SPEC® CFP2006 Result

Hewlett-Packard Company

ProLiant BL460c
(2.50 GHz, Intel Xeon E5420)

$SPECfp^{®}\_rate2006 =$ 70.7

$SPECfp\_rate\_base2006 =$ 64.4

CPU2006 license: 3		**Test date:**	Feb-2008
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Nov-2007
Tested by:	Hewlett-Packard Company	**Software Availability:**	Nov-2007

SPECfp_rate_base2006 = 64.4

SPECfp_rate2006 = 70.7

Hardware

CPU Name:	Intel Xeon E5420
CPU Characteristics:	2.50 GHz, 2x6 MB L2 shared, 1333 MHz system bus
CPU MHz:	2500
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008 Intel Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
Auto Parallel:	Yes
File System:	ext2
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c
(2.50 GHz, Intel Xeon E5420)

$SPECfp\_rate2006 =$ 70.7
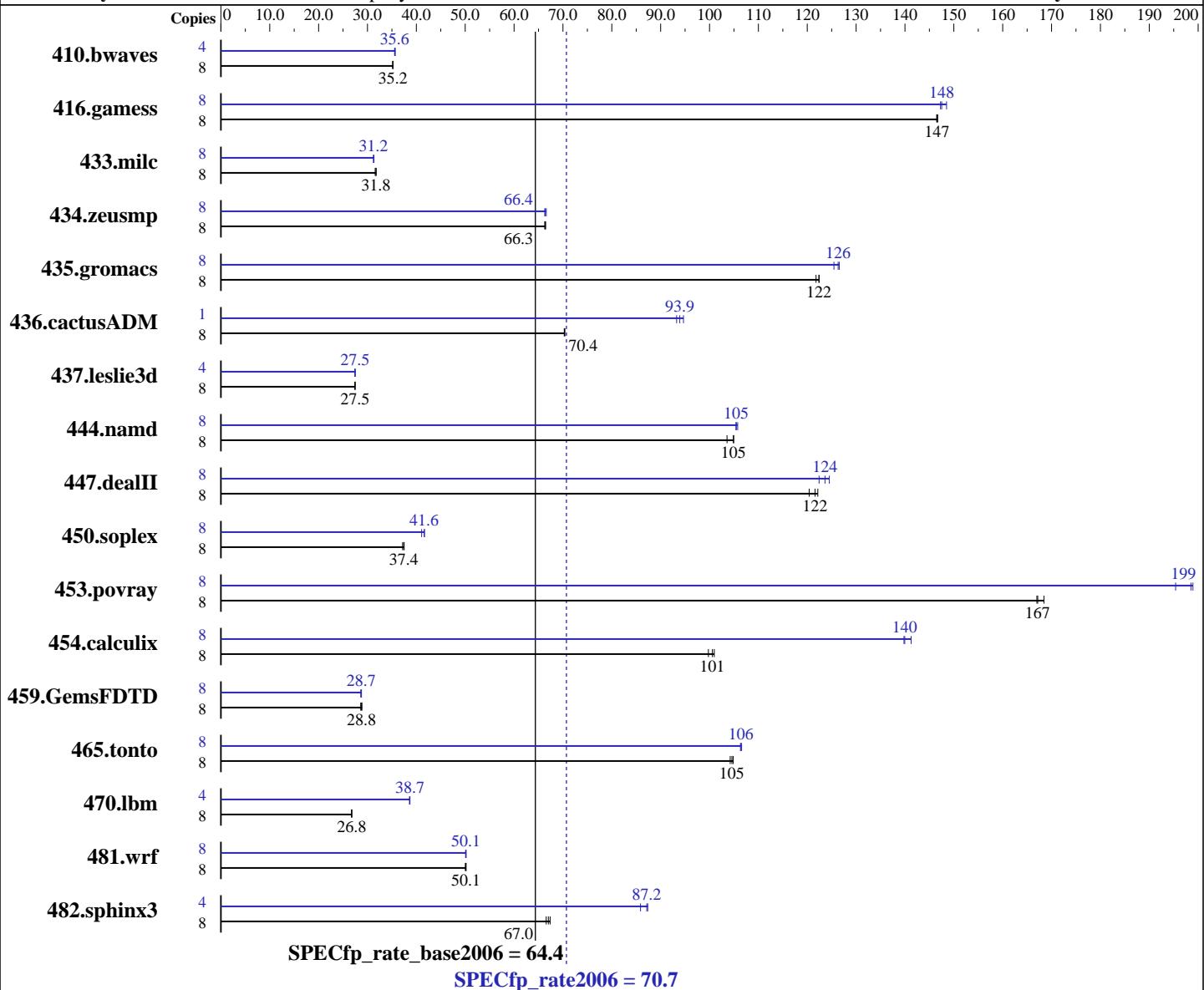
$SPECfp\_rate\_base2006 =$ 64.4

CPU2006 license: 3	**Test date:** Feb-2008
Test sponsor: Hewlett-Packard Company	**Hardware Availability:** Nov-2007
Tested by: Hewlett-Packard Company	**Software Availability:** Nov-2007

L3 Cache:	None	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	16 GB (8x2 GB PC2-5300F CL5)	Other Software:	binutils-2.17.50
Disk Subsystem:	1x72 GB 15 K SAS		
Other Hardware:	None		

