



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

**SPECint®2006 = 59.8**

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

**SPECint\_base2006 = 55.2**

CPU2006 license: 3

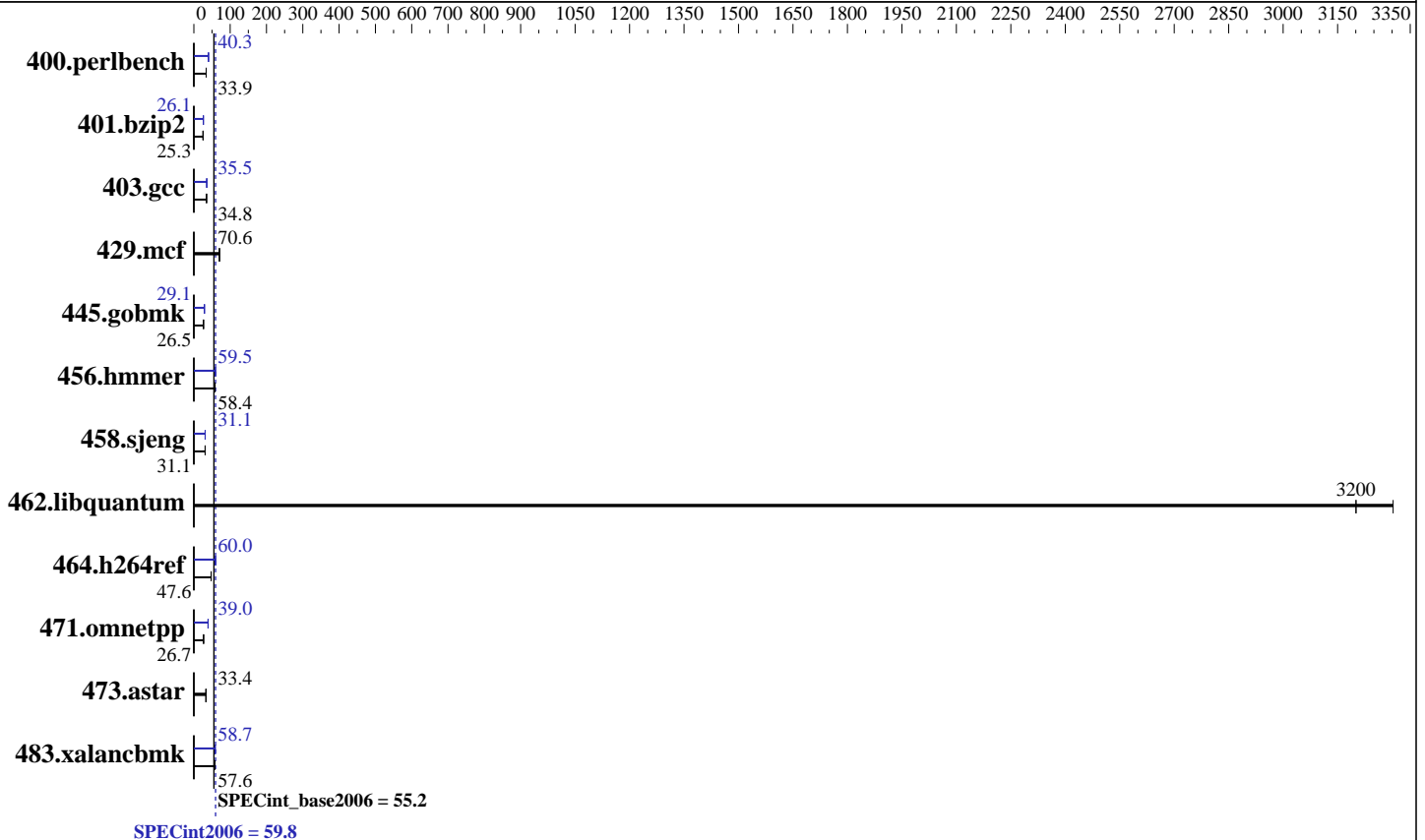
Test date: Aug-2012

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jun-2012

Tested by: Hewlett-Packard Company

Software Availability: Mar-2012



### Hardware

CPU Name: Intel Xeon E5-2690  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz  
 CPU MHz: 2900  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: 2 x 146 GB 15 K SAS, RAID 1  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.2, (Santiago)  
 Kernel 2.6.32-220.el6.x86\_64  
 Compiler: C/C++: Version 12.1.2.273 of Intel C++ Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01  
 HP Array Configuration Utility, CLI version



