



# SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECint®\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

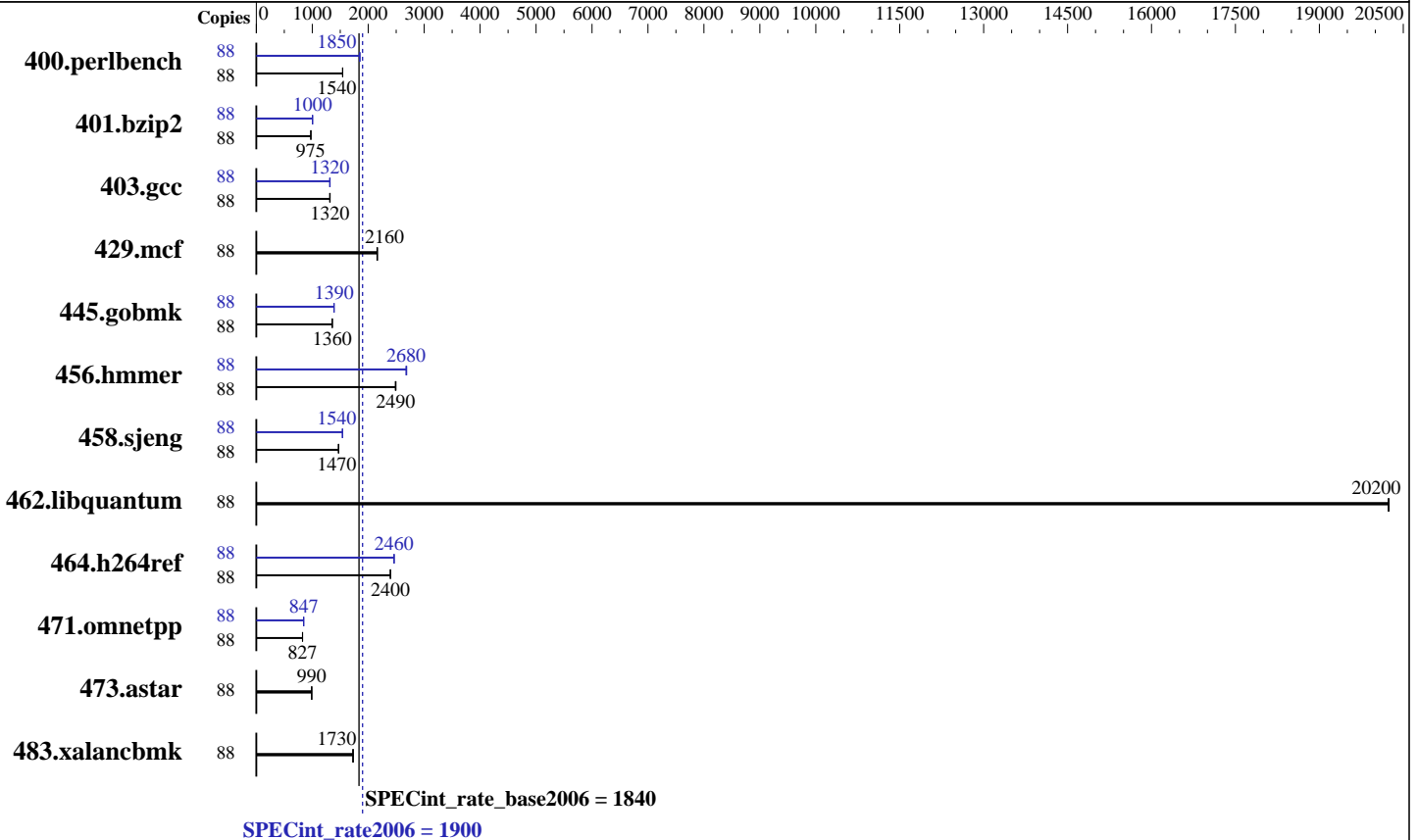
Test date: Jun-2017

Test sponsor: Inspur Corporation

Hardware Availability: Oct-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017



### Hardware

CPU Name: Intel Xeon E5-2699A v4  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 44 cores, 2 chips, 22 cores/chip, 2 threads/core  
 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: 55 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)  
 Disk Subsystem: 1 x 900 GB SATA SSD  
 Other Hardware: None

### Software

Operating System: Inspur K-UX release 3.0.5 (Inspur) 3.10.4-K\_UX.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 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.2



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECint\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

Test date: Jun-2017

Test sponsor: Inspur Corporation

Hardware Availability: Oct-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	88	<b>557</b>	<b>1540</b>	556	1550	558	1540	88	464	1850	<b>465</b>	<b>1850</b>	466	1850
401.bzip2	88	870	976	<b>871</b>	<b>975</b>	871	974	88	844	1010	<b>845</b>	<b>1000</b>	846	1000
403.gcc	88	<b>538</b>	<b>1320</b>	537	1320	540	1310	88	537	1320	<b>538</b>	<b>1320</b>	541	1310
429.mcf	88	<b>371</b>	<b>2160</b>	372	2160	370	2170	88	<b>371</b>	<b>2160</b>	372	2160	370	2170
445.gobmk	88	680	1360	<b>680</b>	<b>1360</b>	680	1360	88	664	1390	<b>664</b>	<b>1390</b>	665	1390
456.hammer	88	331	2480	<b>330</b>	<b>2490</b>	329	2500	88	<b>306</b>	<b>2680</b>	305	2690	307	2680
458.sjeng	88	<b>724</b>	<b>1470</b>	724	1470	725	1470	88	<b>691</b>	<b>1540</b>	691	1540	692	1540
462.libquantum	88	<b>90.1</b>	<b>20200</b>	90.1	20200	90.1	20200	88	<b>90.1</b>	<b>20200</b>	90.1	20200	90.1	20200
464.h264ref	88	813	2390	812	2400	<b>812</b>	<b>2400</b>	88	790	2460	<b>791</b>	<b>2460</b>	791	2460
471.omnetpp	88	667	825	<b>665</b>	<b>827</b>	665	827	88	<b>650</b>	<b>847</b>	650	846	649	847
473.astar	88	<b>624</b>	<b>990</b>	625	989	623	991	88	<b>624</b>	<b>990</b>	625	989	623	991
483.xalancbmk	88	350	1730	352	1720	<b>351</b>	<b>1730</b>	88	350	1730	352	1720	<b>351</b>	<b>1730</b>

