SPEC® CFP2006 Result

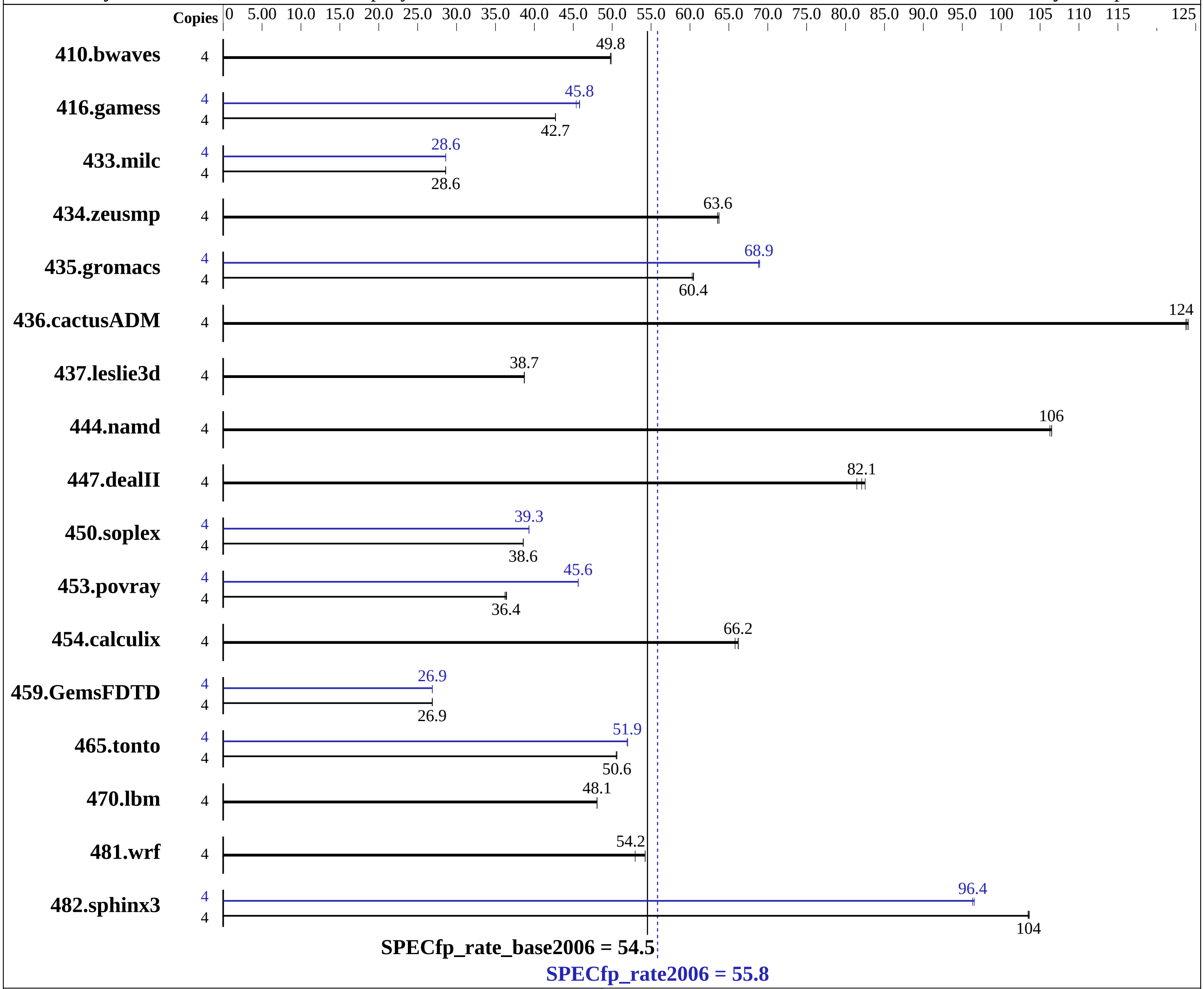
Hewlett-Packard Company

HP Integrity rx2660 (1.66GHz/18MB Dual-Core Intel Itanium)

SPECfp®_rate2006 = 55.8

SPECfp_rate_base2006 = 54.5

CPU2006 license:	03	**Test date:**	Sep-2007
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Nov-2007
Tested by:	Hewlett-Packard Company	**Software Availability:**	Sep-2007



Hardware

CPU Name:	Dual-Core Intel Itanium 9140M
CPU Characteristics:	1.66GHz/18MB, 667MHz FSB
CPU MHz:	1666
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1-2 chips
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	1 MB I + 256 KB D on chip per core

Continued on next page

Software

Operating System:	HPUX11i-MCOE B.11.31 (LR)
Compiler:	HP C/aC++ Developer's Bundle C.11.31.03 HP Fortran90 Compiler B.11.31.03
Auto Parallel:	No
File System:	vxfs
System State:	Multi-user
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	MicroQuill Smartheap 8.1

SPEC CFP2006 Result

Hewlett-Packard Company

HP Integrity rx2660 (1.66GHz/18MB Dual-Core Intel Itanium)

SPECfp_rate2006 = 55.8

SPECfp_rate_base2006 = 54.5

CPU2006 license: 03
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company
Test date: Sep-2007
Hardware Availability: Nov-2007
Software Availability: Sep-2007

