SPEC® CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

$SPECint^{®}\_rate2006 =$ 846

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

$SPECint\_rate\_base2006 =$ 808
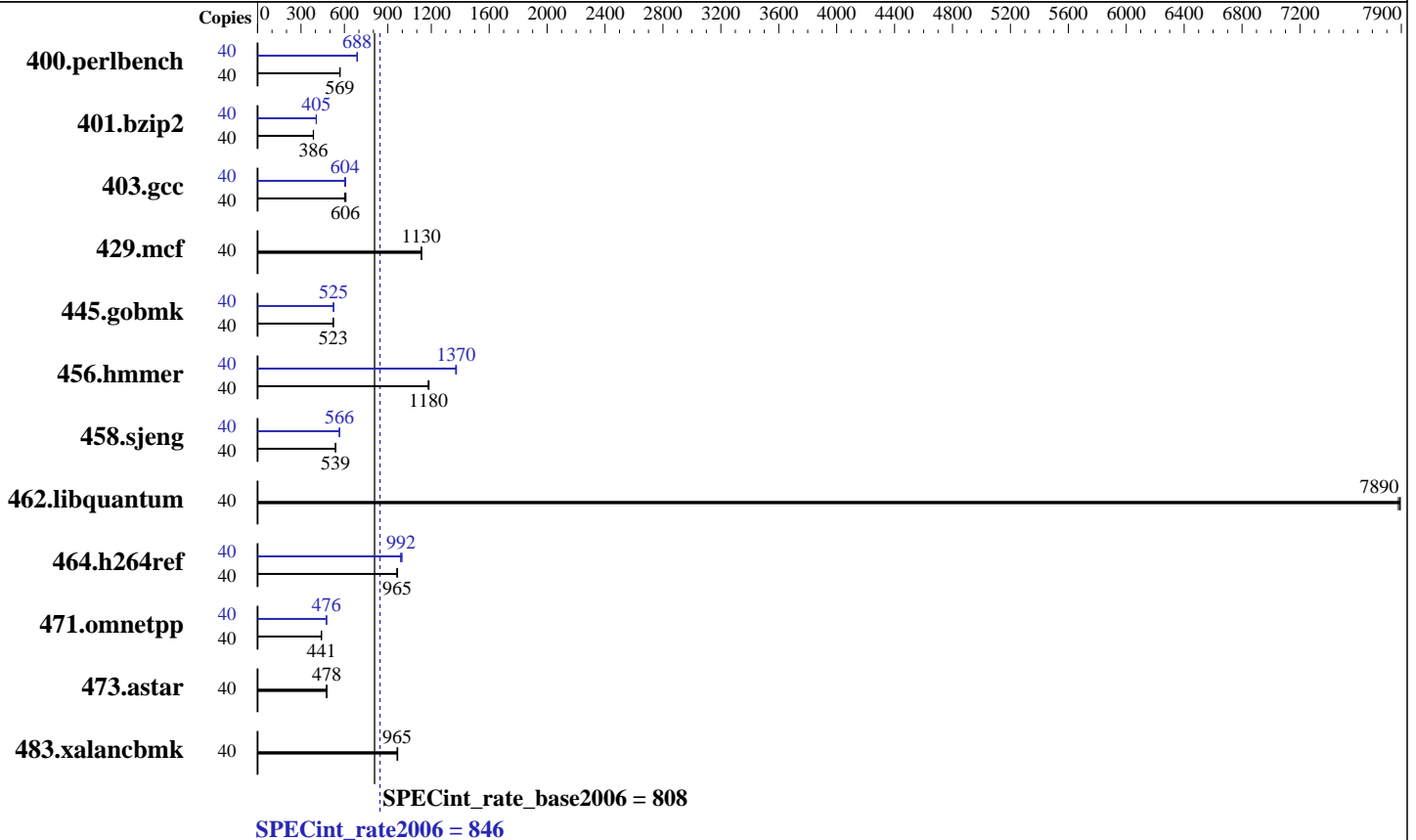
CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jul-2017
Hardware Availability: Apr-2016
Software Availability: Apr-2017

