



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint®\_rate2006 = 186

ProLiant DL360p Gen8  
(1.80 GHz, Intel Xeon E5-2603 v2)

SPECint\_rate\_base2006 = 180

CPU2006 license: 3

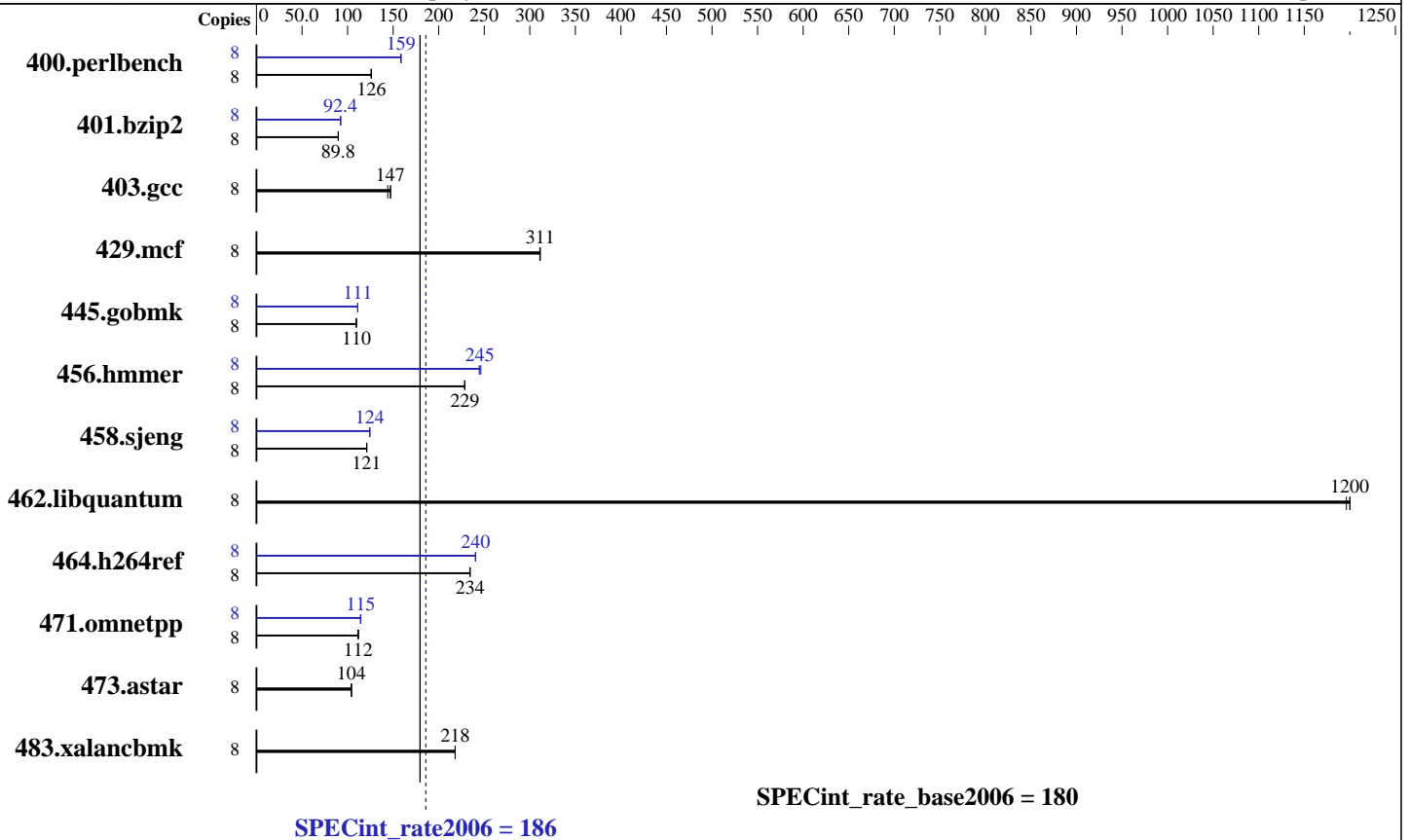
Test date: Oct-2013

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2013

Tested by: Hewlett-Packard Company

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E5-2603 v2  
 CPU Characteristics: 1800  
 CPU MHz: 1800  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 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: 10 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 1 x 400 GB SAS SSD, RAID 0  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 Kernel 2.6.32-358.el6.x86\_64  
 Compiler: C/C++: Version 14.0.0.080 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 V10.0



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint\_rate2006 = 186

ProLiant DL360p Gen8  
(1.80 GHz, Intel Xeon E5-2603 v2)

SPECint\_rate\_base2006 = 180

CPU2006 license: 3  
Test sponsor: Hewlett-Packard Company  
Tested by: Hewlett-Packard Company

Test date: Oct-2013  
Hardware Availability: Sep-2013  
Software Availability: Sep-2013

### Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	622	126	619	126	<b>620</b>	<b>126</b>	8	493	159	493	159	<b>493</b>	<b>159</b>
401.bzip2	8	860	89.8	860	89.8	<b>860</b>	<b>89.8</b>	8	<b>836</b>	<b>92.4</b>	836	92.4	837	92.3
403.gcc	8	447	144	437	147	<b>438</b>	<b>147</b>	8	447	144	437	147	<b>438</b>	<b>147</b>
429.mcf	8	235	311	<b>234</b>	<b>311</b>	234	311	8	235	311	<b>234</b>	<b>311</b>	234	311
445.gobmk	8	765	110	766	110	<b>765</b>	<b>110</b>	8	<b>755</b>	<b>111</b>	755	111	755	111
456.hammer	8	<b>326</b>	<b>229</b>	326	229	327	228	8	303	246	<b>304</b>	<b>245</b>	305	244
458.sjeng	8	799	121	<b>800</b>	<b>121</b>	800	121	8	778	124	<b>778</b>	<b>124</b>	778	124
462.libquantum	8	139	1200	138	1200	<b>138</b>	<b>1200</b>	8	139	1200	138	1200	<b>138</b>	<b>1200</b>
464.h264ref	8	<b>755</b>	<b>234</b>	755	234	755	234	8	<b>736</b>	<b>240</b>	737	240	736	241
471.omnetpp	8	450	111	446	112	<b>448</b>	<b>112</b>	8	<b>437</b>	<b>115</b>	436	115	438	114
473.astar	8	<b>539</b>	<b>104</b>	541	104	538	104	8	<b>539</b>	<b>104</b>	541	104	538	104
483.xalancbmk	8	<b>253</b>	<b>218</b>	253	218	253	218	8	<b>253</b>	<b>218</b>	253	218	253	218

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"  
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>  
Disabled unused Linux services through "stop\_services.sh" before running.

### Platform Notes

BIOS Configuration:  
HP Power Profile set to Maximum Performance  
Memory Power Savings Mode set to Maximum Performance  
Collaborative Power Control set to Disabled  
Dynamic Power Capping Functionality set to Disabled  
Thermal Configuration set to Maximum Cooling  
Processor Power and Utilization Monitoring set to Disabled  
Memory Refresh Rate set to 1x  
Sysinfo program /cpu2006.ic14.0-1/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint\_rate2006 = 186

ProLiant DL360p Gen8  
(1.80 GHz, Intel Xeon E5-2603 v2)

SPECint\_rate\_base2006 = 180

**CPU2006 license:** 3  
**Test sponsor:** Hewlett-Packard Company  
**Tested by:** Hewlett-Packard Company

**Test date:** Oct-2013  
**Hardware Availability:** Sep-2013  
**Software Availability:** Sep-2013

### Platform Notes (Continued)

running on dl360p-gen8-jfb Mon Oct 7 10:52:17 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 E5-2603 v2 @ 1.80GHz
 2 "physical id"s (chips)
 8 "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 : 4
  siblings  : 4
  physical 0: cores 0 1 2 3
  physical 1: cores 0 1 2 3
cache size : 10240 KB
```

```
From /proc/meminfo
MemTotal:      132119284 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux dl360p-gen8-jfb 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST
2013 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Oct 7 10:50
```

```
SPEC is set to: /cpu2006.ic14.0-1
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3        ext4      365G  117G  230G   34% /
```

```
Additional information from dmidecode:
BIOS HP P71 09/08/2013
Memory:
1x HP NOT AVAILABLE 8 GB 1333 MHz 2 rank
8x UNKNOWN NOT AVAILABLE
15x UNKNOWN NOT AVAILABLE 8 GB 1333 MHz 2 rank
```

(End of data from sysinfo program)  
Regarding the sysinfo display about the memory installed, the correct amount of memory is 128 GB and the dmidecode description should read as the following:  
Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECint\_rate2006 = 186

ProLiant DL360p Gen8  
(1.80 GHz, Intel Xeon E5-2603 v2)

SPECint\_rate\_base2006 = 180

CPU2006 license: 3

Test date: Oct-2013

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2013

Tested by: Hewlett-Packard Company

Software Availability: Sep-2013

## Platform Notes (Continued)

1x HP NOT AVAILABLE 8 GB 1333 MHz 2 rank  
15x UNKNOWN NOT AVAILABLE 8 GB 1333 MHz 2 rank

## General Notes

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

LD\_LIBRARY\_PATH = "/cpu2006.ic14.0-1/libs/32:/cpu2006.ic14.0-1/libs/64:/cpu2006.ic14.0-1/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB  
memory using RedHat EL 6.4

## 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/sh -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint\_rate2006 = 186**

ProLiant DL360p Gen8  
(1.80 GHz, Intel Xeon E5-2603 v2)

**SPECint\_rate\_base2006 = 180**

**CPU2006 license:** 3

**Test date:** Oct-2013

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Sep-2013

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

## 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

## 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: basepeak = yes

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECint\_rate2006 = 186

ProLiant DL360p Gen8  
(1.80 GHz, Intel Xeon E5-2603 v2)

SPECint\_rate\_base2006 = 180

CPU2006 license: 3

Test date: Oct-2013

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2013

Tested by: Hewlett-Packard Company

Software Availability: Sep-2013

## Peak Optimization Flags (Continued)

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/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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-ic14.0-official-linux64.20140128.html>  
<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>  
<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.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 Thu Jul 24 19:28:07 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 5 November 2013.