



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint®\_rate2006 = 134

ProLiant DL380 G7  
(1.60 GHz, Intel Xeon E5603)

SPECint\_rate\_base2006 = 127

CPU2006 license: 3

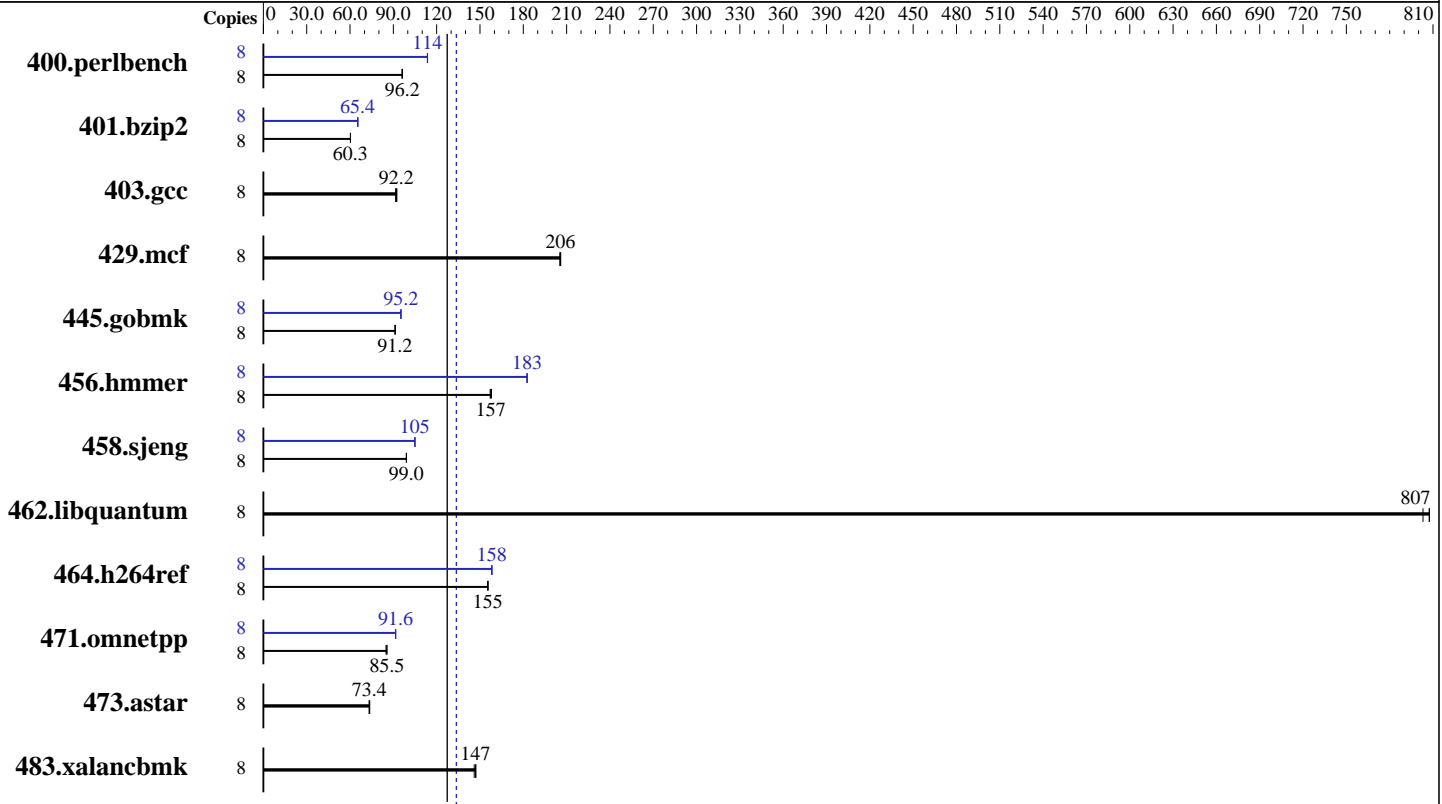
Test date: Oct-2011

Test sponsor: Hewlett-Packard Company

Hardware Availability: Feb-2011

Tested by: Hewlett-Packard Company

Software Availability: Sep-2011



SPECint\_rate2006 = 134

SPECint\_rate\_base2006 = 127

### Hardware

CPU Name: Intel Xeon E5603  
 CPU Characteristics:  
 CPU MHz: 1600  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 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: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 1 x 146 GB 15 K SAS  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.1,  
 Kernel 2.6.32-131.0.15.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0.225 of  
 Intel Compiler XE  
 Build 20110803  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint\_rate2006 = 134

