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

Hewlett-Packard Company

SPECfp®_rate2006 = 87.8

ProLiant DL160 G5
(3.0 GHz, Intel Xeon E5472)
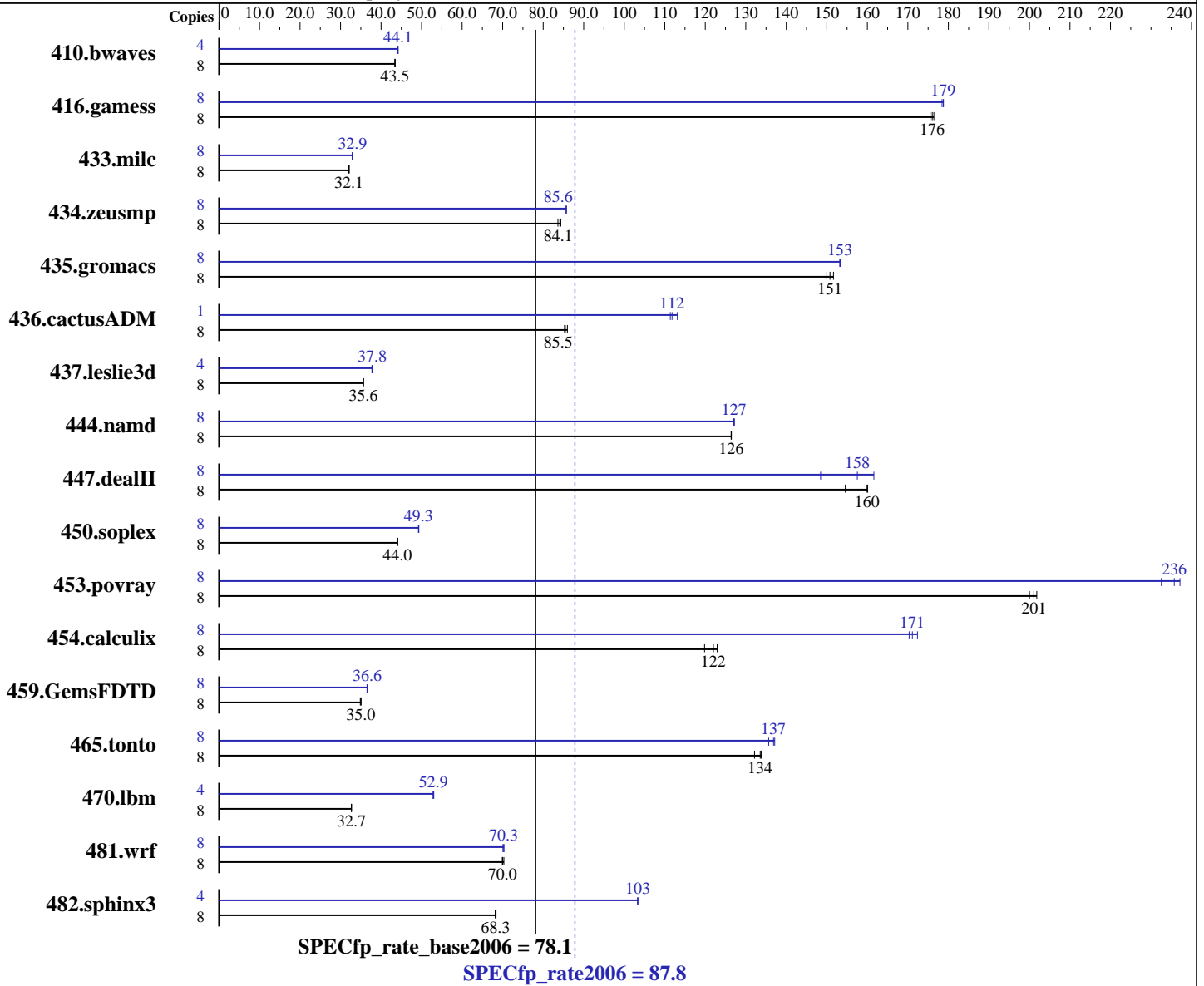
SPECfp_rate_base2006 = 78.1

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Jun-2008

Hardware Availability: May-2008

Software Availability: Nov-2007

Copies		
410.bwaves	4	44.1
	8	43.5
416.gamess	8	179
	8	176
433.milc	8	32.9
	8	32.1
434.zeusmp	8	85.6
	8	84.1
435.gromacs	8	153
	8	151
436.cactusADM	1	112
	8	85.5
437.leslie3d	4	37.8
	8	35.6
444.namd	8	127
	8	126
447.dealII	8	158
	8	160
450.soplex	8	49.3
	8	44.0
453.povray	8	236
	8	201
454.calculix	8	171
	8	122
459.GemsFDTD	8	36.6
	8	35.0
465.tonto	8	137
	8	134
470.lbm	4	52.9
	8	32.7
481.wrf	8	70.3
	8	70.0
482.sphinx3	4	103
	8	68.3