L3 Cache:	9 MB I+D on chip per core
Other Cache:	None
Memory:	16 GB (8x2GB DIMMs)
Disk Subsystem:	73GB 10K RPM 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	4	**1091**	**49.8**	1092	49.8	1090	49.9	4	**1091**	**49.8**	1092	49.8	1090	49.9
416.gamess	4	1834	42.7	**1834**	**42.7**	1833	42.7	4	1709	45.8	1726	45.4	**1710**	**45.8**
433.milc	4	1283	28.6	1283	28.6	**1283**	**28.6**	4	**1283**	**28.6**	1283	28.6	1283	28.6
434.zeusmp	4	571	63.7	**572**	**63.6**	573	63.6	4	571	63.7	**572**	**63.6**	573	63.6
435.gromacs	4	472	60.5	**473**	**60.4**	474	60.3	4	**415**	**68.9**	414	69.0	415	68.8
436.cactusADM	4	**386**	**124**	386	124	385	124	4	**386**	**124**	386	124	385	124
437.leslie3d	4	**971**	**38.7**	971	38.7	971	38.7	4	**971**	**38.7**	971	38.7	971	38.7
444.namd	4	301	106	302	106	**301**	**106**	4	301	106	302	106	**301**	**106**
447.dealII	4	**558**	**82.1**	562	81.4	555	82.5	4	**558**	**82.1**	562	81.4	555	82.5
450.soplex	4	865	38.6	865	38.6	**865**	**38.6**	4	849	39.3	848	39.3	**849**	**39.3**
453.povray	4	584	36.4	**585**	**36.4**	588	36.2	4	466	45.6	**466**	**45.6**	466	45.6
454.calculix	4	502	65.8	**499**	**66.2**	498	66.2	4	502	65.8	**499**	**66.2**	498	66.2
459.GemsFDTD	4	1578	26.9	1580	26.9	**1579**	**26.9**	4	**1579**	**26.9**	1578	26.9	1579	26.9
465.tonto	4	779	50.5	**778**	**50.6**	778	50.6	4	**758**	**51.9**	757	52.0	758	51.9
470.lbm	4	1143	48.1	1144	48.1	**1143**	**48.1**	4	1143	48.1	1144	48.1	**1143**	**48.1**
481.wrf	4	**824**	**54.2**	824	54.2	844	53.0	4	**824**	**54.2**	824	54.2	844	53.0
482.sphinx3	4	**753**	**104**	754	103	752	104	4	809	96.3	**809**	**96.4**	807	96.6

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

Operating System Notes

```
The system had the September 2007 HP-UX 11i v3 Mission Critical
Operating Environment (MCOE) and compilers installed, along with
the following patches:

PHSS_36349  linker + fdp cumulative patch
PHSS_36351  Math Library Cumulative Patch
PHSS_36352  Integrity Unwind Library
PHSS_36350  aC++ Runtime (A.06.15)
PHSS_36354  assembler patch

The following kernel tunables were set, in addition to the defaults
set by the Mission Critical OE:

maxdsiz=3221225472
```

Continued on next page

Operating System Notes (Continued)

```
maxssiz=401604608
maxrsessiz=41943040
```

Base Compiler Invocation

C benchmarks:
`/opt/ansic/bin/cc -Ae`

C++ benchmarks:
`/opt/aCC/bin/aCC -Aa`

Fortran benchmarks:
`/opt/fortran90/bin/f90`

Benchmarks using both Fortran and C:
`/opt/ansic/bin/cc -Ae /opt/fortran90/bin/f90`

Base Portability Flags

453.povray: `-DSPEC_CPU_NEED_INVHYP`
481.wrf: `-DNOUNDERSCORE +noppu`

Base Optimization Flags

C benchmarks:
`+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M -Wl,-N`

C++ benchmarks:
`+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M -Wl,-N`

Fortran benchmarks:
`+Ofaster -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M -Wl,-N`

Benchmarks using both Fortran and C:
`+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M -Wl,-N`

Peak Compiler Invocation

C benchmarks:
`/opt/ansic/bin/cc -Ae`

Continued on next page

Peak Compiler Invocation (Continued)

C++ benchmarks:
/opt/aCC/bin/aCC -Aa

Fortran benchmarks:
/opt/fortran90/bin/f90

Benchmarks using both Fortran and C:
/opt/ansic/bin/cc -Ae /opt/fortran90/bin/f90

Peak Portability Flags

453.povray: -DSPEC_CPU_NEED_INVHYP
481.wrf: -DNOUNDERSCORE +noppu

Peak Optimization Flags

C benchmarks:

433.milc: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Onoparmsoverlap -Wl,-N

470.lbm: basepeak = yes

482.sphinx3: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Onoparmsoverlap

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: basepeak = yes

450.soplex: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Onoparmsoverlap -Wl,-N

453.povray: +Oprofile=collect:all(pass 1) +Oprofile=use(pass 2) +Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M

Fortran benchmarks:

410.bwaves: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

416.gamess: `+Ofaster -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Odataprefetch=direct -Wl,-N`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `+Oprofile=collect:all`(pass 1) `+Oprofile=use`(pass 2) `+Ofaster -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Odataprefetch=direct -Wl,-N`

465.tonto: `+Oprofile=collect:all`(pass 1) `+Oprofile=use`(pass 2) `+Ofaster -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Odataprefetch=direct`

Benchmarks using both Fortran and C:

435.gromacs: `+Oprofile=collect:all`(pass 1) `+Oprofile=use`(pass 2) `+Ofaster +Otype_safety=ansi -Wl,-a,archive_shared -Wl,+pd,64M -Wl,+pi,64M +Onoparmsoverlap`

436.cactusADM: `basepeak = yes`

454.calculix: `basepeak = yes`

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.07.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.07.xml

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

Tested with SPEC CPU2006 v1.0.1.
Report generated on Tue Jul 22 14:19:47 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 November 2007.