SPEC® CFP2006 Result

IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5335)

$SPECfp®\_rate2006 =$ 55.3
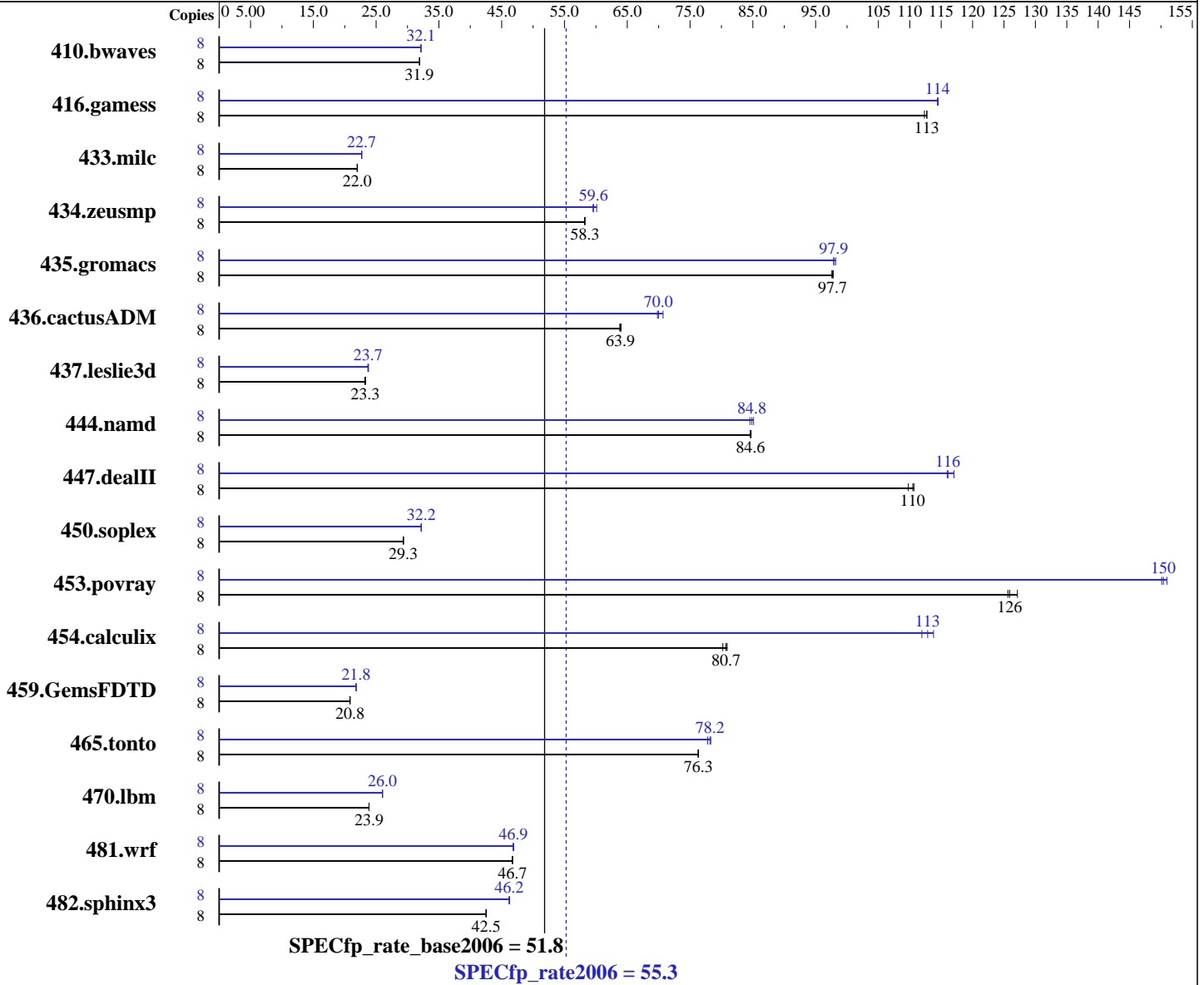
$SPECfp\_rate\_base2006 =$ 51.8

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

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

SPECfp_rate_base2006 = 51.8

SPECfp_rate2006 = 55.3

Hardware

CPU Name:	Intel Xeon E5335
CPU Characteristics:	1333MHz system bus
CPU MHz:	2000
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:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

