



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

**SPECint®2006 = 63.7**

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

**SPECint\_base2006 = 59.3**

CPU2006 license: 3

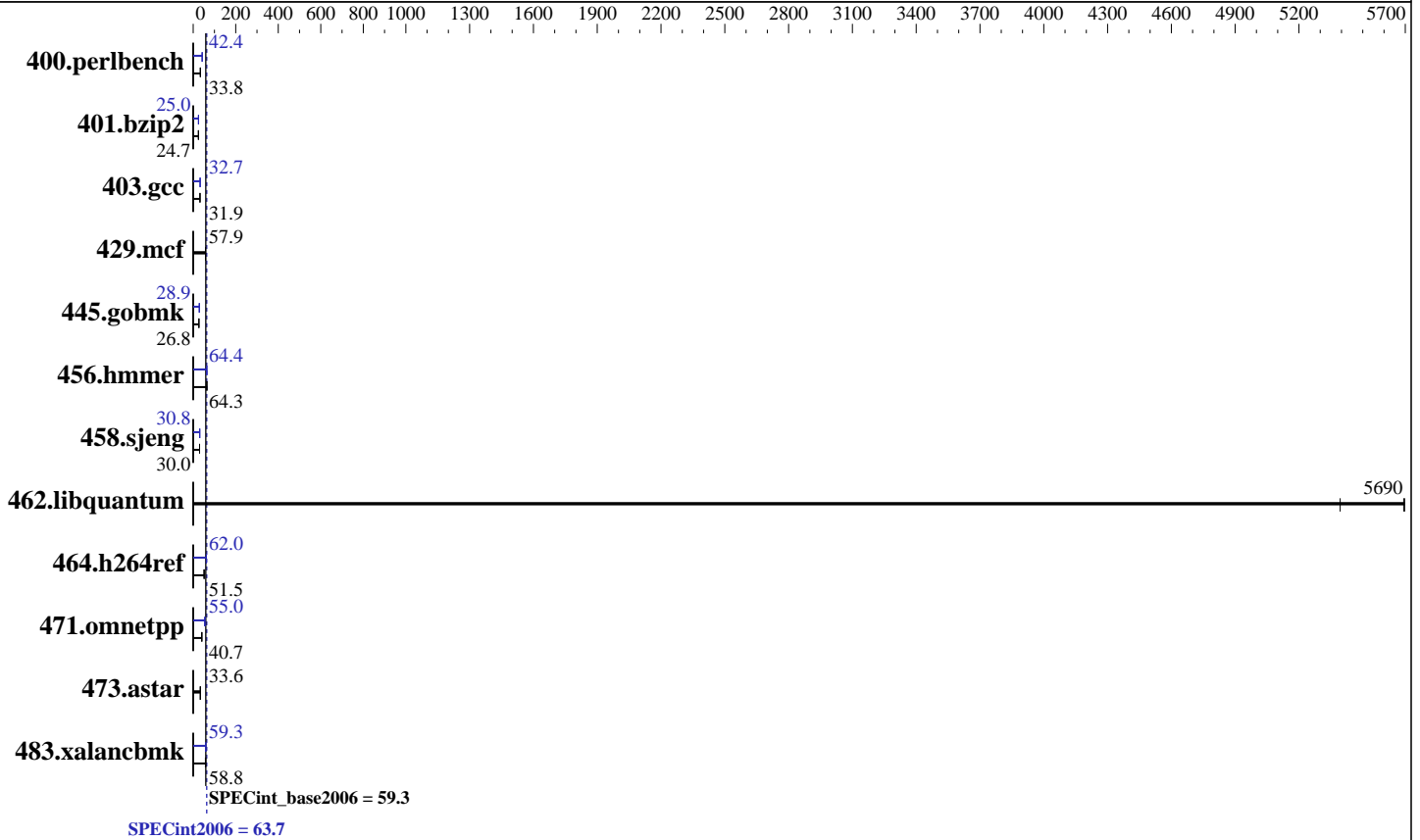
Test date: Feb-2014

Test sponsor: Hewlett-Packard Company

Hardware Availability: Feb-2014

Tested by: Hewlett-Packard Company

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E7-8891 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 3200  
 FPU: Integrated  
 CPU(s) enabled: 40 cores, 4 chips, 10 cores/chip  
 CPU(s) orderable: 2,4 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: 37.5 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 1 TB (64 x 16 GB 2Rx4 PC3-14900R-13, ECC, running at 1333 MHz and CL9)  
 Disk Subsystem: 2 x 500 GB SAS, 10 K RPM, RAID 1  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP3  
 Kernel 3.0.76-0.11-default  
 Compiler: C/C++; Version 14.0.0.080 of Intel C++ Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-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

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

SPECint2006 = **63.7**

SPECint\_base2006 = **59.3**

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

Test date: Feb-2014  
Hardware Availability: Feb-2014  
Software Availability: Sep-2013