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint2006 = **59.8**

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

SPECint\_base2006 = **55.2**

CPU2006 license: 3

Test date: Aug-2012

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jun-2012

Tested by: Hewlett-Packard Company

Software Availability: Mar-2012

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b><u>289</u></b>	<b><u>33.9</u></b>	289	33.8	288	33.9	243	40.3	243	40.2	<b><u>243</u></b>	<b><u>40.3</u></b>
401.bzip2	381	25.3	<b><u>381</u></b>	<b><u>25.3</u></b>	381	25.3	<b><u>369</u></b>	<b><u>26.1</u></b>	370	26.1	368	26.2
403.gcc	230	34.9	<b><u>231</u></b>	<b><u>34.8</u></b>	231	34.8	227	35.5	226	35.5	<b><u>227</u></b>	<b><u>35.5</u></b>
429.mcf	<b><u>129</u></b>	<b><u>70.6</u></b>	129	70.7	130	70.1	<b><u>129</u></b>	<b><u>70.6</u></b>	129	70.7	130	70.1
445.gobmk	<b><u>395</u></b>	<b><u>26.5</u></b>	396	26.5	395	26.5	<b><u>361</u></b>	<b><u>29.1</u></b>	361	29.1	361	29.1
456.hammer	<b><u>160</u></b>	<b><u>58.4</u></b>	160	58.4	160	58.4	157	59.5	157	59.4	<b><u>157</u></b>	<b><u>59.5</u></b>
458.sjeng	390	31.1	390	31.1	<b><u>390</u></b>	<b><u>31.1</u></b>	389	31.1	389	31.1	<b><u>389</u></b>	<b><u>31.1</u></b>
462.libquantum	6.27	3300	<b><u>6.47</u></b>	<b><u>3200</u></b>	6.47	3200	6.27	3300	<b><u>6.47</u></b>	<b><u>3200</u></b>	6.47	3200
464.h264ref	465	47.6	467	47.4	<b><u>465</u></b>	<b><u>47.6</u></b>	<b><u>369</u></b>	<b><u>60.0</u></b>	376	58.9	369	60.0
471.omnetpp	<b><u>234</u></b>	<b><u>26.7</u></b>	235	26.6	233	26.8	160	39.0	159	39.4	<b><u>160</u></b>	<b><u>39.0</u></b>
473.astar	210	33.4	211	33.3	<b><u>210</u></b>	<b><u>33.4</u></b>	210	33.4	211	33.3	<b><u>210</u></b>	<b><u>33.4</u></b>
483.xalancbmk	<b><u>120</u></b>	<b><u>57.6</u></b>	120	57.7	121	57.1	118	58.7	<b><u>118</u></b>	<b><u>58.7</u></b>	117	59.0

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/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --localalloc runspec <etc>
Drive Write Cache set to Enabled in HP Array Configuration Utility,
CLI version
Accelerator Ratio for Reads/Writes set to = 100% Read / 0% Write
in HP Array Configuration Utility, CLI version
```

## Platform Notes

```
BIOS Configuration:
HP Power Profile set to Custom
Intel Hyperthreading Options set to Disabled
Energy/Performance Bias is set to Maximum Performance
Thermal Configuration set to Maximum Cooling
Collaborative Power Control set to Disabled
Processor Power and Utilization Monitoring set to Disabled

Sysinfo program /cpu2006/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on DL380G8-1 Sat Aug 4 10:34:07 2012
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 59.8**

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

**SPECint\_base2006 = 55.2**

**CPU2006 license:** 3

**Test date:** Aug-2012

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Jun-2012

**Tested by:** Hewlett-Packard Company

**Software Availability:** Mar-2012

## Platform Notes (Continued)

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 E5-2690 0 @ 2.90GHz
 2 "physical id"s (chips)
 16 "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      : 8
  siblings       : 8
  physical 0:    cores 0 1 2 3 4 5 6 7
  physical 1:    cores 0 1 2 3 4 5 6 7
cache size      : 20480 KB
```

```
From /proc/meminfo
MemTotal:        132260288 kB
HugePages_Total: 0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.2 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux DL380G8-1 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Aug 3 15:49 last=5
```

```
SPEC is set to: /cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3       ext4      133G  8.7G  118G   7% /
```

```
Additional information from dmidecode:
BIOS HP P70 05/23/2012
Memory:
 16x HP Not Specified 8 GB 1600 MHz 2 rank
```

(End of data from sysinfo program)



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 59.8**

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

**SPECint\_base2006 = 55.2**

**CPU2006 license:** 3

**Test date:** Aug-2012

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Jun-2012

**Tested by:** Hewlett-Packard Company

**Software Availability:** Mar-2012

## General Notes

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

```
KMP_AFFINITY = "granularity=fine,scatter"  
LD_LIBRARY_PATH = "/cpu2006/libs/32:/cpu2006/libs/64"  
OMP_NUM_THREADS = "16"
```

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

## 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.hmmmer: -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/smartheap -lsmartheap64
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 59.8**

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

**SPECint\_base2006 = 55.2**

**CPU2006 license:** 3

**Test date:** Aug-2012

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Jun-2012

**Tested by:** Hewlett-Packard Company

**Software Availability:** Mar-2012

## Base Other Flags

C benchmarks:

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint2006 = 59.8**

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

**SPECint\_base2006 = 55.2**

**CPU2006 license:** 3

**Test date:** Aug-2012

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Jun-2012

**Tested by:** Hewlett-Packard Company

**Software Availability:** Mar-2012

## Peak Optimization Flags (Continued)

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

429.mcf: basepeak = yes

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

456.hmmmer: -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/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/smartheap -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-ic12.1-official-linux64.20120425.html>

<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20120829.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml>

<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20120829.xml>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

ProLiant DL380p Gen8  
(2.90 GHz, Intel Xeon E5-2690)

**SPECint2006 = 59.8**

**SPECint\_base2006 = 55.2**

**CPU2006 license:** 3

**Test sponsor:** Hewlett-Packard Company

**Tested by:** Hewlett-Packard Company

**Test date:** Aug-2012

**Hardware Availability:** Jun-2012

**Software Availability:** Mar-2012

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 09:17:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 25 September 2012.