



# SPEC® CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp®\_rate2006 = **NC**

SPECfp\_rate\_base2006 = **NC**

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

Test date: Feb-2015  
Hardware Availability: Sep-2014  
Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

### Hardware

CPU Name: Intel Xeon E5-2699 v3  
CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
CPU MHz: 2300  
FPU: Integrated  
CPU(s) enabled: 18 cores, 1 chip, 18 cores/chip, 2 threads/core  
CPU(s) orderable: 1 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: 45 MB I+D on chip per chip  
Other Cache: None  
Memory: 128 GB (8 x 16 GB 2133 PC4-2133P-R)  
Disk Subsystem: 1 x 400 GB SAS SSD, RAID 0  
Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)  
Kernel: 3.10.0-123.el7.x86\_64  
Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux; Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux  
Auto Parallel: No  
File System: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 32/64-bit  
Peak Pointers: 32/64-bit  
Other Software: None

**Non-Compliant**



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate2006 = **NC**

SPECfp\_rate\_base2006 = **NC**

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
416.gamess	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
433.milc	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
434.zeusmp	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
435.gromacs	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
436.cactusADM	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
437.leslie3d	36	NC	NC	NC	NC	NC	NC	18	NC	NC	NC	NC	NC	NC		
444.namd	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
447.dealII	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
450.soplex	36	NC	NC	NC	NC	NC	NC	18	NC	NC	NC	NC	NC	NC		
453.povray	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
454.calculix	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
459.GemsFDTD	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
465.tonto	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
470.lbm	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
481.wrf	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		
482.spm	36	NC	NC	NC	NC	NC	NC	36	NC	NC	NC	NC	NC	NC		

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.



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate2006 = **NC**

SPECfp\_rate\_base2006 = **NC**

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
echo always > /sys/kernel/mm/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 Custom
HP Power Regulator set to HP Static High Performance Mode
Minimum Processor Idle Power Package C-State set to No Package State
Energy/Performance Bias set to Maximum Performance
QPI Snoop Configuration set to Cluster on Die
Thermal Configuration set to Maximum Cooling
Processor Power and Utilization Monitoring set to Disabled
Memory Refresh Rate set to 1x Refresh
Sysinfo program /cpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date: 2014-06-25 # $ e3fbb8667b5a285932ceab81e28219e1
running on bl460c gen9-VP2.1 Tue Feb 3 02:35:32 2015
```

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 E5-2699 v3 @ 2.30GHz
1 "physical id"s (chips)
3 "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 : 9
siblings : 18
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 23040 KB
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp\_rate2006 = **NC**

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate\_base2006 = **NC**

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

Test date: Feb-2015  
Hardware Availability: Sep-2014  
Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Platform Notes (Continued)

```
From /proc/meminfo
MemTotal:      131731588 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: cpe:/o:redhat:enterprise_linux:7.0:ga:server
```

```
uname -a:
Linux X-bl460c_gen9-VP2.1 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT
2014 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Feb 2 14:27
```

```
df -h:
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda4       xfs       277G  110G  168G  40% /
```

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 I36 08/26/2014
Memory:
4x HP 752369-081 16 GB 2 rank 2133 MHz
4x HP NOT AVAILABLE 16 GB 2 rank 2133 MHz
Continued on next page
```



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate2006 = **NC**

SPECfp\_rate\_base2006 = **NC**

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Platform Notes (Continued)

8x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)

Regarding the sysinfo display about the memory installed, the correct amount of memory is 128 GB and the dmidecode description should have two lines reading as:

```
4x HP 752369-081 16 GB 2 rank 2133 MHz
4x HP NOT AVAILABLE 16 GB 2 rank 2133 MHz
```

## General Notes

Environment variables set by user 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 i5-4670K CPU + 16GB memory using RedHat Linux 7.0

## Base Compiler Invocation

C benchmarks:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
icc -m64 ifort -m64
```

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_LP64

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate2006 = **NC**

SPECfp\_rate\_base2006 = **NC**

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Base Portability Flags (Continued)

```

416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -r for main
436.cactusADM: -DSPEC_CPU_LP64 -no for main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -for main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

```

## Base Optimization Flags

C benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

Fortran benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

```

Benchmarks using both Fortran and C:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp\_rate2006 = **NC**

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate\_base2006 = **NC**

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

Test date: Feb-2015  
Hardware Availability: Sep-2014  
Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## Peak Portability Flags

410.bwaves: -DSPEC\_CPU\_LP64  
416.gamess: -DSPEC\_CPU\_LP64  
433.milc: -DSPEC\_CPU\_LP64  
447.zeusmp: -DSPEC\_CPU\_LP64  
435.gomacs: -DSPEC\_CPU\_LP64 -noFOR\_main  
436.cactusADM: -DSPEC\_CPU\_LP64 -noFOR\_main  
437.leslie3d: -DSPEC\_CPU\_LP64  
447.deall: -DSPEC\_CPU\_LP64  
453.povray: -DSPEC\_CPU\_LP64  
454.calculix: -DSPEC\_CPU\_LP64 -noFOR\_main  
459.Gemstone3D: -DSPEC\_CPU\_LP64  
465.tonto: -DSPEC\_CPU\_LP64  
470.lbm: -DSPEC\_CPU\_LP64  
481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_CASE\_FLAG -DSPEC\_CPU\_LINUX  
482.sphinx3: -DSPEC\_CPU\_LP64





# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp\_rate2006 = **NC**

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate\_base2006 = **NC**

CPU2006 license: 3

Test date: Feb-2015

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2014

Tested by: Hewlett-Packard Company

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Peak Optimization Flags

C benchmarks:

433.milc: -xCORE-AVX2(pass 2) -prof-gen(pass 2) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)  
-auto-ilp32

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -fno-alias  
-auto-ilp32

447.dealII: basepeak = yes

450.soplex: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3

-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -unroll14  
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -scalar-rep-

Continued on next page





# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate2006 = **NC**

SPECfp\_rate\_base2006 = **NC**

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

## Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll14  
-auto -inline-alloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-memory-layout-trans=3(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

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



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c Gen9  
(2.30 GHz, Intel Xeon E5-2699 v3)

SPECfp\_rate2006 = NC

SPECfp\_rate\_base2006 = NC

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Jun-2014

**SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.**

**Non-Compliant**

SPEC and SPECfp 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 Tue Nov 3 17:48:06 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 April 2015.