Results Table

	Base						Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
410.bwaves	8	3085	35.2	**3089**	**35.2**	3093	35.2	4	**1528**	**35.6**	1529	35.5	1523	35.7
416.gamess	8	1068	147	**1069**	**147**	1069	146	8	1064	147	**1062**	**148**	1055	149
433.milc	8	**2313**	**31.8**	2326	31.6	2312	31.8	8	2344	31.3	**2351**	**31.2**	2351	31.2
434.zeusmp	8	1098	66.3	1095	66.5	**1098**	**66.3**	8	1093	66.6	1098	66.3	**1097**	**66.4**
435.gromacs	8	**467**	**122**	467	122	469	122	8	**452**	**126**	455	125	451	127
436.cactusADM	8	**1359**	**70.4**	1359	70.4	1361	70.3	1	126	94.7	**127**	**93.9**	128	93.3
437.leslie3d	8	2741	27.4	2738	27.5	**2739**	**27.5**	4	**1369**	**27.5**	1370	27.4	1368	27.5
444.namd	8	**612**	**105**	619	104	611	105	8	609	105	607	106	**608**	**105**
447.dealII	8	749	122	**753**	**122**	760	120	8	735	125	748	122	**740**	**124**
450.soplex	8	1794	37.2	1779	37.5	**1783**	**37.4**	8	1624	41.1	**1603**	**41.6**	1602	41.7
453.povray	8	253	168	255	167	**255**	**167**	8	**214**	**199**	214	199	218	195
454.calculix	8	654	101	662	99.8	**656**	**101**	8	472	140	467	141	**472**	**140**
459.GemsFDTD	8	2966	28.6	2941	28.9	**2950**	**28.8**	8	2965	28.6	**2957**	**28.7**	2950	28.8
465.tonto	8	751	105	**753**	**105**	755	104	8	739	107	**740**	**106**	740	106
470.lbm	8	4109	26.8	**4106**	**26.8**	4104	26.8	4	**1421**	**38.7**	1424	38.6	1421	38.7
481.wrf	8	1781	50.2	1787	50.0	**1783**	**50.1**	8	**1782**	**50.1**	1781	50.2	1785	50.1
482.sphinx3	8	2314	67.4	**2327**	**67.0**	2342	66.6	4	908	85.9	**894**	**87.2**	892	87.4

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
'/usr/bin/taskset' used to bind processes to CPUs
 OMP_NUM_THREADS set to number of cores
 KMP_AFFINITY set to physical,0
 KMP_STACKSIZE set to 64M
```

Platform Notes

```
BIOS configuration:
  Power Regulator set to Static High Performance Mode
  Adjacent Sector Prefetch Disabled
  Hardware Prefetcher Disabled
```

Hewlett-Packard Company

ProLiant BL460c
(2.50 GHz, Intel Xeon E5420)

$SPECfp\_rate2006 = \quad 70.7$

$SPECfp\_rate\_base2006 = \quad 64.4$

CPU2006 license: 3		**Test date:**	Feb-2008
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Nov-2007
Tested by:	Hewlett-Packard Company	**Software Availability:**	Nov-2007

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:
    -fast

C++ benchmarks:
    -fast

Fortran benchmarks:
    -fast

Benchmarks using both Fortran and C:
    -fast

Hewlett-Packard Company

$SPECfp_rate2006 = $ 70.7

ProLiant BL460c
(2.50 GHz, Intel Xeon E5420)

$SPECfp_rate_base2006 = $ 64.4

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

Test date: Feb-2008
Hardware Availability: Nov-2007
Software Availability: Nov-2007

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

433.milc: `icc`

C++ benchmarks (except as noted below):
```
icpc
```

450.soplex: `/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib`
`-I/opt/intel/cc/10.1.008/include`

Fortran benchmarks (except as noted below):
```
ifort
```

437.leslie3d: `/opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib`
`-I/opt/intel/fc/10.1.008/include`

Benchmarks using both Fortran and C:
```
icc ifort
```

Peak 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`
444.namd: `-DSPEC_CPU_LP64`
447.dealII: `-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`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

433.milc: `-prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias`
`-auto-ilp32`

470.lbm: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2`
`-scalar-rep- -prefetch -opt-malloc-options=3`

Continued on next page

Hewlett-Packard Company

ProLiant BL460c
(2.50 GHz, Intel Xeon E5420)

$SPECfp\_rate2006 =$ 70.7

$SPECfp\_rate\_base2006 =$ 64.4

CPU2006 license: 3		**Test date:**	Feb-2008
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Nov-2007
Tested by:	Hewlett-Packard Company	**Software Availability:**	Nov-2007

Peak Optimization Flags (Continued)

482.sphinx3: `-fast -unroll2`

C++ benchmarks:

444.namd: `-prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32`

447.dealII: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen(pass 1) -prof-use(pass 2) -fast -opt-malloc-options=3`

453.povray: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `-fast -prefetch`

416.gamess: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `-prof-gen(pass 1) -prof-use(pass 2) -fast`

437.leslie3d: `-prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -opt-malloc-options=3`

459.GemsFDTD: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -prefetch`

465.tonto: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -prefetch -parallel -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-fp-flags.html

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

$SPECfp_rate2006 = $ 70.7

ProLiant BL460c
(2.50 GHz, Intel Xeon E5420)

$SPECfp_rate_base2006 = $ 64.4

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Feb-2008

Hardware Availability: Nov-2007

Software Availability: Nov-2007

You can also download the XML flags source by saving the following link:

http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-fp-flags.xml

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.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 15:23:28 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 March 2008.