



# SPEC® CFP2006 Result

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## Hewlett-Packard Company

ProLiant DL380 G7  
(2.27 GHz, Intel Xeon E5607)

**SPECfp®2006 =**

**SPECfp\_base2006 = NC**

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2011

Hardware Availability: Feb-2011

Software Availability: Apr-2011

**SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result would not meet the 3 month availability requirement in the SPEC CPU2006 run rules due to a change in the availability of the system.**

### Hardware

CPU Name: Intel Xeon E5607  
CPU Characteristics:  
CPU MHz: 2267  
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: 96 GB (12 x 8 GB 2Rx4 PC3-10600R-9, ECC, running at 1067 MHz)  
Disk Subsystem: 1 x 300 GB 10 K SAS  
Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP1, Kernel 2.6.32.12-0.7-default  
Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0 Update 3  
Auto Parallel: Yes  
File System: ext3  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: None

Non-compliant



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**Results Table**

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

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
'nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab  
echo 900 > /proc/sys/vm/nr\_hugepages  
export HUGETLB\_MORECORE=yes  
export LD\_PRELOAD=/usr/lib64/libhugetlbfs.so



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### Platform Notes

BIOS configuration:

HP Power Profile set to Maximum Performance  
Thermal Configuration set to Increased Cooling  
Data Reuse set to Disabled

### General Notes

Binaries were compiled on HEL5.5

### Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

### Base Portability Flags

410.bwaves: -DSPEC\_CPU\_LP64  
416.gcc: -DSPEC\_CPU\_LP64  
432.milc: -DSPEC\_CPU\_LP64  
434.zeusmp: -DSPEC\_CPU\_LP64  
435.gromacs: -DSPEC\_CPU\_LP64 -nofor\_main  
436.cactusADM: -DSPEC\_CPU\_LP64 -nofor\_main  
437.leslie3d: -DSPEC\_CPU\_LP64  
444.namd: -DSPEC\_CPU\_LP64

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## Base Portability Flags (Continued)

```
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -m_for_min
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:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias
```

C++ benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
```

Fortran benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:

```
-ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias
```

## Peak Compiler Invocation

C benchmarks:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```

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## Peak Compiler Invocation (Continued)

Fortran benchmarks:  
ifort -m64

Benchmarks using both Fortran and C:  
icc -m64 ifort -m64

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32  
-ansi-alias

470.lbm: basepeak = yes

482.sphinx: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias  
parallel

C++ benchmarks:

441.wand: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias  
-auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

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## Peak Optimization Flags (Continued)

453.povray: -xSSE4\_2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll14 -ansi-alias  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4\_2 -ipo -O3 -no-prec-div -opt-prefetch -parallel  
-static

416.gamess: -xSSE4\_2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll12  
-inline-level=0 -scalar-rep -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4\_2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll12  
-inline-level=0 -opt-prefetch -parallel  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

465.tonto: -xSSE4\_2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc  
-opt-malloc-options=3 -auto -unroll14  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4\_2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32  
-ansi-alias

436.cactusADM: basepeak = yes

454.calculix: -xSSE4\_2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

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## Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-1.2.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20110316.html>

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

<http://www.spec.org/cpu2006/flags/Intel-1.2.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20110316.xml>

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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 v1.1.

Report generated on Wed Jul 23 16:49:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 16 March 2011.