



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

Lenovo ThinkServer RS140 (Intel Xeon E3-1285 v3, 3.60 GHz)

SPECint®_rate2006 = 219

SPECint_rate_base2006 = 212

CPU2006 license: 9017

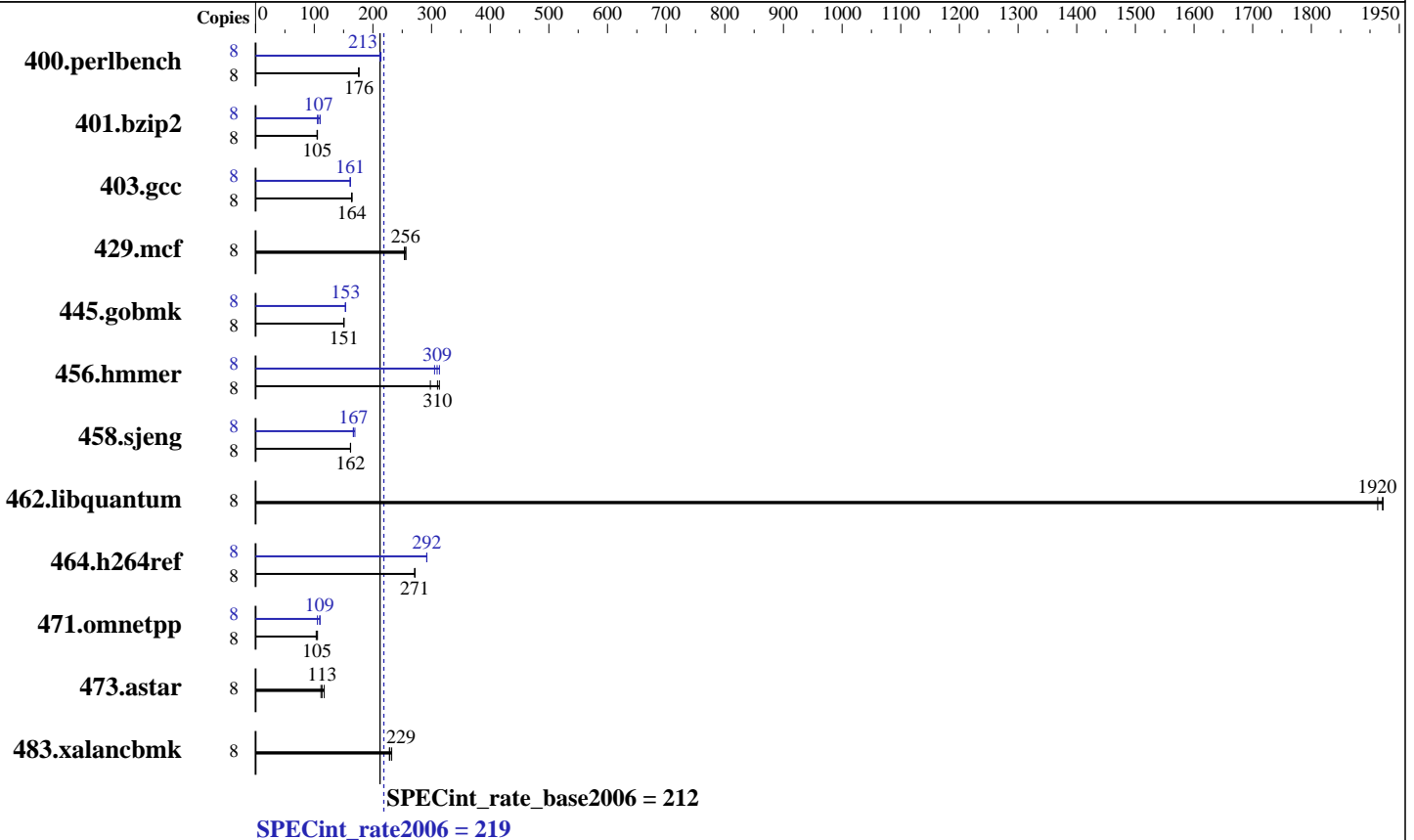
Test sponsor: Lenovo Group Limited

Tested by: Lenovo Group Limited

Test date: Apr-2014

Hardware Availability: Jun-2014

Software Availability: Apr-2014



Hardware

CPU Name: Intel Xeon E3-1285 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz
 CPU MHz: 3600
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (2 x 8 GB 2Rx8 PC3L-12800E-11, ECC)
 Disk Subsystem: 1 x 240 GB SATA SSD
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
 2.6.32-431.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (Full multiuser with network)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

Lenovo ThinkServer RS140 (Intel Xeon E3-1285 v3, 3.60 GHz)

