



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint<sup>®</sup>\_rate2006 = 508

ProLiant BL460c Gen8  
(2.60 GHz, Intel Xeon E5-2630 v2)

SPECint\_rate\_base2006 = 488

CPU2006 license: 3

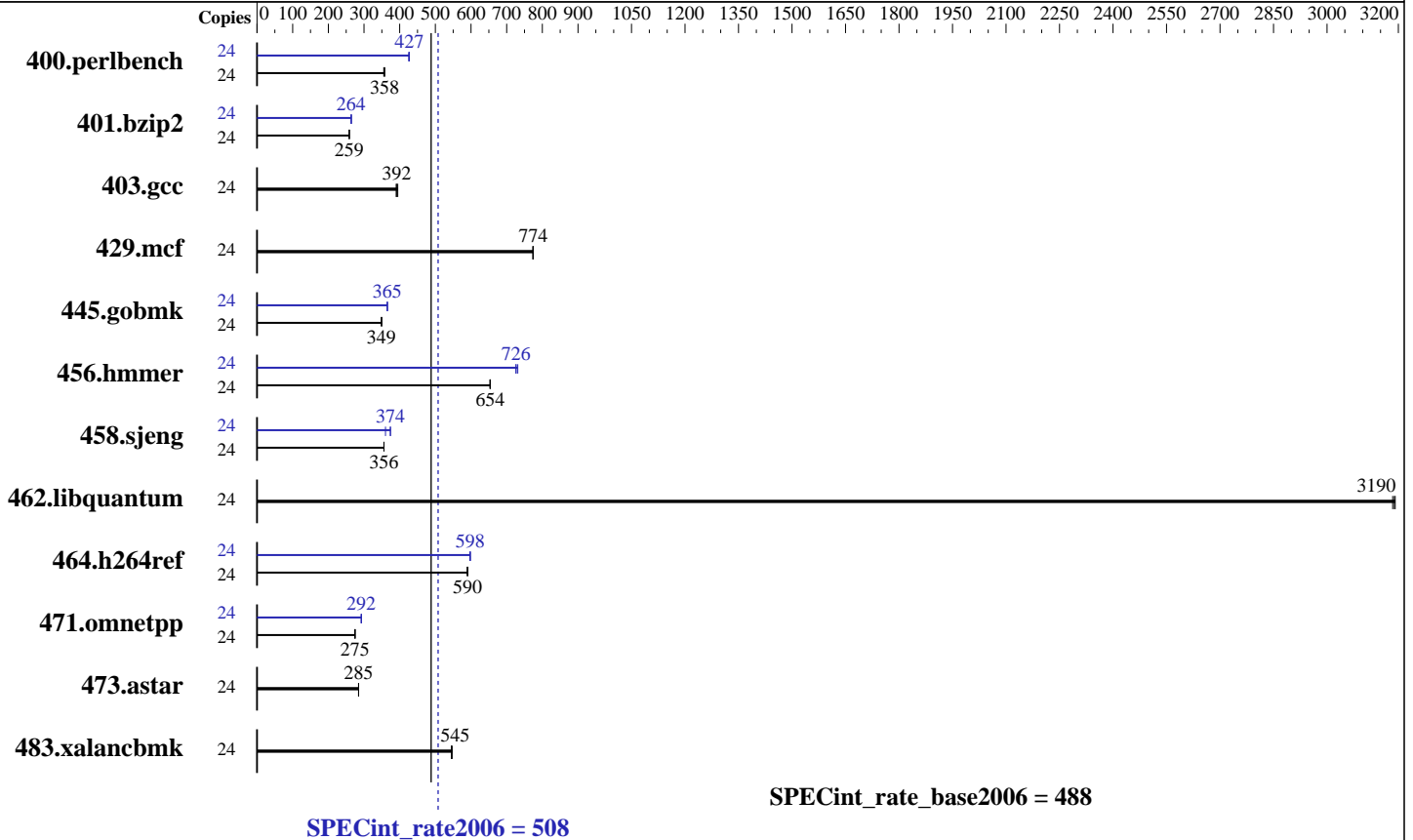
Test date: Sep-2013

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2013

Tested by: Hewlett-Packard Company

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E5-2630 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.10 GHz  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
 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: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: 1 x 400 GB SAS SSD, RAID 1  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 Kernel version 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 = 508