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	289	33.8	<b>289</b>	<b>33.8</b>	290	33.7	<b>231</b>	<b>42.4</b>	230	42.4	231	42.3
401.bzip2	391	24.7	<b>391</b>	<b>24.7</b>	391	24.7	387	25.0	387	25.0	<b>387</b>	<b>25.0</b>
403.gcc	252	32.0	253	31.8	<b>252</b>	<b>31.9</b>	<b>246</b>	<b>32.7</b>	247	32.6	246	32.7
429.mcf	158	57.7	<b>158</b>	<b>57.9</b>	158	57.9	158	57.7	<b>158</b>	<b>57.9</b>	158	57.9
445.gobmk	392	26.8	392	26.8	<b>392</b>	<b>26.8</b>	<b>363</b>	<b>28.9</b>	363	28.9	362	29.0
456.hmmer	146	63.8	145	64.4	<b>145</b>	<b>64.3</b>	<b>145</b>	<b>64.4</b>	149	62.7	145	64.5
458.sjeng	404	30.0	403	30.0	<b>403</b>	<b>30.0</b>	394	30.7	<b>393</b>	<b>30.8</b>	393	30.8
462.libquantum	<b>3.64</b>	<b>5690</b>	3.84	5390	3.64	5700	<b>3.64</b>	<b>5690</b>	3.84	5390	3.64	5700
464.h264ref	429	51.6	431	51.4	<b>429</b>	<b>51.5</b>	357	62.0	357	62.0	<b>357</b>	<b>62.0</b>
471.omnetpp	154	40.7	<b>154</b>	<b>40.7</b>	155	40.2	<b>114</b>	<b>55.0</b>	115	54.4	113	55.4
473.astar	209	33.6	<b>209</b>	<b>33.6</b>	209	33.7	209	33.6	<b>209</b>	<b>33.6</b>	209	33.7
483.xalancbmk	117	58.8	120	57.4	<b>117</b>	<b>58.8</b>	<b>116</b>	<b>59.3</b>	116	59.3	116	59.4

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/transparent\_hugepage/enabled

## Platform Notes

BIOS Configuration:  
HP Power Profile was set to Maximum Performance  
Intel Minimum Processor Idle Power State was set to C6 State  
Intel Minimum Processor Idle Power Package State was set to Package C6 State  
Intel Hyperthreading Options was set to Disabled  
Memory Double Refresh Rate was set to Disabled  
Processor Power and Utilization Monitoring was set to Disabled  
Sysinfo program /home/cpu2006/config/sysinfo.rev6874.hp  
\$Rev: 6874 \$ \$Date:: 2013-11-20 #\$ e05b96ddac6c3d74bfe176502a0a2391  
running on dl580-rwen Fri Feb 21 00:19:23 2014

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 E7-8891 v2 @ 3.20GHz  
4 "physical id"s (chips)  
40 "processors"  
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 63.7**

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

**SPECint\_base2006 = 59.3**

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

**Test date:** Feb-2014  
**Hardware Availability:** Feb-2014  
**Software Availability:** Sep-2013

## Platform Notes (Continued)

```
caution.)
cpu cores : 10
siblings  : 10
physical 0: cores 2 3 4 5 6 7 8 10 11 12
physical 1: cores 2 3 4 5 6 7 8 10 11 12
physical 2: cores 2 3 4 5 6 7 8 10 11 12
physical 3: cores 2 3 4 5 6 7 8 10 11 12
cache size : 38400 KB
```

```
From /proc/meminfo
MemTotal:      1058730268 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 3
```

```
uname -a:
Linux dl580-rwen 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
(ccab990) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Feb 21 00:14 last=S
```

```
SPEC is set to: /home/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb3       ext3  275G  8.7G  265G   4% /
```

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 HP P79 02/03/2014
Memory:
64x HP 712383-081 16 GB 1866 MHz, configured at 1333 MHz
32x UNKNOWN NOT AVAILABLE
```

(End of data from sysinfo program)  
Regarding the sysinfo display about the memory installed, the correct amount of memory is 1 TB and the dmidecode description should have one line reading as:  
64x HP 712383-081 16 GB 1866 MHz, configured at 1333 MHz



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 63.7**

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

**SPECint\_base2006 = 59.3**

**CPU2006 license:** 3

**Test date:** Feb-2014

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Feb-2014

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

## General Notes

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

KMP\_AFFINITY = "granularity=fine,compact"

LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

OMP\_NUM\_THREADS = "40"

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

## Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh -lsmartheap64

## Base Other Flags

C benchmarks:

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 63.7**

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

**SPECint\_base2006 = 59.3**

**CPU2006 license:** 3

**Test date:** Feb-2014

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Feb-2014

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

## Base Other Flags (Continued)

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
473.astar: -DSPEC\_CPU\_LP64  
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)  
-opt-prefetch -ansi-alias

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

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -inline-alloc  
-opt-malloc-options=3 -auto-ilp32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 63.7**

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

**SPECint\_base2006 = 59.3**

**CPU2006 license:** 3

**Test date:** Feb-2014

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Feb-2014

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

## Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias

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

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

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)  
-opt-ra-region-strategy=block -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmartheap

## 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 CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

ProLiant DL580 Gen8  
(3.20 GHz, Intel Xeon E7-8891 v2)

**SPECint2006 = 63.7**

**SPECint\_base2006 = 59.3**

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

**Test date:** Feb-2014  
**Hardware Availability:** Feb-2014  
**Software Availability:** Sep-2013

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 21:36:03 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 11 March 2014.