ProLiant DL380 G7  
(1.60 GHz, Intel Xeon E5603)

SPECint\_rate\_base2006 = 127

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

Test date: Oct-2011  
Hardware Availability: Feb-2011  
Software Availability: Sep-2011

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	<b>812</b>	<b>96.2</b>	812	96.3	814	96.0	8	687	114	688	114	<b>688</b>	<b>114</b>
401.bzip2	8	1281	60.3	1280	60.3	<b>1280</b>	<b>60.3</b>	8	1181	65.4	<b>1181</b>	<b>65.4</b>	1181	65.4
403.gcc	8	697	92.5	703	91.6	<b>699</b>	<b>92.2</b>	8	697	92.5	703	91.6	<b>699</b>	<b>92.2</b>
429.mcf	8	<b>354</b>	<b>206</b>	355	205	354	206	8	<b>354</b>	<b>206</b>	355	205	354	206
445.gobmk	8	919	91.3	<b>920</b>	<b>91.2</b>	920	91.2	8	882	95.2	<b>881</b>	<b>95.2</b>	880	95.3
456.hammer	8	<b>474</b>	<b>157</b>	473	158	475	157	8	409	183	<b>409</b>	<b>183</b>	409	183
458.sjeng	8	977	99.1	978	99.0	<b>977</b>	<b>99.0</b>	8	<b>922</b>	<b>105</b>	923	105	922	105
462.libquantum	8	205	808	<b>205</b>	<b>807</b>	206	803	8	205	808	<b>205</b>	<b>807</b>	206	803
464.h264ref	8	1138	156	1139	155	<b>1139</b>	<b>155</b>	8	1120	158	1118	158	<b>1119</b>	<b>158</b>
471.omnetpp	8	<b>585</b>	<b>85.5</b>	589	84.9	584	85.6	8	547	91.5	<b>546</b>	<b>91.6</b>	545	91.7
473.astar	8	766	73.3	762	73.7	<b>766</b>	<b>73.4</b>	8	766	73.3	762	73.7	<b>766</b>	<b>73.4</b>
483.xalancbmk	8	375	147	<b>376</b>	<b>147</b>	378	146	8	375	147	<b>376</b>	<b>147</b>	378	146

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.  
numactl was used to bind copies to the cores

## 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>

## Platform Notes

BIOS configuration:  
HP Power Profile set to Maximum Performance  
Thermal Configuration set to Increased Cooling  
Data Reuse set to Disabled

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/cpu2006/smartheap/cpu2006/ic12.1-libs/ia32/:/cpu2006/ic12.1-libs/intel64"



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint\_rate2006 = 134**

ProLiant DL380 G7  
(1.60 GHz, Intel Xeon E5603)

**SPECint\_rate\_base2006 = 127**

**CPU2006 license:** 3

**Test date:** Oct-2011

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Feb-2011

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2011

## 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`



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint\_rate2006 = 134**

ProLiant DL380 G7  
(1.60 GHz, Intel Xeon E5603)

**SPECint\_rate\_base2006 = 127**

**CPU2006 license:** 3

**Test date:** Oct-2011

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Feb-2011

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2011

## 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

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

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

ProLiant DL380 G7  
(1.60 GHz, Intel Xeon E5603)

**SPECint\_rate2006 = 134**

**SPECint\_rate\_base2006 = 127**

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

**Test date:** Oct-2011  
**Hardware Availability:** Feb-2011  
**Software Availability:** Sep-2011

## Peak Optimization Flags (Continued)

483.xalanbmk: 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/HP-Intel-Linux-Settings-flags.20111122.html>  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.html>

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

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20111122.xml>  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.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 v1.1.  
Report generated on Thu Jul 24 01:06:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 12 December 2011.