



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint<sup>®</sup>\_rate2006 = 175

ProLiant DL380 G7  
(2.13 GHz, Intel Xeon E5606)

SPECint\_rate\_base2006 = 166

CPU2006 license: 3

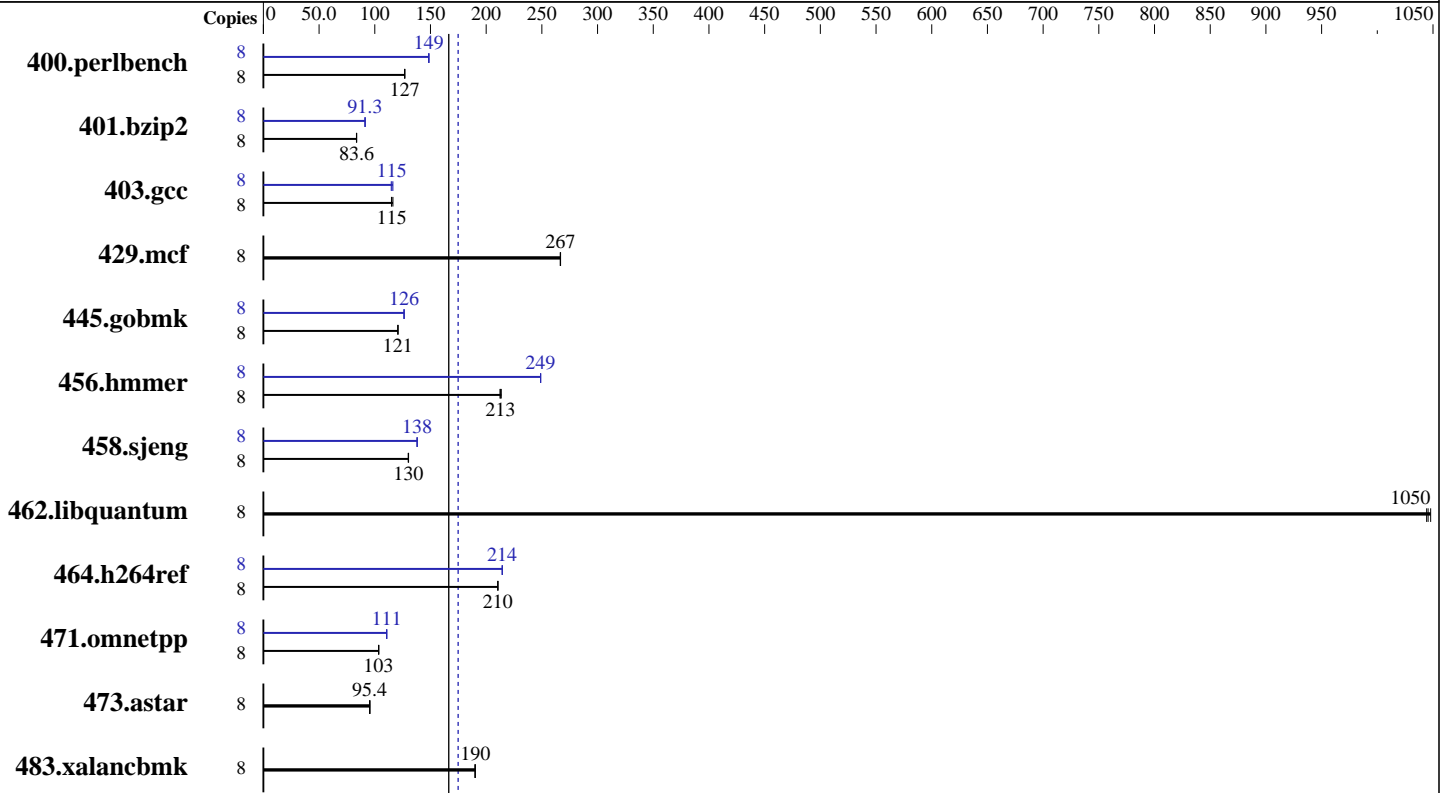
Test date: Jan-2012

Test sponsor: Hewlett-Packard Company

Hardware Availability: Feb-2011

Tested by: Hewlett-Packard Company

Software Availability: Sep-2011



SPECint\_rate2006 = 175

SPECint\_rate\_base2006 = 166

### Hardware

CPU Name: Intel Xeon E5606  
 CPU Characteristics:  
 CPU MHz: 2133  
 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: 8 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

