



# SPEC<sup>®</sup> CFP2006 Result

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## Hewlett-Packard Company

### SPECfp<sup>®</sup>\_rate2006 = Not Run

ProLiant DL170h G6  
(2.8 GHz, Intel Xeon X5560)

### SPECfp\_rate\_base2006 = 185

CPU2006 license: 3

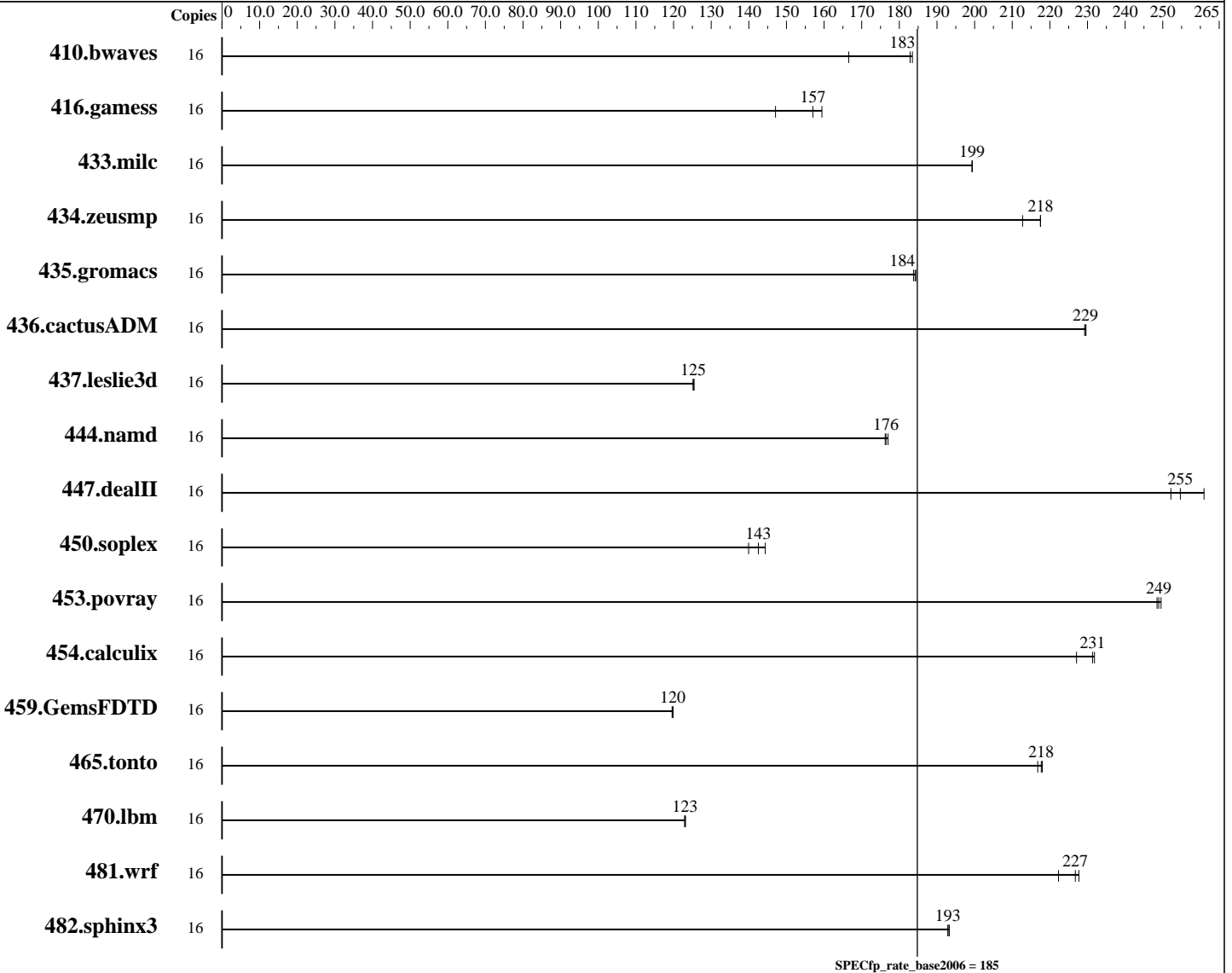
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Jan-2010

Hardware Availability: Jul-2009

Software Availability: Sep-2009



### Hardware

CPU Name: Intel Xeon X5560  
 CPU Characteristics: Intel Turbo Boost Technology up 3.20 GHz  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core  
 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

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### Software

Operating System: Red Hat Enterprise Linux Server release 5.4  
 Kernel 2.6.18-164.el5  
 Compiler: Intel C++ and Fortran Compiler 11.1 for Linux  
 Build 20090827 Package ID: l\_cproc\_p\_11.1.056,  
 l\_cprof\_p\_11.1.056  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit

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L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (6x4 GB DDR3-10600R CL9)  
Disk Subsystem: 1x500 GB 7.4K RPM SATA  
Other Hardware: None

Peak Pointers: Not Applicable  
Other Software: Binutils 2.17.50.0.18

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	1306	167	1185	183	<u>1189</u>	<u>183</u>							
416.gamess	16	1965	159	2130	147	<u>1995</u>	<u>157</u>							
433.milc	16	<u>737</u>	<u>199</u>	737	199	737	199							
434.zeusmp	16	684	213	669	218	<u>669</u>	<u>218</u>							
435.gromacs	16	620	184	622	184	<u>620</u>	<u>184</u>							
436.cactusADM	16	834	229	<u>833</u>	<u>229</u>	833	230							
437.leslie3d	16	1201	125	<u>1201</u>	<u>125</u>	1199	125							
444.namd	16	728	176	725	177	<u>727</u>	<u>176</u>							
447.dealII	16	<u>719</u>	<u>255</u>	701	261	726	252							
450.soplex	16	924	144	954	140	<u>936</u>	<u>143</u>							
453.povray	16	343	248	<u>342</u>	<u>249</u>	341	250							
454.calculix	16	569	232	<u>571</u>	<u>231</u>	581	227							
459.GemsFDTD	16	1416	120	<u>1417</u>	<u>120</u>	1419	120							
465.tonto	16	722	218	<u>723</u>	<u>218</u>	726	217							
470.lbm	16	1785	123	<u>1787</u>	<u>123</u>	1788	123							
481.wrf	16	785	228	804	222	<u>788</u>	<u>227</u>							
482.sphinx3	16	1613	193	1617	193	<u>1616</u>	<u>193</u>							

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

## Platform Notes

BIOS configuration:  
HP Power Profile set to Performance



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## General Notes

The ProLiant DL170h G6 is comprised of four independent server nodes in a single chassis. Only one of the server nodes was used for this benchmark; the other server nodes were idle during the benchmark. The active server node contained all of the CPUs and memory described in this disclosure.

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icc ifort

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_LP64  
416.gamess: -DSPEC\_CPU\_LP64  
433.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  
447.dealII: -DSPEC\_CPU\_LP64  
450.soplex: -DSPEC\_CPU\_LP64  
453.povray: -DSPEC\_CPU\_LP64  
454.calculix: -DSPEC\_CPU\_LP64 -nofor\_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:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

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## Base Optimization Flags (Continued)

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static`

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20100202.00.html>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20091110.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20100202.00.xml>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20091110.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).

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