SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

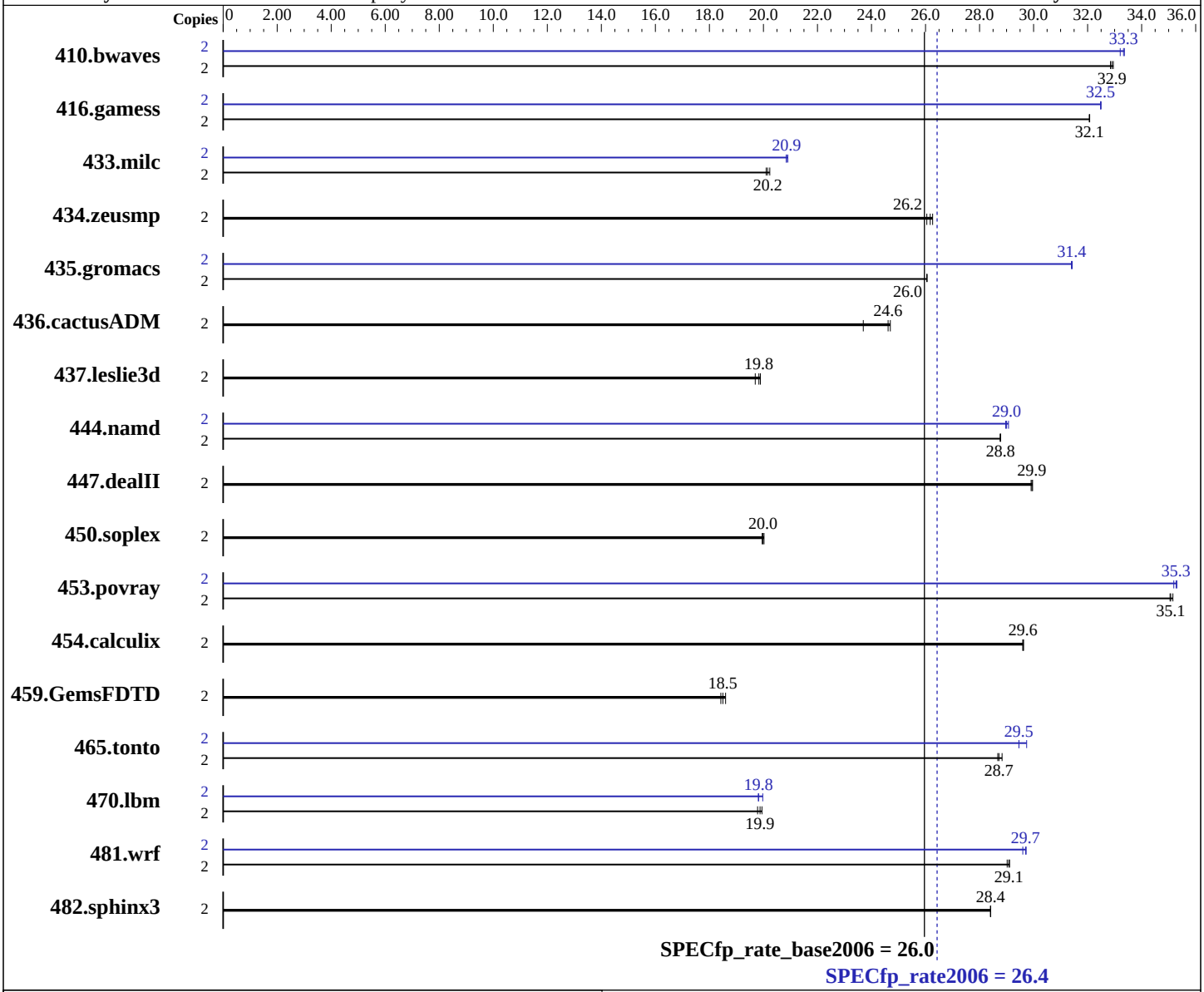
ProLiant DL365
(3.0GHz AMD Opteron 2222)

SPECfp®_rate2006 = 26.4

SPECfp_rate_base2006 = 26.0

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

Test date: Aug-2007
Hardware Availability: Sep-2007
Software Availability: Oct-2007



Hardware

CPU Name:	AMD Opteron 2222
CPU Characteristics:	
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core

Continued on next page

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SP1 kernel 2.6.16.46-0.12-smp
Compiler:	The Portland Group (PGI) PGI pgf90 7.1-0 Fortran Compiler PGI pgcc 7.1-0 C Compiler PGI pgCC 7.1-0 C++ Compiler
Auto Parallel:	No
File System:	ext2
System State:	Multi-user, run level 3

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL365
(3.0GHz AMD Opteron 2222)

SPECfp_rate2006 = 26.4

SPECfp_rate_base2006 = 26.0

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

Test date: Aug-2007
Hardware Availability: Sep-2007
Software Availability: Oct-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (4x4 GB, PC2-5300P CL5)
Disk Subsystem: 1x72 GB 10 K SAS
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: none

