



# SPEC® CINT2006 Result

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## Inspur Corporation

SPECint®\_rate2006 = 1730

### TS850 (8-sockets, Intel Xeon E7-8850)

SPECint\_rate\_base2006 = 1670

CPU2006 license: 3358

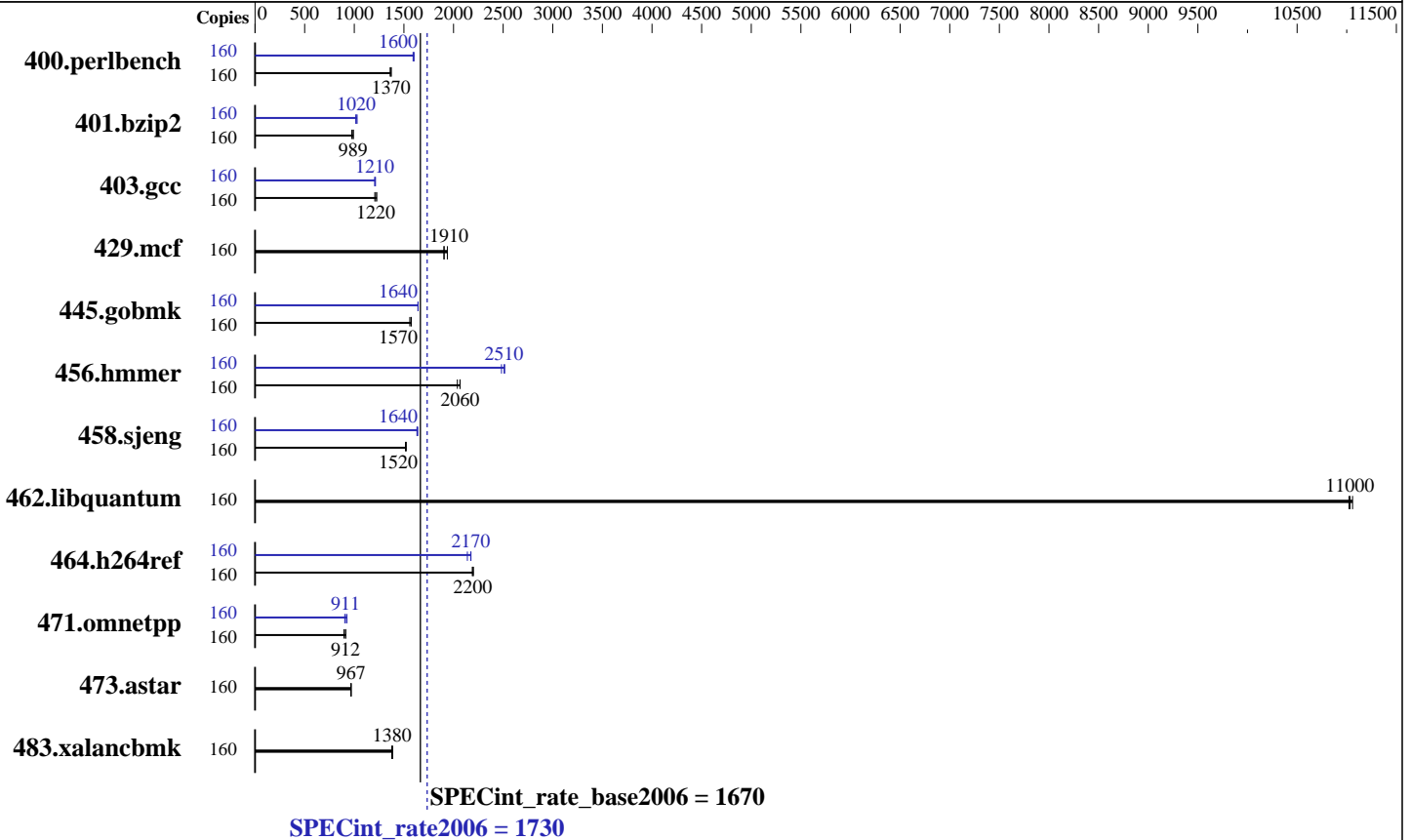
Test date: Mar-2013

Test sponsor: Inspur Corporation

Hardware Availability: Sep-2012

Tested by: Inspur Corporation

Software Availability: Oct-2011



### Hardware

CPU Name: Intel Xeon E7-8850  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.40 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 80 cores, 8 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 8 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: 24 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 2 TB (64 x 32 GB 4Rx4 PC3L-10600R-9, ECC, running at 1066 MHz)  
 Disk Subsystem: 2 x 300 GB(SAS, 10K RPM, RAID0)  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.3 (Santiago)  
 2.6.32-279.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



