



SPEC[®] CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint[®]2006 = 64.4

Lenovo System x3250 M5
(Intel Xeon E3-1286 v3, 3.70 GHz)

SPECint_base2006 = 62.4

CPU2006 license: 9017

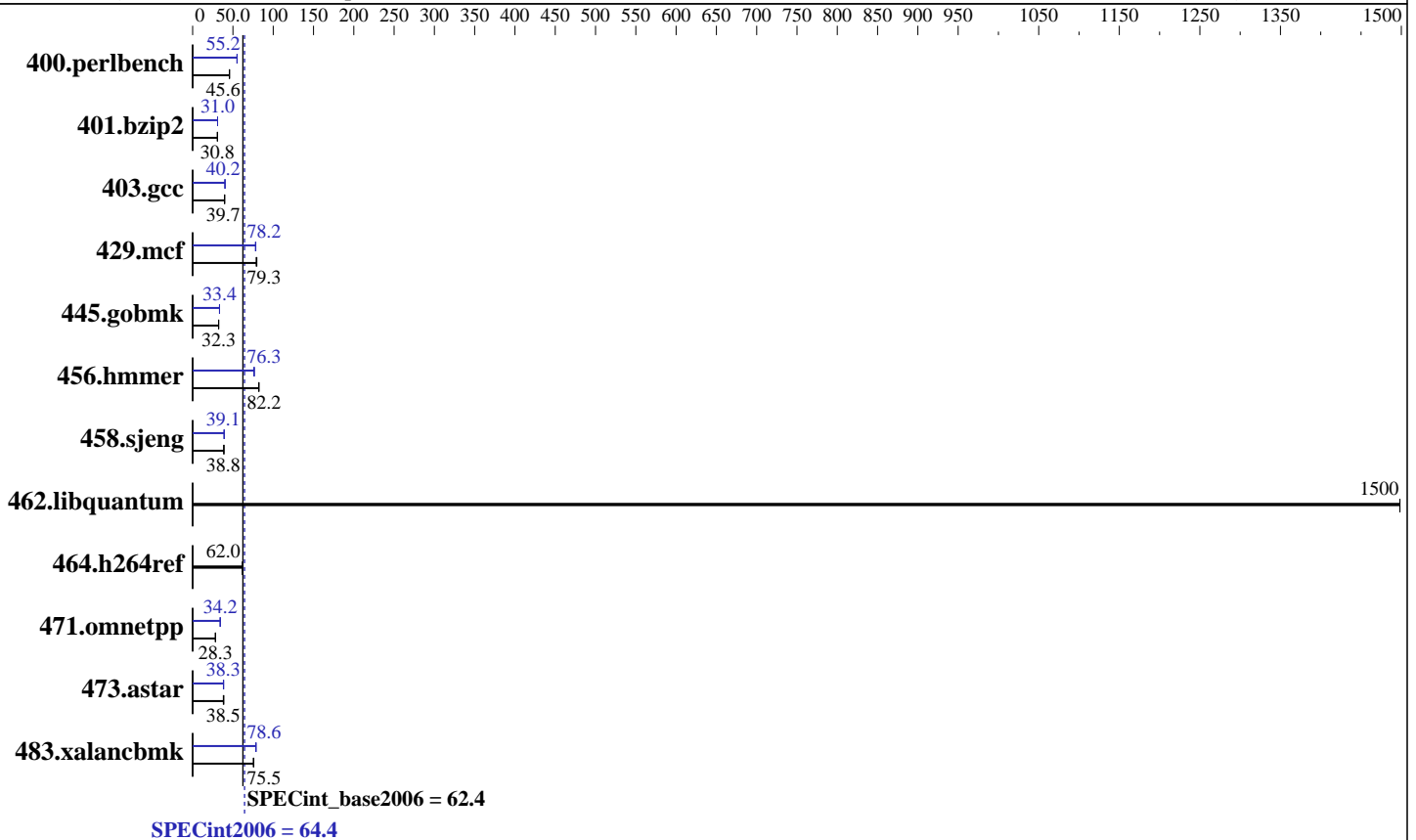
Test date: Jan-2015

Test sponsor: Lenovo Group Limited

Hardware Availability: Jul-2014

Tested by: Lenovo Group Limited

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E3-1286 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 4.10 GHz
 CPU MHz: 3700
 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 (4 x 4 GB 2Rx8 PC3-12800U-13)
 Disk Subsystem: 1 x 1000 GB SATA, 7200 RPM
 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: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = **64.4**

Lenovo System x3250 M5
(Intel Xeon E3-1286 v3, 3.70 GHz)

