SPEC® CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/E120f-M (Intel Xeon E5-2630L v3)

$SPECfp®\_rate2006 = 268$

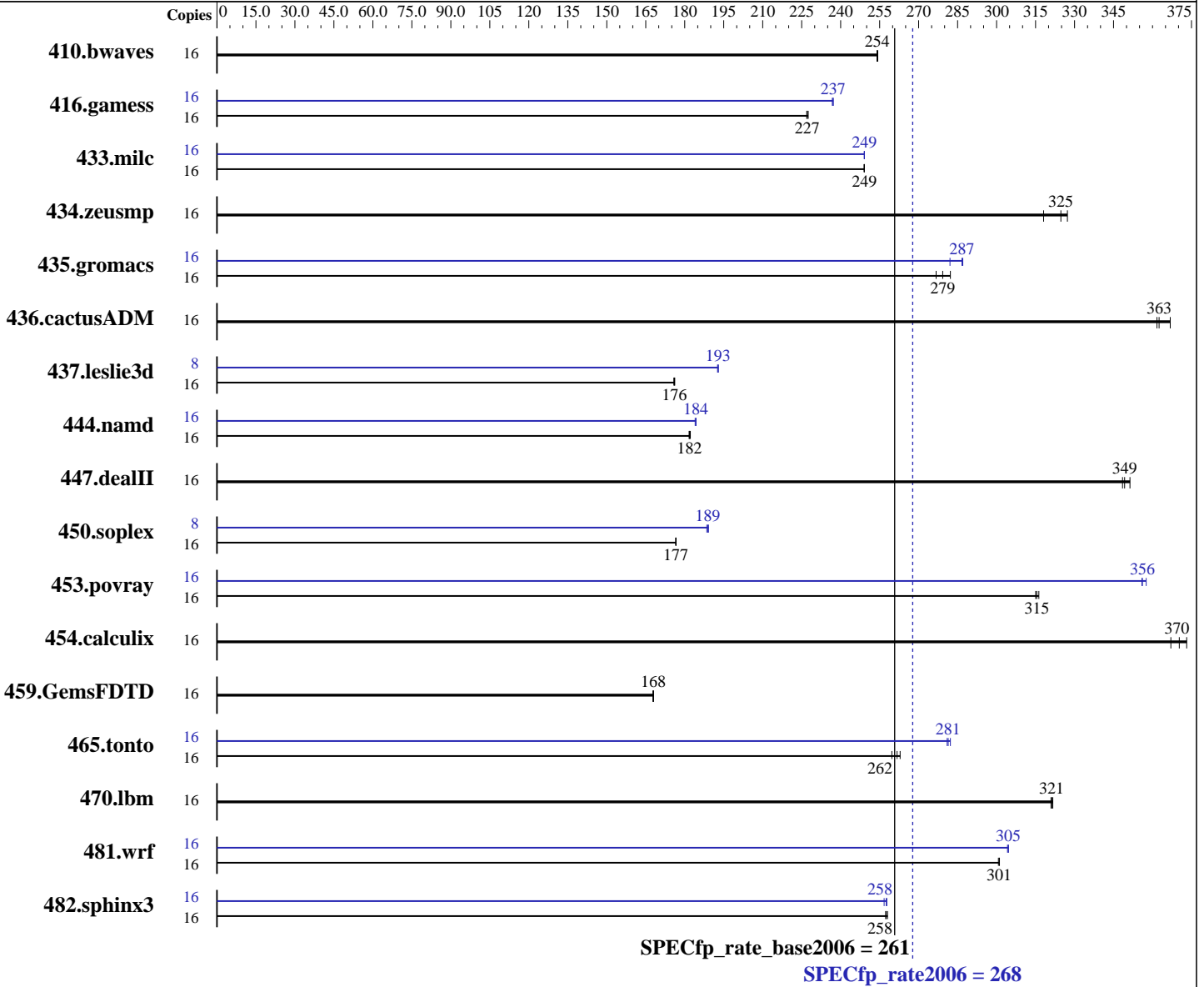$SPECfp\_rate\_base2006 = 261$

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

SPECfp_rate_base2006 = 261

SPECfp_rate2006 = 268

Hardware

CPU Name: Intel Xeon E5-2630L v3
CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz
CPU MHz: 1800
FPU: Integrated
CPU(s) enabled: 8 cores, 1 chip, 8 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
Kernel 2.6.32-431.20.3.el6.x86_64
Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;
Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux
Auto Parallel: No
File System: ext4
Continued on next page

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/E120f-M (Intel Xeon E5-2630L v3)

$SPECfp_rate2006 = $ 268

$SPECfp_rate_base2006 = $ 261

CPU2006 license: 9006	
Test sponsor: NEC Corporation	
Tested by: NEC Corporation	

Test date: Oct-2014	
Hardware Availability: Jan-2015	
Software Availability: Jul-2014	

L3 Cache:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (8 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)
Disk Subsystem:	1 x 250 GB SATA, 7200 RPM
Other Hardware:	None