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### Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	160	1149	1360	<b>1141</b>	<b>1370</b>	1139	1370	160	982	1590	<b>979</b>	<b>1600</b>	976	1600
401.bzip2	160	<b>1561</b>	<b>989</b>	1584	975	1560	990	160	<b>1513</b>	<b>1020</b>	1521	1010	1501	1030
403.gcc	160	<b>1059</b>	<b>1220</b>	1067	1210	1050	1230	160	1068	1210	<b>1066</b>	<b>1210</b>	1061	1210
429.mcf	160	767	1900	<b>766</b>	<b>1910</b>	753	1940	160	767	1900	<b>766</b>	<b>1910</b>	753	1940
445.gobmk	160	1066	1570	1076	1560	<b>1069</b>	<b>1570</b>	160	<b>1022</b>	<b>1640</b>	1022	1640	1022	1640
456.hammer	160	732	2040	<b>723</b>	<b>2060</b>	723	2070	160	601	2480	<b>595</b>	<b>2510</b>	593	2520
458.sjeng	160	1277	1520	<b>1274</b>	<b>1520</b>	1271	1520	160	1187	1630	<b>1182</b>	<b>1640</b>	1182	1640
462.libquantum	160	301	11000	300	11100	<b>300</b>	<b>11000</b>	160	301	11000	300	11100	<b>300</b>	<b>11000</b>
464.h264ref	160	1609	2200	1618	2190	<b>1613</b>	<b>2200</b>	160	1655	2140	<b>1630</b>	<b>2170</b>	1627	2180
471.omnetpp	160	1096	913	1116	896	<b>1096</b>	<b>912</b>	160	<b>1098</b>	<b>911</b>	1080	926	1106	904
473.astar	160	1159	969	<b>1162</b>	<b>967</b>	1163	966	160	1159	969	<b>1162</b>	<b>967</b>	1163	966
483.xalancbmk	160	801	1380	<b>799</b>	<b>1380</b>	797	1390	160	801	1380	<b>799</b>	<b>1380</b>	797	1390

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

Sysinfo program /speccpu/config/sysinfo.rev6800  
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3  
running on localhost Mon Mar 11 13:08:30 2013

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 E7- 8850 @ 2.00GHz
 8 "physical id"s (chips)
160 "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 : 10
siblings  : 20
```

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## Platform Notes (Continued)

```

physical 0: cores 0 1 2 3 4 5 6 7 8 9
physical 1: cores 0 1 2 3 4 5 6 7 8 9
physical 2: cores 0 1 2 3 4 5 6 7 8 9
physical 3: cores 0 1 2 3 4 5 6 7 8 9
physical 4: cores 0 1 2 3 4 5 6 7 8 9
physical 5: cores 0 1 2 3 4 5 6 7 8 9
physical 6: cores 0 1 2 3 4 5 6 7 8 9
physical 7: cores 0 1 2 3 4 5 6 7 8 9
cache size : 24576 KB

```

From /proc/meminfo

```

MemTotal:      2117711876 kB
HugePages_Total:    0
Hugepagesize:    2048 kB

```

/usr/bin/lsb\_release -d

Red Hat Enterprise Linux Server release 6.3 (Santiago)

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

```

redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

```

uname -a:

```

Linux localhost 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36 EDT 2012
x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 Mar 11 13:05

SPEC is set to: /speccpu

```

Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda2       ext4      337G  307G   13G  97% /

```

(End of data from sysinfo program)

## General Notes

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

LD\_LIBRARY\_PATH = "/speccpu/libs/32:/speccpu/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

Filesystem page cache cleared with:

echo 1> /proc/sys/vm/drop\_caches

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>



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## Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/smartheap -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32



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## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
 401.bzip2: -DSPEC\_CPU\_LP64  
 456.hmmer: -DSPEC\_CPU\_LP64  
 458.sjeng: -DSPEC\_CPU\_LP64  
 462.libquantum: -DSPEC\_CPU\_LINUX  
 483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
 -ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -unroll4 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
 -L/smartheap -lsmartheap

473.astar: basepeak = yes

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## Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 15:34:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 May 2013.