



SPEC® CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint®2006 = **71.1**

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint_base2006 = **68.9**

CPU2006 license: 9017

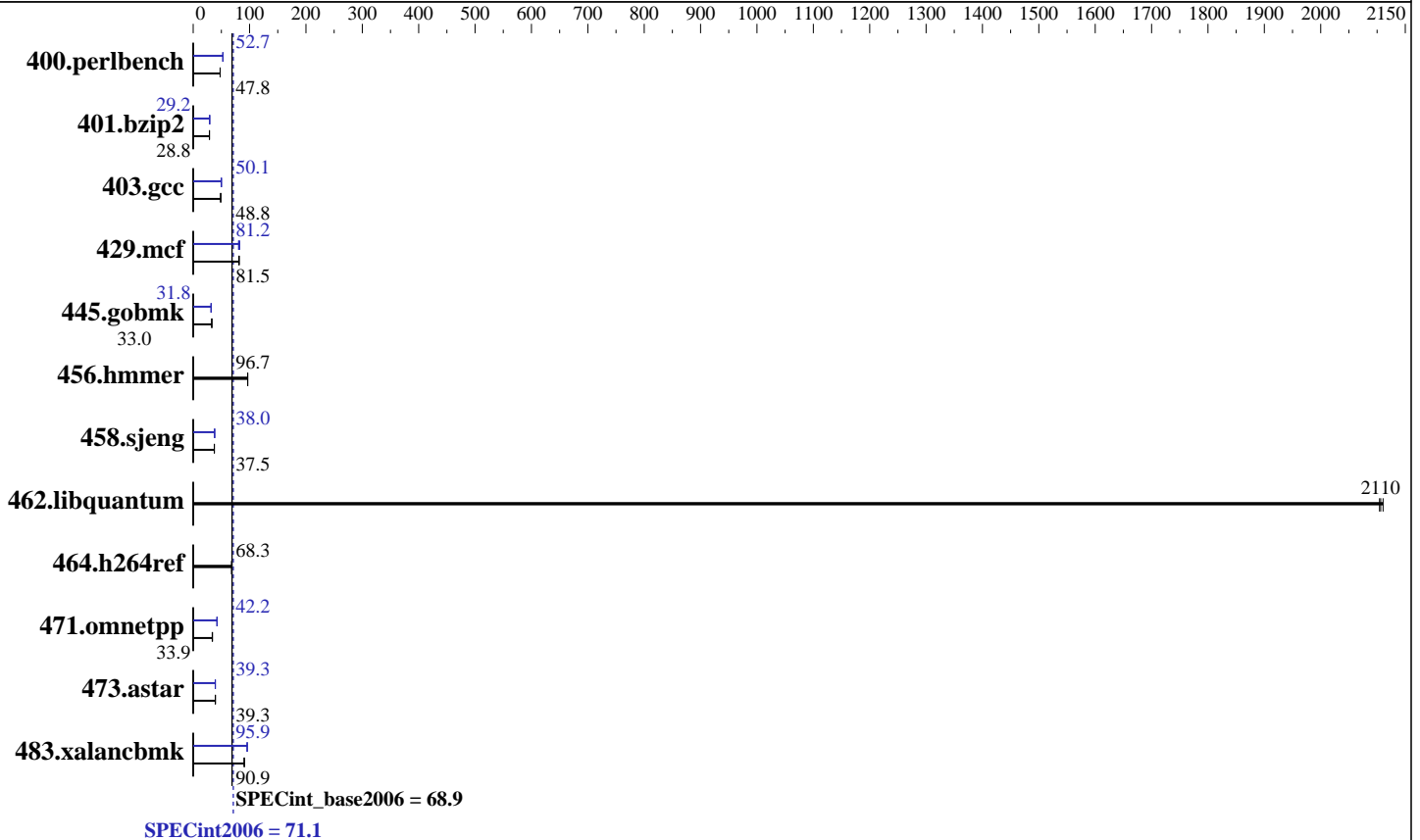
Test date: Jan-2016

Test sponsor: Lenovo Group Limited

Hardware Availability: Oct-2015

Tested by: Lenovo Group Limited

Software Availability: Aug-2015



Hardware

CPU Name: Intel Xeon E3-1225 v5
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 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: 32 GB (4 x 8 GB 2Rx8 PC4-2133P-U)
 Disk Subsystem: 1 x 800 GB SATA SSD
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12 (x86_64)
 Kernel 3.12.28-4-default
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.2



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = **71.1**

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint_base2006 = **68.9**

CPU2006 license: 9017

Test date: Jan-2016

Test sponsor: Lenovo Group Limited

Hardware Availability: Oct-2015

Tested by: Lenovo Group Limited

Software Availability: Aug-2015

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	204	47.9	204	47.8	205	47.8	185	52.7	185	52.7	185	52.7
401.bzip2	334	28.9	335	28.8	335	28.8	330	29.2	330	29.2	330	29.3
403.gcc	165	48.8	165	48.8	165	48.8	162	49.8	161	50.1	161	50.1
429.mcf	113	80.8	112	81.5	112	81.7	110	82.5	112	81.2	113	80.4
445.gobmk	318	33.0	317	33.0	318	33.0	330	31.8	330	31.8	330	31.8
456.hammer	96.5	96.7	96.5	96.7	96.5	96.7	96.5	96.7	96.5	96.7	96.5	96.7
458.sjeng	322	37.5	323	37.5	323	37.5	318	38.0	318	38.0	318	38.0
462.libquantum	9.82	2110	9.84	2110	9.85	2100	9.82	2110	9.84	2110	9.85	2100
464.h264ref	324	68.3	324	68.3	323	68.4	324	68.3	324	68.3	323	68.4
471.omnetpp	182	34.3	185	33.8	184	33.9	148	42.2	148	42.2	147	42.5
473.astar	178	39.3	179	39.3	178	39.3	178	39.4	179	39.3	180	39.1
483.xalancbmk	76.5	90.2	75.9	90.9	75.9	90.9	72.2	95.6	72.0	95.9	72.0	95.9