SPECint_rate2006 = 219

SPECint_rate_base2006 = 212

CPU2006 license: 9017

Test sponsor: Lenovo Group Limited

Tested by: Lenovo Group Limited

Test date: Apr-2014

Hardware Availability: Jun-2014

Software Availability: Apr-2014

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	445	176	444	176	444	176	8	366	214	366	213	368	212
401.bzip2	8	736	105	735	105	732	106	8	701	110	719	107	733	105
403.gcc	8	393	164	393	164	392	164	8	398	162	399	161	399	161
429.mcf	8	285	256	285	256	288	254	8	285	256	285	256	288	254
445.gobmk	8	557	151	558	150	557	151	8	549	153	547	153	546	154
456.hammer	8	241	310	238	313	250	298	8	245	305	238	313	241	309
458.sjeng	8	599	162	598	162	597	162	8	581	167	572	169	580	167
462.libquantum	8	86.3	1920	86.6	1910	86.2	1920	8	86.3	1920	86.6	1910	86.2	1920
464.h264ref	8	651	272	652	271	652	271	8	607	292	606	292	606	292
471.omnetpp	8	478	105	474	106	484	103	8	475	105	458	109	455	110
473.astar	8	504	111	496	113	480	117	8	504	111	496	113	480	117
483.xalancbmk	8	242	228	238	232	241	229	8	242	228	238	232	241	229

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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:

ICE Performance Modes set to Full Speed

Sysinfo program /usr/cpu2006/config/sysinfo.rev6818

\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191

running on RS140 Wed Apr 23 23:43:31 2014

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 E3-1285 v3 @ 3.60GHz

1 "physical id"s (chips)

8 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

<http://www.spec.org/>

Page 2



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint_rate2006 = 219

Lenovo ThinkServer RS140 (Intel Xeon E3-1285 v3, 3.60 GHz)

SPECint_rate_base2006 = 212

CPU2006 license: 9017

Test date: Apr-2014

Test sponsor: Lenovo Group Limited

Hardware Availability: Jun-2014

Tested by: Lenovo Group Limited

Software Availability: Apr-2014

Platform Notes (Continued)

```
cpu cores : 4
siblings  : 8
physical 0: cores 0 1 2 3
cache size : 8192 KB
```

From /proc/meminfo

```
MemTotal:      16219472 kB
HugePages_Total: 0
Hugepagesize:   2048 kB
```

/usr/bin/lsb_release -d

```
Red Hat Enterprise Linux Server release 6.5 (Santiago)
```

From /etc/*release* /etc/*version*

```
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

uname -a:

```
Linux RS140 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64
x86_64 x86_64 GNU/Linux
```

run-level 3 Apr 23 23:42

SPEC is set to: /usr/cpu2006

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        ext4  217G   30G  176G  15% /
```

Additional information from dmidecode:

```
BIOS LENOVO FBKT75CUS 03/24/2014
Memory:
 2x 8 GB
 2x Samsung M391B1G73QH0-YK0 8 GB 1600 MHz 2 rank
 2x [Empty] [Empty]
```

(End of data from sysinfo program)

RS140 support 2 channels and 2 DIMMs per channel, total 4 DIMMs.

2 DIMM slots installed with 8 GB DIMM for this run.

General Notes

Environment variables set by runspec before the start of the run:

```
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB

memory using RedHat EL 6.4

Transparent Huge Pages enabled with:

```
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

Lenovo ThinkServer RS140 (Intel Xeon E3-1285 v3,
3.60 GHz)

SPECint_rate2006 = 219

SPECint_rate_base2006 = 212

CPU2006 license: 9017

Test sponsor: Lenovo Group Limited

Tested by: Lenovo Group Limited

Test date: Apr-2014

Hardware Availability: Jun-2014

Software Availability: Apr-2014

Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

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 -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint_rate2006 = 219

Lenovo ThinkServer RS140 (Intel Xeon E3-1285 v3, 3.60 GHz)

SPECint_rate_base2006 = 212

CPU2006 license: 9017

Test date: Apr-2014

Test sponsor: Lenovo Group Limited

Hardware Availability: Jun-2014

Tested by: Lenovo Group Limited

Software Availability: Apr-2014

Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc -m32

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
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:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint_rate2006 = 219

Lenovo ThinkServer RS140 (Intel Xeon E3-1285 v3, 3.60 GHz)

SPECint_rate_base2006 = 212

CPU2006 license: 9017

Test date: Apr-2014

Test sponsor: Lenovo Group Limited

Hardware Availability: Jun-2014

Tested by: Lenovo Group Limited

Software Availability: Apr-2014

Peak Optimization Flags (Continued)

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-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Lenovo-Platform-Settings-V1.2-revB.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Lenovo-Platform-Settings-V1.2-revB.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 Thu Jul 24 22:46:26 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 24 June 2014.