ProLiant DL380 G7  
(2.13 GHz, Intel Xeon E5606)

SPECint\_rate2006 = 175

SPECint\_rate\_base2006 = 166

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

Test date: Jan-2012  
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	616	127	616	127	<b>616</b>	<b>127</b>	8	526	149	527	148	<b>526</b>	<b>149</b>
401.bzip2	8	921	83.8	924	83.6	<b>923</b>	<b>83.6</b>	8	847	91.1	<b>845</b>	<b>91.3</b>	844	91.5
403.gcc	8	560	115	554	116	<b>559</b>	<b>115</b>	8	<b>558</b>	<b>115</b>	554	116	561	115
429.mcf	8	274	267	<b>274</b>	<b>267</b>	273	267	8	274	267	<b>274</b>	<b>267</b>	273	267
445.gobmk	8	<b>695</b>	<b>121</b>	695	121	695	121	8	664	126	665	126	<b>664</b>	<b>126</b>
456.hammer	8	<b>351</b>	<b>213</b>	351	212	349	214	8	300	249	<b>300</b>	<b>249</b>	300	249
458.sjeng	8	743	130	<b>743</b>	<b>130</b>	744	130	8	<b>701</b>	<b>138</b>	702	138	701	138
462.libquantum	8	159	1040	<b>159</b>	<b>1050</b>	158	1050	8	159	1040	<b>159</b>	<b>1050</b>	158	1050
464.h264ref	8	<b>841</b>	<b>210</b>	841	211	841	210	8	825	215	826	214	<b>826</b>	<b>214</b>
471.omnetpp	8	<b>483</b>	<b>103</b>	483	104	483	103	8	<b>452</b>	<b>111</b>	452	111	451	111
473.astar	8	<b>588</b>	<b>95.4</b>	586	95.8	589	95.3	8	<b>588</b>	<b>95.4</b>	586	95.8	589	95.3
483.xalancbmk	8	290	190	<b>290</b>	<b>190</b>	291	190	8	290	190	<b>290</b>	<b>190</b>	291	190

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>

## Platform Notes

BIOS configuration:  
HP Power Profile set to Maximum Performance  
Thermal Configuration set to Increased Cooling  
Data Reuse set to Disabled  
Sysinfo program /cpu2006/config/sysinfo.rev6800  
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3  
running on dl380-2-allen.localdomain Thu Jan 19 11:59:41 2012

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>

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

ProLiant DL380 G7  
(2.13 GHz, Intel Xeon E5606)

SPECint\_rate2006 = 175

SPECint\_rate\_base2006 = 166

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

**Test date:** Jan-2012  
**Hardware Availability:** Feb-2011  
**Software Availability:** Sep-2011

### Platform Notes (Continued)

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5606 @ 2.13GHz
 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 9 10
  physical 1: cores 0 1 9 10
cache size : 8192 KB

From /proc/meminfo
MemTotal:      49416676 kB
HugePages_Total:    0
Hugepagesize:    2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.1 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux dl380-2-allen.localdomain 2.6.32-131.0.15.el6.x86_64 #1 SMP Tue May 10
15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 19 11:18

SPEC is set to: /cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3       ext3     133G   39G   88G   31% /

Additional information from dmidecode:
BIOS HP P67 01/30/2011
Memory:
 12x Not Specified Not Specified 4 GB 1333 MHz 2 rank

(End of data from sysinfo program)

```

### 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**

ProLiant DL380 G7  
(2.13 GHz, Intel Xeon E5606)

**SPECint\_rate2006 = 175**

**SPECint\_rate\_base2006 = 166**

**CPU2006 license:** 3

**Test sponsor:** Hewlett-Packard Company

**Tested by:** Hewlett-Packard Company

**Test date:** Jan-2012

**Hardware Availability:** Feb-2011

**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 = 175**

ProLiant DL380 G7  
(2.13 GHz, Intel Xeon E5606)

**SPECint\_rate\_base2006 = 166**

**CPU2006 license:** 3

**Test date:** Jan-2012

**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: -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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint\_rate2006 = 175**

ProLiant DL380 G7  
(2.13 GHz, Intel Xeon E5606)

**SPECint\_rate\_base2006 = 166**

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

**Test date:** Jan-2012  
**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-Platform-Flags-Intel-V1.2-A.html>  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

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

<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.xml>  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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 02:13:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 28 February 2012.