



# SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## Inspur Corporation

**SPECint®2006 = 63.7**

### Inspur NF5180M4 (Intel Xeon E5-2620 v4)

**SPECint\_base2006 = 60.3**

**CPU2006 license:** 3358

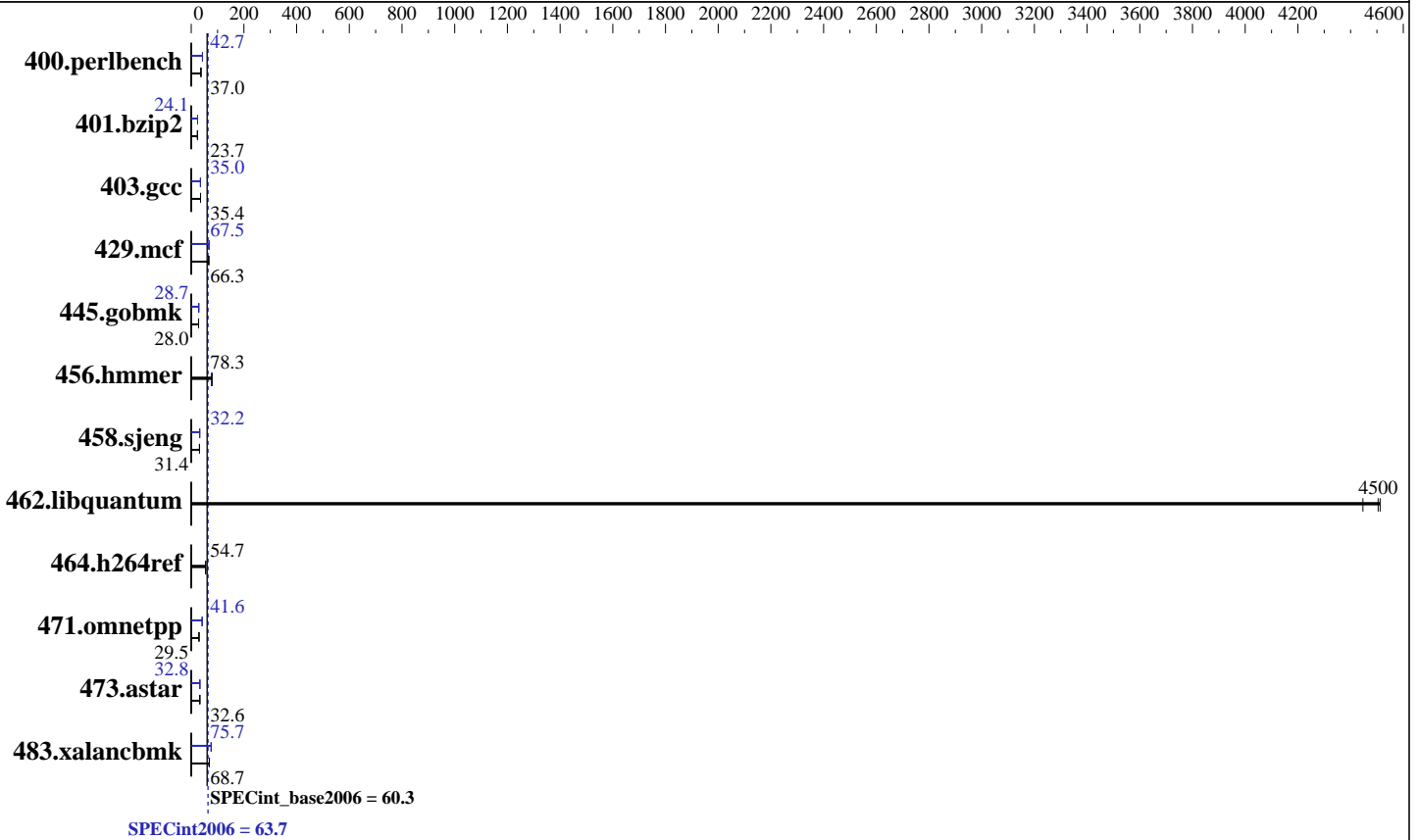
**Test date:** Aug-2017

**Test sponsor:** Inspur Corporation

**Hardware Availability:** Apr-2016

**Tested by:** Inspur Corporation

**Software Availability:** Apr-2017



### Hardware

**CPU Name:** Intel Xeon E5-2620 v4  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.00 GHz  
**CPU MHz:** 2100  
**FPU:** Integrated  
**CPU(s) enabled:** 16 cores, 2 chips, 8 cores/chip  
**CPU(s) orderable:** 1,2 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:** 20 MB I+D on chip per chip  
**Other Cache:** None  
**Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R, running at 2133 MHz)  
**Disk Subsystem:** 1 x 900 GB SATA SSD  
**Other Hardware:** None

### Software

**Operating System:** Red Hat Enterprise Linux Server release 7.3 (Maipo)  
 3.10.0-514.el7.x86\_64  
**Compiler:** C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux  
**Auto Parallel:** Yes  
**File System:** xfs  
**System State:** Run level 5 (multi-user)  
**Base Pointers:** 32/64-bit  
**Peak Pointers:** 32/64-bit  
**Other Software:** Microquill SmartHeap V10.2



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint2006 = 63.7

Inspur NF5180M4 (Intel Xeon E5-2620 v4)