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	825	33.0	**826**	**32.9**	828	32.8	2	818	33.2	**815**	**33.3**	815	33.4
416.gamess	2	1221	32.1	1221	32.1	**1221**	**32.1**	2	**1206**	**32.5**	1206	32.5	1205	32.5
433.milc	2	913	20.1	**911**	**20.2**	907	20.2	2	881	20.8	**880**	**20.9**	878	20.9
434.zeusmp	2	**695**	**26.2**	693	26.3	699	26.0	2	**695**	**26.2**	693	26.3	699	26.0
435.gromacs	2	548	26.0	548	26.1	**548**	**26.0**	2	455	31.4	454	31.4	**455**	**31.4**
436.cactusADM	2	968	24.7	**971**	**24.6**	1009	23.7	2	968	24.7	**971**	**24.6**	1009	23.7
437.leslie3d	2	945	19.9	**948**	**19.8**	954	19.7	2	945	19.9	**948**	**19.8**	954	19.7
444.namd	2	558	28.8	**557**	**28.8**	557	28.8	2	554	29.0	552	29.1	**553**	**29.0**
447.dealII	2	764	30.0	765	29.9	**764**	**29.9**	2	764	30.0	765	29.9	**764**	**29.9**
450.soplex	2	836	20.0	833	20.0	**835**	**20.0**	2	836	20.0	833	20.0	**835**	**20.0**
453.povray	2	303	35.2	304	35.1	**303**	**35.1**	2	**302**	**35.3**	302	35.2	301	35.3
454.calculix	2	557	29.6	**557**	**29.6**	557	29.6	2	557	29.6	**557**	**29.6**	557	29.6
459.GemsFDTD	2	1152	18.4	**1147**	**18.5**	1141	18.6	2	1152	18.4	**1147**	**18.5**	1141	18.6
465.tonto	2	**685**	**28.7**	686	28.7	683	28.8	2	662	29.7	668	29.5	**668**	**29.5**
470.lbm	2	1378	19.9	**1383**	**19.9**	1389	19.8	2	**1386**	**19.8**	1376	20.0	1387	19.8
481.wrf	2	767	29.1	770	29.0	**768**	**29.1**	2	755	29.6	752	29.7	**752**	**29.7**
482.sphinx3	2	**1372**	**28.4**	1372	28.4	1372	28.4	2	**1372**	**28.4**	1372	28.4	1372	28.4

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

Operating System Notes

```
Environment stack size set to 'unlimited'
ulimit -l set to 1048576
'numactl' was used to bind copies to the cores
Set vm/nr_hugepages=1024 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages
```

Base Compiler Invocation

C benchmarks:

```
pgcc
```

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
pgcpp

Fortran benchmarks:
pgf95

Benchmarks using both Fortran and C:
pgcc pgf95

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 -Mnomain
436.cactusADM: -DSPEC_CPU_LP64 -Mnomain
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 -Mnomain
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 -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:8
-tp k8-64 -Bstatic_pgi

C++ benchmarks:
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:8
--zc_eh -tp k8-64 -Bstatic_pgi

Fortran benchmarks:
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:8
-tp k8-64 -Bstatic_pgi

Benchmarks using both Fortran and C:
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:8
-tp k8-64 -Bstatic_pgi

Base Other Flags

C benchmarks:
`-w`

C++ benchmarks:
`-w`

Fortran benchmarks:
`-w`

Benchmarks using both Fortran and C:
`-w`

Peak Compiler Invocation

C benchmarks:
`pgcc`

C++ benchmarks:
`pgcpp`

Fortran benchmarks:
`pgf95`

Benchmarks using both Fortran and C:
`pgcc pgf95`

Peak Portability Flags

`Same as Base Portability Flags`

Peak Optimization Flags

C benchmarks:

433.milc: `-Mpfi`(pass 1) `-Mipa=fast`(pass 2) `-Mipa=inline`(pass 2) `-Mipa=noarg`(pass 2) `-Mpfo`(pass 2) `-fast -O4 -Mdse -Mfprelaxed -Msmartalloc=huge:8 -tp k8-64 -Bstatic_pgi`

470.lbm: `-fast -Mfprelaxed -Msmartalloc=huge:8 -Mipa=fast -Mipa=noarg -tp k8-64 -Bstatic_pgi`

482.sphinx3: `basepeak = yes`

Continued on next page

Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: `-Mpfi`(pass 1) `-Mpfo`(pass 2) `-Mipa=fast`(pass 2) `-Mipa=inline`(pass 2) `-fast -O4 -Mfprelaxed -Msmartalloc=huge:32 --zc_eh -tp k8-64 -Bstatic_pgi`

447.dealII: `basepeak = yes`

450.soplex: `basepeak = yes`

453.povray: `-fast -Mfprelaxed -Msmartalloc=huge:32 -Mipa=fast -Mipa=inline --zc_eh -tp k8-64 -Bstatic_pgi`

Fortran benchmarks:

410.bwaves: `-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc -tp k8-64 -Bstatic_pgi`

416.gamess: `-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Mvect=noaltcode -Msmartalloc=huge:64 -tp k8-64 -Bstatic_pgi`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-fast -Mfprelaxed -Msmartalloc=huge:128 -Mipa=fast -Mipa=inline -Mvect=noaltcode -tp k8-64 -Bstatic_pgi`

Benchmarks using both Fortran and C:

435.gromacs: `-fast -O4 -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:16 -tp k8-64 -Mfpapprox=rsqrt -Bstatic_pgi`

436.cactusADM: `basepeak = yes`

454.calculix: `basepeak = yes`

481.wrf: `-fast -Mfprelaxed -Msmartalloc=huge:32 -Mvect=noaltcode -tp k8-64 -Bstatic_pgi`

Peak Other Flags

C benchmarks:

`-w`

Continued on next page

Peak Other Flags (Continued)

C++ benchmarks:
`-w`

Fortran benchmarks:
`-w`

Benchmarks using both Fortran and C:
`-w`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/hp-pgi710_flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/hp-pgi710_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 13:30:36 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 September 2007.