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 configuration:

EIST Support set to Enabled

ClE Support set to Enable

C State Support set to Enabled

Turbo Mode set to Enable

Sysinfo program /home/cpu2006-1.2-ic16.0/config/sysinfo.rev6914

\$Rev: 6914 \$ \$Date: 2014-06-25 # \$ e3fbb8667b5a285932ceab81e28219e1

running on TS150 Mon Jan 4 05:26:45 2016

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 E3-1225 v5 @ 3.30GHz

1 "physical id"s (chips)

4 "processors"

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

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

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

Page 2



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 71.1

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint_base2006 = 68.9

CPU2006 license: 9017

Test date: Jan-2016

Test sponsor: Lenovo Group Limited

Hardware Availability: Oct-2015

Tested by: Lenovo Group Limited

Software Availability: Aug-2015

Platform Notes (Continued)

```
caution.)
  cpu cores : 4
  siblings  : 4
  physical 0: cores 0 1 2 3
  cache size : 8192 KB
```

```
From /proc/meminfo
MemTotal:      32933544 kB
HugePages_Total:    0
Hugepagesize:   2048 kB
```

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

```
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 0
  # 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"
  VERSION_ID="12"
  PRETTY_NAME="SUSE Linux Enterprise Server 12"
  ID="sles"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:12"
```

```
uname -a:
Linux TS150 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014 (9879bd4)
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Jan 4 05:01
```

```
SPEC is set to: /home/cpu2006-1.2-ic16.0
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   693G  27G  667G  4% /home
```

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 LENOVO FWKT32A 12/25/2015

Memory:

4x Samsung M378A1G43DB0-CPB 8 GB 2 rank 2133 MHz

(End of data from sysinfo program)



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 71.1

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint_base2006 = 68.9

CPU2006 license: 9017

Test date: Jan-2016

Test sponsor: Lenovo Group Limited

Hardware Availability: Oct-2015

Tested by: Lenovo Group Limited

Software Availability: Aug-2015

General Notes

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

KMP_AFFINITY = "granularity=fine,scatter"

LD_LIBRARY_PATH = "/home/cpu2006-1.2-ic16.0/libs/32:/home/cpu2006-1.2-ic16.0/libs/64:/home/cpu2006-1.2-ic16.0/sh"

OMP_NUM_THREADS = "4"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

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.hmmmer: -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 -lsmartheap64



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 71.1

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint_base2006 = 68.9

CPU2006 license: 9017

Test date: Jan-2016

Test sponsor: Lenovo Group Limited

Hardware Availability: Oct-2015

Tested by: Lenovo Group Limited

Software Availability: Aug-2015

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

445.gobmk: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

C++ benchmarks (except as noted below):

icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32

401.bzip2: -DSPEC_CPU_LP64

403.gcc: -DSPEC_CPU_LP64

429.mcf: -DSPEC_CPU_LP64

445.gobmk: -D_FILE_OFFSET_BITS=64

456.hmmmer: -DSPEC_CPU_LP64

458.sjeng: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

464.h264ref: -DSPEC_CPU_LP64

471.omnetpp: -D_FILE_OFFSET_BITS=64

473.astar: -DSPEC_CPU_LP64

483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -opt-prefetch
-ansi-alias

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div
-par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

SPECint2006 = 71.1

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint_base2006 = 68.9

CPU2006 license: 9017

Test date: Jan-2016

Test sponsor: Lenovo Group Limited

Hardware Availability: Oct-2015

Tested by: Lenovo Group Limited

Software Availability: Aug-2015

Peak Optimization Flags (Continued)

401.bzip2 (continued):

`-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:threadsafe(pass 1)`

`-prof-use(pass 2) -par-num-threads=1(pass 1) -ansi-alias`

456.hmmcr: `basepeak = yes`

458.sjeng: `-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)`

`-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)`

`-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4`

462.libquantum: `basepeak = yes`

464.h264ref: `basepeak = yes`

C++ benchmarks:

471.omnetpp: `-xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)`

`-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)`

`-par-num-threads=1(pass 1) -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-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Default-Platform-Flags.html>



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Lenovo Group Limited

Lenovo ThinkServer TS150
(3.30 GHz, Intel Xeon E3-1225 v5)

SPECint2006 = 71.1

SPECint_base2006 = 68.9

CPU2006 license: 9017

Test sponsor: Lenovo Group Limited

Tested by: Lenovo Group Limited

Test date: Jan-2016

Hardware Availability: Oct-2015

Software Availability: Aug-2015

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

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Default-Platform-Flags.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 Feb 9 17:21:34 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 February 2016.