SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c
(3.5 GHz, Intel Xeon X5270)

$SPECfp®\_rate2006 =$ 34.7

$SPECfp\_rate\_base2006 =$ 33.2

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

Test date: Aug-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008

Benchmark	Copies	Result
410.bwaves	2	25.6
416.gamess	2	53.2
416.gamess	2	52.3
433.milc	2	22.2
433.milc	2	22.2
434.zeusmp	2	34.7
434.zeusmp	2	34.4
435.gromacs	2	46.2
435.gromacs	2	45.8
436.cactusADM	1	42.0
436.cactusADM	2	38.2
437.leslie3d	2	20.8
444.namd	2	38.0
447.dealII	2	57.0
447.dealII	2	55.0
450.soplex	2	21.9
450.soplex	2	20.0
453.povray	2	69.2
453.povray	2	58.1
454.calculix	2	52.6
454.calculix	2	52.3
459.GemsFDTD	2	19.2
465.tonto	2	46.7
465.tonto	2	43.4
470.lbm	1	23.9
470.lbm	2	18.6
481.wrf	2	31.9
482.sphinx3	1	31.2
482.sphinx3	2	30.5

SPECfp_rate_base2006 = 33.2

SPECfp_rate2006 = 34.7

Hardware

CPU Name: Intel Xeon X5270
CPU Characteristics: 3.5 GHz, 6 MB L2 shared, 1333 MHz system bus
CPU MHz: 3500
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 6 MB I+D on chip per chip

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++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042, l_fproc_b_11.0.042
Auto Parallel: Yes
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 64-bit

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c
(3.5 GHz, Intel Xeon X5270)

SPECfp_rate2006 =   34.7

SPECfp_rate_base2006 = 33.2

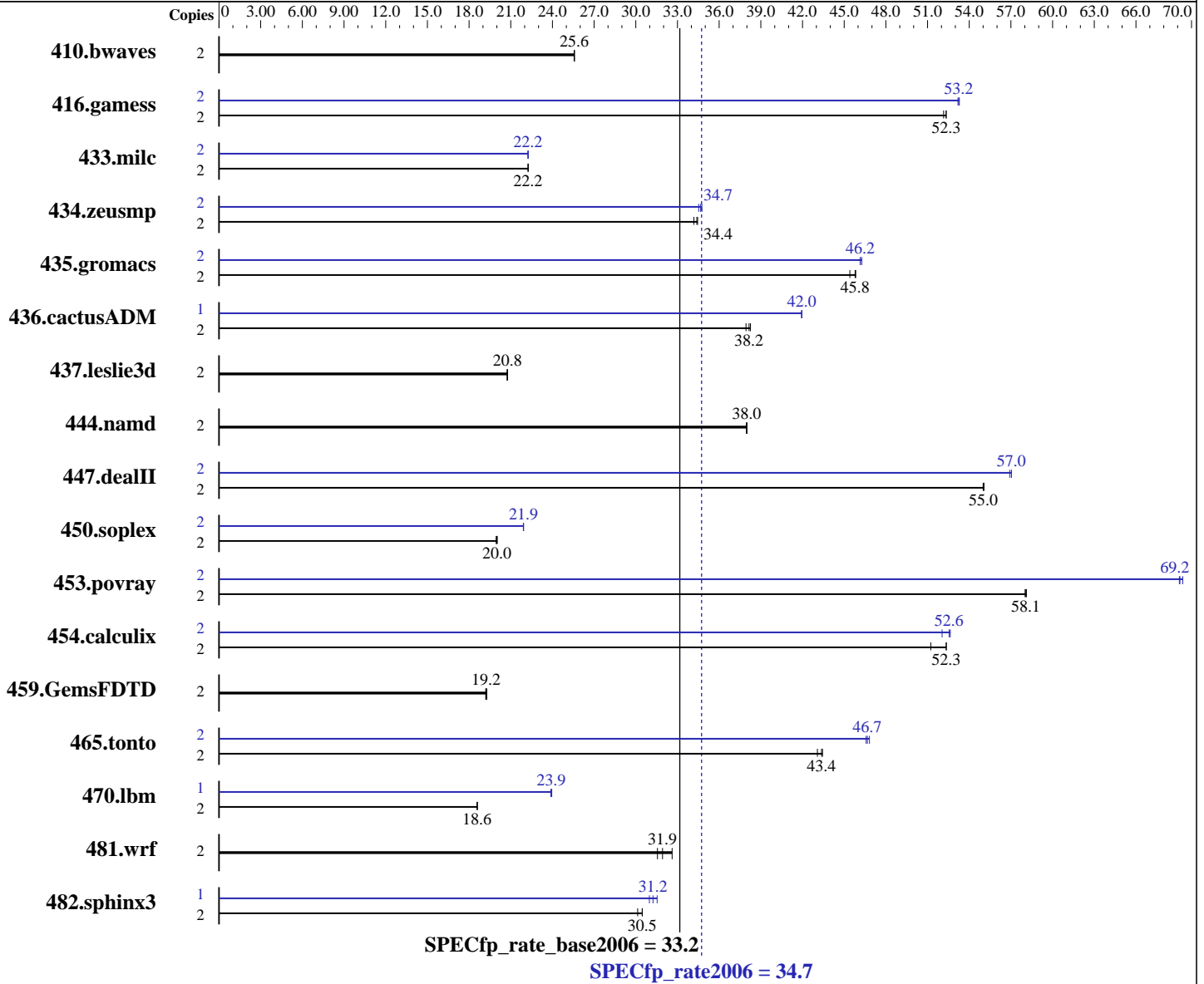|	
CPU2006 license: 3	**Test date:** Aug-2008
Test sponsor: Hewlett-Packard Company	**Hardware Availability:** Sep-2008
Tested by: Hewlett-Packard Company	**Software Availability:** Nov-2008