SPECint_base2006 = **62.4**

CPU2006 license: 9017

Test date: Jan-2015

Test sponsor: Lenovo Group Limited

Hardware Availability: Jul-2014

Tested by: Lenovo Group Limited

Software Availability: Nov-2013

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	215	45.5	213	45.9	<u>214</u>	<u>45.6</u>	<u>177</u>	<u>55.2</u>	177	55.3	178	55.0
401.bzip2	314	30.8	<u>314</u>	<u>30.8</u>	314	30.8	312	30.9	<u>312</u>	<u>31.0</u>	312	31.0
403.gcc	203	39.7	<u>203</u>	<u>39.7</u>	203	39.6	<u>200</u>	<u>40.2</u>	200	40.2	201	40.1
429.mcf	116	78.9	114	79.7	<u>115</u>	<u>79.3</u>	116	78.4	<u>117</u>	<u>78.2</u>	117	77.9
445.gobmk	325	32.3	325	32.3	<u>325</u>	<u>32.3</u>	<u>314</u>	<u>33.4</u>	314	33.4	315	33.3
456.hammer	<u>114</u>	<u>82.2</u>	113	82.3	114	82.0	122	76.6	123	76.0	<u>122</u>	<u>76.3</u>
458.sjeng	<u>312</u>	<u>38.8</u>	312	38.8	313	38.7	310	39.1	309	39.1	<u>309</u>	<u>39.1</u>
462.libquantum	13.8	1500	<u>13.8</u>	<u>1500</u>	13.8	1500	13.8	1500	<u>13.8</u>	<u>1500</u>	13.8	1500
464.h264ref	358	61.8	357	62.1	<u>357</u>	<u>62.0</u>	358	61.8	357	62.1	<u>357</u>	<u>62.0</u>
471.omnetpp	<u>221</u>	<u>28.3</u>	221	28.2	220	28.4	183	34.2	182	34.3	<u>182</u>	<u>34.2</u>
473.astar	182	38.6	<u>182</u>	<u>38.5</u>	184	38.1	<u>183</u>	<u>38.3</u>	182	38.5	184	38.2
483.xalancbmk	90.9	75.9	91.5	75.4	<u>91.4</u>	<u>75.5</u>	87.7	78.7	<u>87.8</u>	<u>78.6</u>	88.0	78.4

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS setting:

Operating Mode set to Maximum Performance

Sysinfo program /home/SPEC_icl4/config/sysinfo.rev6818

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

running on localhost.localdomain Thu Jan 29 22:04:21 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 E3-1286 v3 @ 3.70GHz

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.)

cpu cores : 4

siblings : 8

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

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

Page 2



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 64.4

Lenovo System x3250 M5
(Intel Xeon E3-1286 v3, 3.70 GHz)

SPECint_base2006 = 62.4

CPU2006 license: 9017

Test date: Jan-2015

Test sponsor: Lenovo Group Limited

Hardware Availability: Jul-2014

Tested by: Lenovo Group Limited

Software Availability: Nov-2013

Platform Notes (Continued)

```
physical 0: cores 0 1 2 3
cache size : 8192 KB
```

```
From /proc/meminfo
MemTotal:      16165980 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 localhost.localdomain 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 Jan 28 19:44
```

```
SPEC is set to: /home/SPEC_ic14
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_home ext4  860G   20G  797G   3% /home
```

```
Additional information from dmidecode:
BIOS IBM  -[JUE115CUS-1.06]- 11/11/2014
Memory:
4x Hynix/Hyundai HMT351U7EFR8A-PB 4 GB 1600 MHz 2 rank
```

(End of data from sysinfo program)

General Notes

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

```
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/SPEC_ic14/libs/32:/home/SPEC_ic14/libs/64:/home/SPEC_ic14/sh"
OMP_NUM_THREADS = "4"
```

```
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
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 64.4

Lenovo System x3250 M5
(Intel Xeon E3-1286 v3, 3.70 GHz)

SPECint_base2006 = 62.4

CPU2006 license: 9017

Test date: Jan-2015

Test sponsor: Lenovo Group Limited

Hardware Availability: Jul-2014

Tested by: Lenovo Group Limited

Software Availability: Nov-2013

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
 401.bzip2: -DSPEC_CPU_LP64
 403.gcc: -DSPEC_CPU_LP64
 429.mcf: -DSPEC_CPU_LP64
 445.gobmk: -DSPEC_CPU_LP64
 456.hmmer: -DSPEC_CPU_LP64
 458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
 464.h264ref: -DSPEC_CPU_LP64
 471.omnetpp: -DSPEC_CPU_LP64
 473.astar: -DSPEC_CPU_LP64
 483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmarthheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 64.4

Lenovo System x3250 M5
(Intel Xeon E3-1286 v3, 3.70 GHz)

SPECint_base2006 = 62.4

CPU2006 license: 9017

Test date: Jan-2015

Test sponsor: Lenovo Group Limited

Hardware Availability: Jul-2014

Tested by: Lenovo Group Limited

Software Availability: Nov-2013

Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
 401.bzip2: `-DSPEC_CPU_LP64`
 403.gcc: `-DSPEC_CPU_LP64`
 429.mcf: `-DSPEC_CPU_LP64`
 456.hmmer: `-DSPEC_CPU_LP64`
 458.sjeng: `-DSPEC_CPU_LP64`
 462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
 464.h264ref: `-DSPEC_CPU_LP64`
 473.astar: `-DSPEC_CPU_LP64`
 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) -opt-prefetch -ansi-alias`

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

403.gcc: `-xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32`

429.mcf: `-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32`

445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias`

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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 64.4

Lenovo System x3250 M5
(Intel Xeon E3-1286 v3, 3.70 GHz)

SPECint_base2006 = 62.4

CPU2006 license: 9017

Test date: Jan-2015

Test sponsor: Lenovo Group Limited

Hardware Availability: Jul-2014

Tested by: Lenovo Group Limited

Software Availability: Nov-2013

Peak Optimization Flags (Continued)

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

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

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)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

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-Flags-V1.2-HSW-A.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-Flags-V1.2-HSW-A.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 Wed Feb 25 11:29:16 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 February 2015.