SPECfp_rate_base2006 = 78.1

SPECfp_rate2006 = 87.8

Hardware

CPU Name: Intel Xeon E5472

CPU Characteristics: 3.0 GHz, 2x6 MB L2 shared, 1600 MHz system bus

CPU MHz: 3000

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 DL160 G5
(3.0 GHz, Intel Xeon E5472)

$SPECfp_rate2006 = $ 87.8

$SPECfp_rate_base2006 = $ 78.1

CPU2006 license: 3	**Test date:** Jun-2008
Test sponsor: Hewlett-Packard Company	**Hardware Availability:** May-2008
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:	32 GB (8x4 GB PC2-6400F CL6)	Other Software:	binutils-2.17.50
Disk Subsystem:	1x160 GB 7.2 K SATA		
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	2505	43.4	2502	43.5	**2502**	**43.5**	4	**1231**	**44.1**	1232	44.1	1229	44.2
416.gamess	8	893	175	888	176	**890**	**176**	8	**876**	**179**	878	178	876	179
433.milc	8	2286	32.1	**2290**	**32.1**	2290	32.1	8	**2230**	**32.9**	2236	32.8	2229	33.0
434.zeusmp	8	**865**	**84.1**	863	84.3	870	83.6	8	**850**	**85.6**	849	85.8	852	85.4
435.gromacs	8	377	152	**379**	**151**	381	150	8	**373**	**153**	373	153	373	153
436.cactusADM	8	1121	85.3	**1119**	**85.5**	1112	86.0	1	106	113	**107**	**112**	107	111
437.leslie3d	8	2116	35.5	**2110**	**35.6**	2109	35.7	4	**995**	**37.8**	993	37.9	996	37.7
444.namd	8	**508**	**126**	508	126	507	126	8	505	127	504	127	**505**	**127**
447.dealII	8	572	160	**572**	**160**	592	155	8	566	162	616	148	**581**	**158**
450.soplex	8	1513	44.1	**1515**	**44.0**	1517	44.0	8	1353	49.3	**1355**	**49.3**	1355	49.2
453.povray	8	213	200	**212**	**201**	211	202	8	179	237	183	233	**181**	**236**
454.calculix	8	537	123	551	120	**541**	**122**	8	**386**	**171**	383	172	388	170
459.GemsFDTD	8	2420	35.1	2435	34.9	**2426**	**35.0**	8	2318	36.6	**2320**	**36.6**	2324	36.5
465.tonto	8	596	132	**589**	**134**	588	134	8	580	136	574	137	**575**	**137**
470.lbm	8	**3363**	**32.7**	3362	32.7	3364	32.7	4	1040	52.8	1037	53.0	**1039**	**52.9**
481.wrf	8	1278	69.9	**1277**	**70.0**	1271	70.3	8	1271	70.3	1275	70.1	**1272**	**70.3**
482.sphinx3	8	2288	68.2	2281	68.4	**2284**	**68.3**	4	**754**	**103**	755	103	753	104

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.
     '/usr/bin/taskset' used to bind processes to CPUs
```

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 DL160 G5
(3.0 GHz, Intel Xeon E5472)

$SPECfp\_rate2006 =$ 87.8

$SPECfp\_rate\_base2006 =$ 78.1

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Jun-2008

Hardware Availability: May-2008

Software Availability: Nov-2007

Platform Notes

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

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

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL160 G5
(3.0 GHz, Intel Xeon E5472)

$SPECfp\_rate2006 =$ 87.8

$SPECfp\_rate\_base2006 =$ 78.1

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

Test date: Jun-2008
Hardware Availability: May-2008
Software Availability: Nov-2007

Base Optimization Flags (Continued)

Fortran benchmarks:
```
-fast
```

Benchmarks using both Fortran and C:
```
-fast
```

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`

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL160 G5
(3.0 GHz, Intel Xeon E5472)

SPECfp_rate2006 =　　87.8

SPECfp_rate_base2006 =　78.1

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

Test date: Jun-2008
Hardware Availability: May-2008
Software Availability: Nov-2007

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`

> 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`

Hewlett-Packard Company

ProLiant DL160 G5
(3.0 GHz, Intel Xeon E5472)

$SPECfp\_rate2006 = 87.8$

$SPECfp\_rate\_base2006 = 78.1$

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

Test date: Jun-2008
Hardware Availability: May-2008
Software Availability: Nov-2007

Peak Optimization Flags (Continued)

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.20090713.html`

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.20090713.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 v1.1.
Report generated on Tue Jul 22 20:02:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 July 2008.