Copies	
400.perlbench	40 / 688, 40 / 569
401.bzip2	40 / 405, 40 / 386
403.gcc	40 / 604, 40 / 606
429.mcf	40 / 1130
445.gobmk	40 / 525, 40 / 523
456.hmmer	40 / 1370, 40 / 1180
458.sjeng	40 / 566, 40 / 539
462.libquantum	40 / 7890
464.h264ref	40 / 992, 40 / 965
471.omnetpp	40 / 476, 40 / 441
473.astar	40 / 478
483.xalancbmk	40 / 965

SPECint_rate_base2006 = 808

SPECint_rate2006 = 846

Hardware

CPU Name: Intel Xeon E5-2630 v4
CPU Characteristics: Intel Turbo Boost Technology up to 3.10 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 20 cores, 2 chips, 10 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: 25 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 450 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-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.2

SPEC CINT2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Inspur Corporation

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

SPECint_rate2006 =   846

SPECint_rate_base2006 = 808

CPU2006 license: 3358　　　　　　　　　　　　　　　　　　　**Test date:** Jul-2017
Test sponsor: Inspur Corporation　　　　　　　　　　**Hardware Availability:** Apr-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	40	**687**	**569**	685	570	687	568	40	**568**	**688**	568	688	569	687
401.bzip2	40	**1000**	**386**	1003	385	999	386	40	953	405	949	407	**952**	**405**
403.gcc	40	527	611	536	601	**531**	**606**	40	534	603	**533**	**604**	529	609
429.mcf	40	**322**	**1130**	322	1130	322	1130	40	**322**	**1130**	322	1130	322	1130
445.gobmk	40	802	523	802	523	**802**	**523**	40	799	525	**800**	**525**	800	524
456.hmmer	40	315	1180	316	1180	**316**	**1180**	40	272	1370	**272**	**1370**	273	1370
458.sjeng	40	899	539	**899**	**539**	899	539	40	**856**	**566**	856	565	856	566
462.libquantum	40	**105**	**7890**	105	7890	105	7880	40	**105**	**7890**	105	7890	105	7880
464.h264ref	40	920	962	915	967	**917**	**965**	40	887	998	**892**	**992**	896	988
471.omnetpp	40	**567**	**441**	566	441	567	441	40	525	476	**525**	**476**	525	477
473.astar	40	**587**	**478**	591	475	587	479	40	**587**	**478**	591	475	587	479
483.xalancbmk	40	286	964	285	968	**286**	**965**	40	286	964	285	968	**286**	**965**

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 Thu Jul 13 08:57:08 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 E5-2630 v4 @ 2.20GHz
         2 "physical id"s (chips)
         40 "processors"
```
Continued on next page

Inspur Corporation

SPECint_rate2006 =   846

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

SPECint_rate_base2006 = 808

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jul-2017
Hardware Availability: Apr-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 : 10
       siblings  : 20
       physical 0: cores 0 1 2 3 4 8 9 10 11 12
       physical 1: cores 0 1 2 3 4 8 9 10 11 12
    cache size : 25600 KB

From /proc/meminfo
    MemTotal:       263851212 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 Jul 6 09:35

SPEC is set to: /home/CPU2006
    Filesystem              Type  Size  Used Avail Use% Mounted on
    /dev/mapper/rhel-home xfs   392G  147G  246G  38% /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

Inspur Corporation

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

SPECint_rate2006 =   846

SPECint_rate_base2006 = 808

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jul-2017
Hardware Availability: Apr-2016
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
```

Inspur Corporation

SPECint_rate2006 =   846

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

SPECint_rate_base2006 = 808

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jul-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 -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`

Inspur Corporation

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

SPECint_rate2006 =   846

SPECint_rate_base2006 = 808

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jul-2017
Hardware Availability: Apr-2016
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.hmmer: `-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

Inspur NF5170M4 (Intel Xeon E5-2630 v4)

SPECint_rate2006 = 846

SPECint_rate_base2006 = 808

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Jul-2017
Hardware Availability: Apr-2016
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

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 Aug 8 15:41:39 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 August 2017.