SPECint\_base2006 = 60.3

CPU2006 license: 3358

Test sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test date: Aug-2017

Hardware Availability: Apr-2016

Software Availability: Apr-2017

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>264</b>	<b>37.0</b>	264	36.9	264	37.0	229	42.7	<b>229</b>	<b>42.7</b>	229	42.6
401.bzip2	<b>407</b>	<b>23.7</b>	407	23.7	408	23.6	400	24.1	400	24.2	<b>400</b>	<b>24.1</b>
403.gcc	227	35.4	<b>228</b>	<b>35.4</b>	228	35.3	230	35.0	229	35.1	<b>230</b>	<b>35.0</b>
429.mcf	136	67.1	138	66.2	<b>138</b>	<b>66.3</b>	134	68.0	135	67.4	<b>135</b>	<b>67.5</b>
445.gobmk	<b>375</b>	<b>28.0</b>	375	27.9	374	28.0	<b>366</b>	<b>28.7</b>	366	28.6	366	28.7
456.hammer	<b>119</b>	<b>78.3</b>	119	78.4	119	78.2	<b>119</b>	<b>78.3</b>	119	78.4	119	78.2
458.sjeng	385	31.5	<b>385</b>	<b>31.4</b>	385	31.4	376	32.2	376	32.2	<b>376</b>	<b>32.2</b>
462.libquantum	<b>4.60</b>	<b>4500</b>	4.59	4510	4.66	4450	<b>4.60</b>	<b>4500</b>	4.59	4510	4.66	4450
464.h264ref	<b>405</b>	<b>54.7</b>	405	54.6	404	54.7	<b>405</b>	<b>54.7</b>	405	54.6	404	54.7
471.omnetpp	<b>212</b>	<b>29.5</b>	212	29.5	212	29.4	<b>150</b>	<b>41.6</b>	150	41.6	150	41.6
473.astar	214	32.9	<b>215</b>	<b>32.6</b>	217	32.4	214	32.8	<b>214</b>	<b>32.8</b>	213	32.9
483.xalancbmk	100	68.8	101	68.6	<b>100</b>	<b>68.7</b>	91.3	75.6	<b>91.2</b>	<b>75.7</b>	91.0	75.9

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 and OS configuration:

SCALING\_GOVERNOR set to Performance

Hardware Prefetch set to Disable

VT Support set to Disable

C1E Support set to Disable

Hyper-Threading set to Disable

Sysinfo program /home/CPU2006/config/sysinfo.rev6993

Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)

running on localhost.localdomain Tue Aug 15 01:36:23 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) CPU E5-2620 v4 @ 2.10GHz

2 "physical id"s (chips)

16 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

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

Page 2



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint2006 = 63.7

Inspur NF5180M4 (Intel Xeon E5-2620 v4)

SPECint\_base2006 = 60.3

CPU2006 license: 3358

Test date: Aug-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

## Platform Notes (Continued)

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

```
cpu cores : 8
siblings  : 8
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

From /proc/meminfo

```
MemTotal:      263852996 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

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

```
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.3 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.3"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.3:ga:server
```

uname -a:

```
Linux localhost.localdomain 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13
EDT 2016 x86_64 x86_64 x86_64 GNU/Linux
```

run-level 5 Aug 15 01:34

SPEC is set to: /home/CPU2006

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs  877G  11G  866G   2% /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 American Megatrends Inc. 4.1.11 09/07/2016

Memory:

```
8x NO DIMM NO DIMM
16x Samsung M393A2K43BB1-CNC 16 GB 2 rank 2400 MHz, configured at 2133 MHz
```

(End of data from sysinfo program)



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint2006 = 63.7

Inspur NF5180M4 (Intel Xeon E5-2620 v4)

SPECint\_base2006 = 60.3

CPU2006 license: 3358

Test date: Aug-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

## General Notes

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

KMP\_AFFINITY = "granularity=fine,scatter"

LD\_LIBRARY\_PATH = "/home/CPU2006/lib/ia32:/home/CPU2006/lib/intel64:/home/CPU2006/sh10.2"

OMP\_NUM\_THREADS = "16"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM

memory using Redhat Enterprise Linux 7.2

Transparent Huge Pages enabled by default.

Filesystem page cache cleared with:

shell invocation of 'sync; echo 3 > /proc/sys/vm/drop\_caches' prior to run

## 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.xalanbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint2006 = 63.7

Inspur NF5180M4 (Intel Xeon E5-2620 v4)

SPECint\_base2006 = 60.3

CPU2006 license: 3358

Test sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test date: Aug-2017

Hardware Availability: Apr-2016

Software Availability: Apr-2017

## 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\_2017/linux/lib/ia32

445.gobmk: icc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

C++ benchmarks (except as noted below):

icc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

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: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -qopt-prefetch

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint2006 = 63.7

Inspur NF5180M4 (Intel Xeon E5-2620 v4)

SPECint\_base2006 = 60.3

CPU2006 license: 3358

Test date: Aug-2017

Test sponsor: Inspur Corporation

Hardware Availability: Apr-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

## Peak Optimization Flags (Continued)

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

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

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2)

456.hmmcr: basepeak = yes

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -qopt-ra-region-strategy=block  
-Wl,-z,muldefs -L/sh10.2 -lsmartheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-auto-p32 -Wl,-z,muldefs -L/sh10.2 -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-Wl,-z,muldefs -L/sh10.2 -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-ic17.0-official-linux64-revF.html>

<http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.0-HSW.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml>

<http://www.spec.org/cpu2006/flags/Inspur-Platform-Settings-V1.0-HSW.xml>



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint2006 = 63.7

Inspur NF5180M4 (Intel Xeon E5-2620 v4)

SPECint\_base2006 = 60.3

CPU2006 license: 3358

Test sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test date: Aug-2017

Hardware Availability: Apr-2016

Software Availability: Apr-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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Wed Oct 4 12:34:31 2017 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 3 October 2017.