L3 Cache:	None	Peak Pointers:	32/64-bit
Other Cache:	None	Other Software:	MicroQuill SmartHeap Library 8.1
Memory:	16 GB (8x2 GB PC2-5300F CL5)		Binutils 2.18.50.0.7.20080502
Disk Subsystem:	2x72 GB 10 K SAS		
Other Hardware:	None		

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1063	25.6	**1063**	**25.6**	1062	25.6	2	1063	25.6	**1063**	**25.6**	1062	25.6
416.gamess	2	**748**	**52.3**	748	52.3	751	52.2	2	736	53.2	735	53.3	**735**	**53.2**
433.milc	2	825	22.3	825	22.2	**825**	**22.2**	2	**825**	**22.2**	825	22.3	825	22.2
434.zeusmp	2	**529**	**34.4**	528	34.5	532	34.2	2	527	34.5	524	34.8	**525**	**34.7**
435.gromacs	2	312	45.8	314	45.4	**312**	**45.8**	2	309	46.1	**309**	**46.2**	309	46.3
436.cactusADM	2	**626**	**38.2**	630	37.9	625	38.2	1	**285**	**42.0**	285	41.9	285	42.0
437.leslie3d	2	**906**	**20.8**	907	20.7	905	20.8	2	**906**	**20.8**	907	20.7	905	20.8
444.namd	2	422	38.0	422	38.0	**422**	**38.0**	2	422	38.0	422	38.0	**422**	**38.0**
447.dealII	2	**416**	**55.0**	416	55.0	416	55.1	2	401	57.0	**401**	**57.0**	402	56.9
450.soplex	2	833	20.0	836	19.9	**834**	**20.0**	2	761	21.9	761	21.9	**761**	**21.9**
453.povray	2	183	58.0	183	58.1	**183**	**58.1**	2	**154**	**69.2**	154	69.1	153	69.4
454.calculix	2	**315**	**52.3**	315	52.4	322	51.2	2	313	52.6	317	52.0	**314**	**52.6**
459.GemsFDTD	2	1105	19.2	1101	19.3	**1103**	**19.2**	2	1105	19.2	1101	19.3	**1103**	**19.2**
465.tonto	2	453	43.4	457	43.1	**454**	**43.4**	2	420	46.8	**422**	**46.7**	422	46.6
470.lbm	2	1478	18.6	1479	18.6	**1479**	**18.6**	1	**575**	**23.9**	575	23.9	574	24.0
481.wrf	2	**700**	**31.9**	685	32.6	708	31.6	2	**700**	**31.9**	685	32.6	708	31.6
482.sphinx3	2	1279	30.5	1294	30.1	**1280**	**30.5**	1	629	31.0	**624**	**31.2**	618	31.5

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.
     taskset was used to bind processes to cores except
     for 436.cactusADM peak

Operating System Notes

     'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
     OMP_NUM_THREADS set to number of cores
     KMP_AFFINITY set to physical,0
     KMP_STACKSIZE set to 64M

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant BL460c
(3.5 GHz, Intel Xeon X5270)

$SPECfp\_rate2006 =$ 34.7

$SPECfp\_rate\_base2006 =$ 33.2

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

Test date: Aug-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008

Platform Notes

```
BIOS configuration:
  Power Regulator set to Static High Performance Mode
```

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:
```
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
```

C++ benchmarks:
```
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
```

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp_rate2006 = 34.7

ProLiant BL460c
(3.5 GHz, Intel Xeon X5270)

SPECfp_rate_base2006 = 33.2

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

Test date: Aug-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008

Base Optimization Flags (Continued)

Fortran benchmarks:
```
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc
```

```
482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc
         -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
         -I/opt/intel/Compiler/11.0/042/ipp/ia32/include
```

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

```
450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc
         -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
         -I/opt/intel/Compiler/11.0/042/ipp/ia32/include
```

Fortran benchmarks:
```
ifort
```

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
437.leslie3d: -DSPEC_CPU_LP64
  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
   470.lbm: -DSPEC_CPU_LP64
    481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

SPEC CFP2006 Result

Hewlett-Packard Company

ProLiant BL460c
(3.5 GHz, Intel Xeon X5270)

SPECfp_rate2006 =   34.7

SPECfp_rate_base2006 = 33.2

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

Peak Optimization Flags

C benchmarks:

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

        470.lbm: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`
                `-auto-ilp32`

     482.sphinx3: `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2`

C++ benchmarks:

        444.namd: `basepeak = yes`

       447.dealII: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -unroll2 -ansi-alias -scalar-rep-`

      450.soplex: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -opt-malloc-options=3`

      453.povray: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -unroll4 -ansi-alias`

Fortran benchmarks:

       410.bwaves: `basepeak = yes`

      416.gamess: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -unroll2 -Ob0 -ansi-alias`
                `-scalar-rep-`

      434.zeusmp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static`

      437.leslie3d: `basepeak = yes`

    459.GemsFDTD: `basepeak = yes`

        465.tonto: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -unroll4 -auto`

Benchmarks using both Fortran and C:

      435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -opt-prefetch -auto-ilp32`

    436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3`
                `-no-prec-div -static -unroll2 -opt-prefetch -parallel`
                `-auto-ilp32`

SPEC CFP2006 Result

Hewlett-Packard Company

ProLiant BL460c
(3.5 GHz, Intel Xeon X5270)

$SPECfp\_rate2006 =$ 34.7

$SPECfp\_rate\_base2006 =$ 33.2

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

Peak Optimization Flags (Continued)

454.calculix: `-xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32`

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-ic11.0-fp-linux64-revD.20090713.html
http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.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-revD.20090713.xml
http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 21:04:23 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 1 October 2008.