System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-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	16	855	254	856	254	**856**	**254**	16	855	254	856	254	**856**	**254**
416.gamess	16	1377	228	**1379**	**227**	1380	227	16	**1321**	**237**	1323	237	1321	237
433.milc	16	**590**	**249**	590	249	590	249	16	590	249	590	249	**590**	**249**
434.zeusmp	16	**448**	**325**	458	318	445	327	16	**448**	**325**	458	318	445	327
435.gromacs	16	405	282	413	277	**409**	**279**	16	398	287	405	282	**398**	**287**
436.cactusADM	16	521	367	529	362	**527**	**363**	16	521	367	529	362	**527**	**363**
437.leslie3d	16	856	176	**854**	**176**	854	176	8	390	193	**390**	**193**	390	193
444.namd	16	704	182	**706**	**182**	706	182	16	697	184	**696**	**184**	696	184
447.dealII	16	**524**	**349**	521	351	525	348	16	**524**	**349**	521	351	525	348
450.soplex	16	**756**	**177**	756	177	755	177	8	354	188	**353**	**189**	353	189
453.povray	16	269	316	270	315	**270**	**315**	16	239	356	**239**	**356**	238	358
454.calculix	16	354	373	360	367	**356**	**370**	16	354	373	360	367	**356**	**370**
459.GemsFDTD	16	**1011**	**168**	1012	168	1010	168	16	**1011**	**168**	1012	168	1010	168
465.tonto	16	606	260	**602**	**262**	599	263	16	**560**	**281**	560	281	558	282
470.lbm	16	685	321	**684**	**321**	684	322	16	685	321	**684**	**321**	684	322
481.wrf	16	594	301	**594**	**301**	594	301	16	587	305	588	304	**587**	**305**
482.sphinx3	16	1212	257	1209	258	**1211**	**258**	16	**1211**	**258**	1210	258	1215	257

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS Settings:
  Power Management Policy: Custom
  Energy Performance: Performance

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/E120f-M (Intel Xeon E5-2630L v3)

SPECfp_rate2006 =   268

SPECfp_rate_base2006 =   261

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Platform Notes (Continued)

```
    Patrol Scrub: Disabled
    Demand Scrub: Disabled
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1 > /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:
```
    icc   -m64
```

C++ benchmarks:
```
    icpc  -m64
```

Fortran benchmarks:
```
    ifort -m64
```

Benchmarks using both Fortran and C:
```
    icc   -m64 ifort -m64
```

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
```

NEC Corporation

Express5800/E120f-M (Intel Xeon E5-2630L v3)

$SPECfp\_rate2006 =$ 268

$SPECfp\_rate\_base2006 =$ 261

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Base Portability Flags (Continued)

```
      481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
   482.sphinx3: -DSPEC_CPU_LP64
```

Base Optimization Flags

C benchmarks:
```
    -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
    -ansi-alias -opt-mem-layout-trans=3
```

C++ benchmarks:
```
    -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
    -ansi-alias -opt-mem-layout-trans=3
```

Fortran benchmarks:
```
    -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
```

Benchmarks using both Fortran and C:
```
    -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
    -ansi-alias -opt-mem-layout-trans=3
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
    icc   -m64
```

```
    482.sphinx3: icc -m32
```

C++ benchmarks (except as noted below):
```
    icpc  -m64
```

```
     450.soplex: icpc -m32
```

Fortran benchmarks:
```
    ifort -m64
```

Benchmarks using both Fortran and C:
```
    icc   -m64 ifort -m64
```

Peak Portability Flags

```
    410.bwaves: -DSPEC_CPU_LP64
    416.gamess: -DSPEC_CPU_LP64
      433.milc: -DSPEC_CPU_LP64
```

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/E120f-M (Intel Xeon E5-2630L v3)

SPECfp_rate2006 = 268

SPECfp_rate_base2006 = 261

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Peak Portability Flags (Continued)

```
    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
```

Peak Optimization Flags

C benchmarks:

```
      433.milc: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -O3(pass 2) -no-prec-div(pass 2)
                -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)
                -auto-ilp32

       470.lbm: basepeak = yes

   482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-mem-layout-trans=3
                -unroll2
```

C++ benchmarks:

```
      444.namd: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -O3(pass 2) -no-prec-div(pass 2)
                -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -fno-alias
                -auto-ilp32

     447.dealII: basepeak = yes

    450.soplex: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -O3(pass 2) -no-prec-div(pass 2)
                -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)
                -opt-malloc-options=3

    453.povray: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -O3(pass 2) -no-prec-div(pass 2)
                -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -unroll4
                -ansi-alias
```

Fortran benchmarks:

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/E120f-M (Intel Xeon E5-2630L v3)

SPECfp_rate2006 =   268

SPECfp_rate_base2006 =   261

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
          -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
          -inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
          -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
          -auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
          -O3(pass 2) -no-prec-div(pass 2)
          -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)
          -opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-120f-RevB.html

---

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-120f-RevB.xml

---

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

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Jan 27 13:28:41 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 27 January 2015.