ProLiant BL460c Gen8  
(2.60 GHz, Intel Xeon E5-2630 v2)

SPECint\_rate\_base2006 = 488

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

Test date: Sep-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	24	655	358	<b>656</b>	<b>358</b>	660	355	24	549	427	<b>549</b>	<b>427</b>	551	425		
401.bzip2	24	894	259	<b>896</b>	<b>259</b>	896	259	24	876	265	877	264	<b>877</b>	<b>264</b>		
403.gcc	24	490	395	<b>493</b>	<b>392</b>	495	390	24	490	395	<b>493</b>	<b>392</b>	495	390		
429.mcf	24	283	773	283	774	<b>283</b>	<b>774</b>	24	283	773	283	774	<b>283</b>	<b>774</b>		
445.gobmk	24	720	350	722	349	<b>721</b>	<b>349</b>	24	689	365	689	365	<b>689</b>	<b>365</b>		
456.hammer	24	<b>342</b>	<b>654</b>	343	653	342	654	24	306	731	<b>308</b>	<b>726</b>	308	726		
458.sjeng	24	816	356	<b>816</b>	<b>356</b>	816	356	24	806	360	<b>777</b>	<b>374</b>	776	374		
462.libquantum	24	<b>156</b>	<b>3190</b>	156	3190	156	3180	24	<b>156</b>	<b>3190</b>	156	3190	156	3180		
464.h264ref	24	<b>900</b>	<b>590</b>	901	589	899	591	24	888	598	<b>888</b>	<b>598</b>	890	597		
471.omnetpp	24	545	275	<b>546</b>	<b>275</b>	547	274	24	512	293	<b>513</b>	<b>292</b>	513	292		
473.astar	24	<b>592</b>	<b>285</b>	592	285	591	285	24	<b>592</b>	<b>285</b>	592	285	591	285		
483.xalancbmk	24	303	547	<b>304</b>	<b>545</b>	304	545	24	303	547	<b>304</b>	<b>545</b>	304	545		

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/config/sysinfo.rev6818  
Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

SPECint\_rate2006 = 508

ProLiant BL460c Gen8  
(2.60 GHz, Intel Xeon E5-2630 v2)

SPECint\_rate\_base2006 = 488

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

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

### Platform Notes (Continued)

\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on BL460cGen8-RFP-BAO Fri Sep 27 15:35:50 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 E5-2630 v2 @ 2.60GHz
 2 "physical id"s (chips)
 24 "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 : 6
  siblings  : 12
  physical 0: cores 0 1 2 3 4 5
  physical 1: cores 0 1 2 3 4 5
cache size : 15360 KB
```

```
From /proc/meminfo
MemTotal:      132119288 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 BL460cGen8-RFP-BAO 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 Sep 27 15:34

```
SPEC is set to: /cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3       ext4      360G  8.8G  333G   3% /
```

```
Additional information from dmidecode:
BIOS HP I31 09/08/2013
Memory:
 16x HP 689911-071 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**

**SPECint\_rate2006 = 508**

ProLiant BL460c Gen8  
(2.60 GHz, Intel Xeon E5-2630 v2)

**SPECint\_rate\_base2006 = 488**

**CPU2006 license:** 3

**Test date:** Sep-2013

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Sep-2013

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/cpu2006/libs/32:/cpu2006/libs/64:/cpu2006/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

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32

400.perlbench: icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint\_rate2006 = 508**

ProLiant BL460c Gen8  
(2.60 GHz, Intel Xeon E5-2630 v2)

**SPECint\_rate\_base2006 = 488**

**CPU2006 license:** 3

**Test date:** Sep-2013

**Test sponsor:** Hewlett-Packard Company

**Hardware Availability:** Sep-2013

**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

## Peak Compiler Invocation (Continued)

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`

462.libquantum: `basepeak = yes`

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Hewlett-Packard Company**

**SPECint\_rate2006 = 508**

ProLiant BL460c Gen8  
(2.60 GHz, Intel Xeon E5-2630 v2)

**SPECint\_rate\_base2006 = 488**

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

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

## Peak Optimization Flags (Continued)

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/HP-Platform-Flags-Intel-V1.2-revB.html>  
<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.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-revB.xml>  
<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.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 18:42:23 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 22 October 2013.