



SPEC[®] CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp[®]_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19

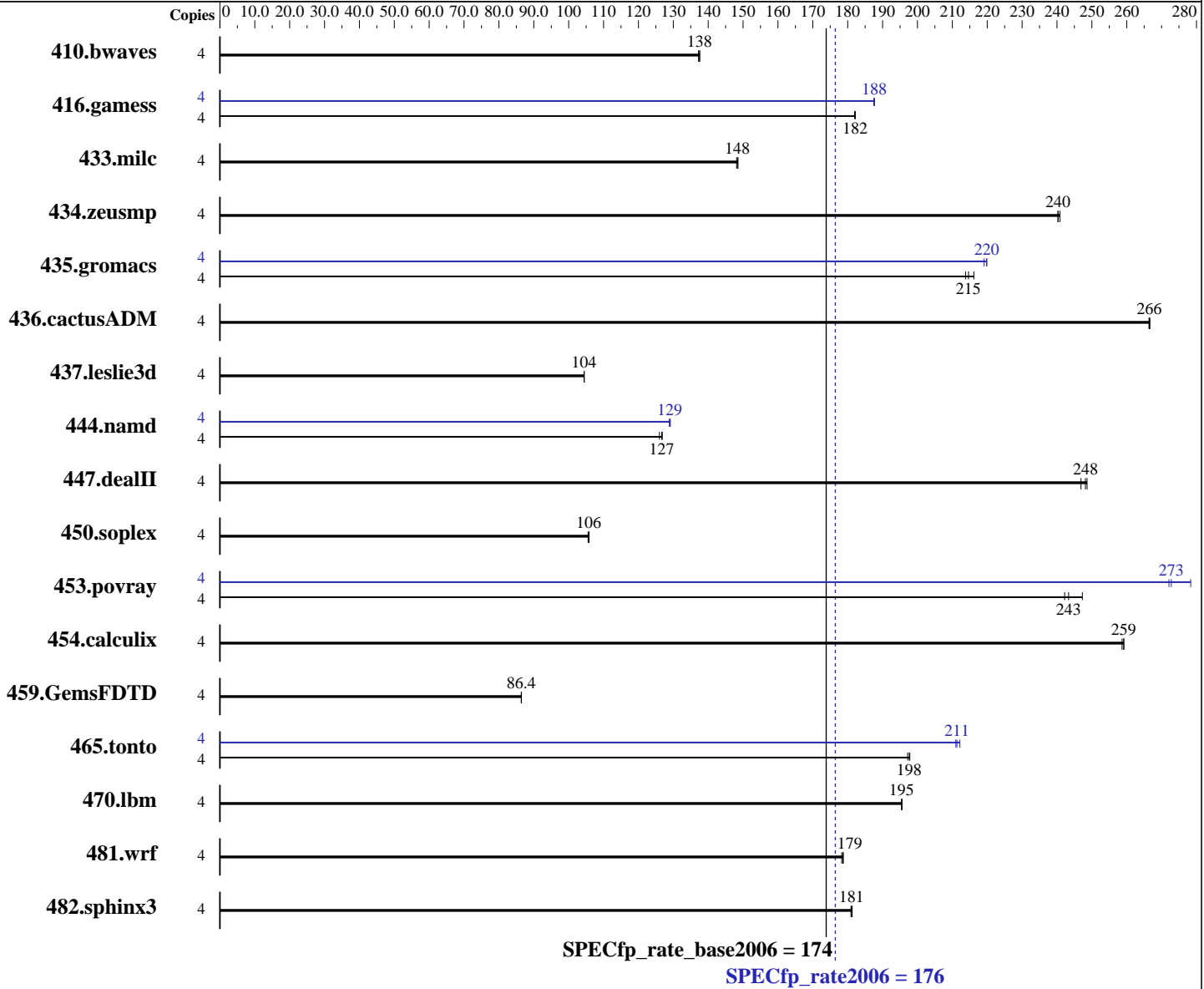
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2015

