SPECint_rate_base2006 = 2650

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Aug-2015
Hardware Availability: May-2015
Software Availability: Sep-2014

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

401.bzip2: -DSPEC_CPU_LP64

456.hmmer: -DSPEC_CPU_LP64

458.sjeng: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LINUX

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECint_rate2006 = 2750

Huawei CH242 V3 (Intel Xeon E7-8880 v3)

SPECint_rate_base2006 = 2650

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2015

Hardware Availability: May-2015

Software Availability: Sep-2014

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak 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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.4.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.4.xml>

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 Tue Sep 8 22:41:02 2015 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 8 September 2015.