Continued on next page

Software

Operating System:	SLES 10 (x86_64), 2.6.16.21-0.8-smp
Compiler:	Intel C++ and Fortran Compiler for Linux version 10.1 Build 20070725
Auto Parallel:	No
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5335)

SPECfp_rate2006 = 55.3

SPECfp_rate_base2006 = 51.8

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

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

L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)
Disk Subsystem: 1 x 36 GB SAS, 10000 RPM
Other Hardware: Memory and I/O Expansion Unit (P/N 42C1600)

Other Software: None

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	**3407**	**31.9**	3407	31.9	3405	31.9	8	3383	32.1	3382	32.1	**3383**	**32.1**
416.gamess	8	1390	113	**1390**	**113**	1395	112	8	1369	114	**1369**	**114**	1368	115
433.milc	8	3340	22.0	**3339**	**22.0**	3337	22.0	8	**3234**	**22.7**	3236	22.7	3233	22.7
434.zeusmp	8	1250	58.3	**1250**	**58.3**	1251	58.2	8	1211	60.1	1223	59.5	**1221**	**59.6**
435.gromacs	8	585	97.6	584	97.8	**585**	**97.7**	8	582	98.2	**583**	**97.9**	584	97.9
436.cactusADM	8	1498	63.8	**1496**	**63.9**	1494	64.0	8	1352	70.7	**1366**	**70.0**	1369	69.8
437.leslie3d	8	3225	23.3	**3233**	**23.3**	3241	23.2	8	3175	23.7	3161	23.8	**3169**	**23.7**
444.namd	8	757	84.7	**758**	**84.6**	758	84.6	8	**756**	**84.8**	754	85.1	759	84.5
447.dealII	8	834	110	**828**	**110**	827	111	8	**788**	**116**	789	116	782	117
450.soplex	8	2274	29.3	**2274**	**29.3**	2274	29.3	8	2074	32.2	**2073**	**32.2**	2072	32.2
453.povray	8	335	127	339	126	**338**	**126**	8	284	150	282	151	**283**	**150**
454.calculix	8	823	80.2	**818**	**80.7**	816	80.9	8	**585**	**113**	580	114	590	112
459.GemsFDTD	8	4075	20.8	4070	20.9	**4072**	**20.8**	8	3893	21.8	3889	21.8	**3890**	**21.8**
465.tonto	8	**1031**	**76.3**	1032	76.3	1031	76.4	8	1005	78.3	**1007**	**78.2**	1012	77.8
470.lbm	8	**4604**	**23.9**	4604	23.9	4606	23.9	8	**4225**	**26.0**	4225	26.0	4225	26.0
481.wrf	8	1912	46.7	1914	46.7	**1913**	**46.7**	8	**1906**	**46.9**	1909	46.8	1906	46.9
482.sphinx3	8	3663	42.6	**3668**	**42.5**	3669	42.5	8	3371	46.2	3376	46.2	**3374**	**46.2**

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

General Notes

    taskset utility used to bind CPU(s) to processes

Base Compiler Invocation

C benchmarks:
     icc

C++ benchmarks:
     icpc

Fortran benchmarks:
     ifort

IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5335)

$SPECfp\_rate2006 = \qquad 55.3$

$SPECfp\_rate\_base2006 = \quad 51.8$

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

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

Base Compiler Invocation (Continued)

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
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5335)

SPECfp_rate2006 =   55.3

SPECfp_rate_base2006 = 51.8

Peak Compiler Invocation (Continued)

        433.milc: `icc`

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

     450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc`
              `-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
              `-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

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

     437.leslie3d: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort`
              `-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
              `-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/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

IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5335)

$SPECfp\_rate2006 = \qquad 55.3$

$SPECfp\_rate\_base2006 = \quad 51.8$

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Aug-2007
Hardware Availability: Feb-2007
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 -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/Intel-ic10.1-FP-intel64-linux-flags.20090714.22.html`

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5335)

$SPECfp\_rate2006 = 55.3$

$SPECfp\_rate\_base2006 = 51.8$

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

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

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.22.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 14:37:53 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 November 2007.