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 and OS configuration:  
SCALING\_GOVERNOR set to Performance  
Hardware Prefetch set to Disable  
VT Support set to Disable  
C1E Support set to Disable  
Sysinfo program /home/CPU2006/config/sysinfo.rev6993  
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
running on localhost.localdomain Mon Jun 19 02:59:20 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 E5-2699A v4 @ 2.40GHz  
2 "physical id"s (chips)  
88 "processors"

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

Test sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test date: Jun-2017

Hardware Availability: Oct-2016

Software Availability: Apr-2017

## Platform Notes (Continued)

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 : 22

siblings : 44

physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27 28

physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27 28

cache size : 28160 KB

From /proc/meminfo

MemTotal: 264022224 kB

HugePages\_Total: 0

Hugepagesize: 2048 kB

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

inspur-release: Inspur K-UX release 3.0.5 (Inspur)

os-release:

NAME="Inspur K-UX"

VERSION="3 (Inspur)"

ID="k-ux"

VERSION\_ID="3"

PRETTY\_NAME="Inspur K-UX 3 (Inspur)"

ANSI\_COLOR="0;31"

CPE\_NAME="cpe:/o:k-ux:k-ux:3"

HOME\_URL="http://www.inspur.com/"

system-release: Inspur K-UX release 3.0.5 (Inspur)

system-release-cpe: cpe:/o:k-ux:k-ux:3

uname -a:

Linux localhost.localdomain 3.10.4-K\_UX.x86\_64 #1 SMP Fri Sep 30 11:06:29 GMT 2016 x86\_64 x86\_64 x86\_64 GNU/Linux

SPEC is set to: /home/CPU2006

Filesystem Type Size Used Avail Use% Mounted on

/dev/mapper/ik-home xfs 877G 7.3G 870G 1% /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

(End of data from sysinfo program)



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

Test date: Jun-2017

Test sponsor: Inspur Corporation

Hardware Availability: Oct-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

## General Notes

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

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

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

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

## Base Compiler Invocation

C benchmarks:

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

C++ benchmarks:

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

## Base Portability Flags

400.perlbench: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -D\_FILE\_OFFSET\_BITS=64  
403.gcc: -D\_FILE\_OFFSET\_BITS=64  
429.mcf: -D\_FILE\_OFFSET\_BITS=64  
445.gobmk: -D\_FILE\_OFFSET\_BITS=64  
456.hmmer: -D\_FILE\_OFFSET\_BITS=64  
458.sjeng: -D\_FILE\_OFFSET\_BITS=64  
462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX  
464.h264ref: -D\_FILE\_OFFSET\_BITS=64  
471.omnetpp: -D\_FILE\_OFFSET\_BITS=64  
473.astar: -D\_FILE\_OFFSET\_BITS=64  
483.xalancbmk: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

Test sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test date: Jun-2017

Hardware Availability: Oct-2016

Software Availability: Apr-2017

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

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

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64

401.bzip2: -DSPEC\_CPU\_LP64

403.gcc: -D\_FILE\_OFFSET\_BITS=64

429.mcf: -D\_FILE\_OFFSET\_BITS=64

445.gobmk: -D\_FILE\_OFFSET\_BITS=64

456.hmmer: -DSPEC\_CPU\_LP64

458.sjeng: -DSPEC\_CPU\_LP64

462.libquantum: -D\_FILE\_OFFSET\_BITS=64 -DSPEC\_CPU\_LINUX

464.h264ref: -D\_FILE\_OFFSET\_BITS=64

471.omnetpp: -D\_FILE\_OFFSET\_BITS=64

473.astar: -D\_FILE\_OFFSET\_BITS=64

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) -auto-ilp32 -qopt-mem-layout-trans=3

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 5



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

Test date: Jun-2017

Test sponsor: Inspur Corporation

Hardware Availability: Oct-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

## Peak Optimization Flags (Continued)

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(pass 2) -qopt-prefetch -auto-ilp32  
-qopt-mem-layout-trans=3

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=3

429.mcf: basepeak = yes

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) -qopt-mem-layout-trans=3

456.hmmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-qopt-mem-layout-trans=3

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 -auto-ilp32  
-qopt-mem-layout-trans=3

462.libquantum: basepeak = yes

464.h264ref: -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) -unroll2 -qopt-mem-layout-trans=3

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  
-qopt-mem-layout-trans=3 -Wl,-z,muldefs  
-L/sh10.2 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca



# SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

SPECint\_rate2006 = 1900

Inspur NF5180M4 (Intel Xeon E5-2699A v4)

SPECint\_rate\_base2006 = 1840

CPU2006 license: 3358

Test date: Jun-2017

Test sponsor: Inspur Corporation

Hardware Availability: Oct-2016

Tested by: Inspur Corporation

Software Availability: Apr-2017

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 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 Jul 12 12:11:58 2017 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 11 July 2017.