Hardware Availability: Feb-2016

Software Availability: Sep-2015



Hardware

CPU Name: Intel Xeon E3-1220 v5
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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: SUSE Linux Enterprise Server 12 (x86_64)
 Kernel 3.12.48-52.27-default
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;
 Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2015

Hardware Availability: Feb-2016

Software Availability: Sep-2015

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2133P-E)
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
Other Hardware: None

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	4	<u>395</u>	<u>138</u>	395	138	396	137	4	<u>395</u>	<u>138</u>	395	138	396	137
416.gamess	4	430	182	430	182	<u>430</u>	<u>182</u>	4	418	187	417	188	<u>417</u>	<u>188</u>
433.milc	4	247	149	<u>248</u>	<u>148</u>	248	148	4	247	149	<u>248</u>	<u>148</u>	248	148
434.zeusmp	4	<u>151</u>	<u>240</u>	151	241	151	240	4	<u>151</u>	<u>240</u>	151	241	151	240
435.gromacs	4	<u>133</u>	<u>215</u>	134	214	132	216	4	<u>130</u>	<u>220</u>	130	220	130	219
436.cactusADM	4	179	267	<u>179</u>	<u>266</u>	179	266	4	179	267	<u>179</u>	<u>266</u>	179	266
437.leslie3d	4	<u>360</u>	<u>104</u>	360	104	360	104	4	<u>360</u>	<u>104</u>	360	104	360	104
444.namd	4	255	126	<u>253</u>	<u>127</u>	253	127	4	<u>249</u>	<u>129</u>	249	129	248	129
447.dealII	4	184	249	<u>184</u>	<u>248</u>	185	247	4	184	249	<u>184</u>	<u>248</u>	185	247
450.soplex	4	315	106	316	106	<u>315</u>	<u>106</u>	4	315	106	316	106	<u>315</u>	<u>106</u>
453.povray	4	86.1	247	87.9	242	<u>87.4</u>	<u>243</u>	4	76.5	278	78.2	272	<u>78.0</u>	<u>273</u>
454.calculix	4	127	259	<u>127</u>	<u>259</u>	128	259	4	127	259	<u>127</u>	<u>259</u>	128	259
459.GemsFDTD	4	491	86.4	491	86.5	<u>491</u>	<u>86.4</u>	4	491	86.4	491	86.5	<u>491</u>	<u>86.4</u>
465.tonto	4	<u>199</u>	<u>198</u>	200	197	199	198	4	187	211	186	212	<u>186</u>	<u>211</u>
470.lbm	4	<u>281</u>	<u>195</u>	281	196	281	195	4	<u>281</u>	<u>195</u>	281	196	281	195
481.wrf	4	251	178	<u>250</u>	<u>179</u>	250	179	4	251	178	<u>250</u>	<u>179</u>	250	179
482.sphinx3	4	<u>430</u>	<u>181</u>	430	181	431	181	4	<u>430</u>	<u>181</u>	430	181	431	181

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

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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 configuration:
Sysinfo program /home/SPECcpu2006/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2015
Hardware Availability: Feb-2016
Software Availability: Sep-2015

Platform Notes (Continued)

running on TX1330M2 Fri Nov 27 18:21:45 2015

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E3-1220 v5 @ 3.00GHz
 1 "physical id"s (chips)
 4 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
  cpu cores : 4
  siblings  : 4
  physical 0: cores 0 1 2 3
  cache size : 8192 KB
```

```
From /proc/meminfo
MemTotal:      65902560 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 0
# This file is deprecated and will be removed in a future service pack or
release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12"
VERSION_ID="12"
PRETTY_NAME="SUSE Linux Enterprise Server 12"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12"
```

```
uname -a:
Linux TX1330M2 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014
(9879bd4) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 5 Nov 27 12:56
```

```
SPEC is set to: /home/SPECcpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   237G  7.8G  229G   4% /home
Continued on next page
```



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2015
Hardware Availability: Feb-2016
Software Availability: Sep-2015

Platform Notes (Continued)

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS FUJITSU // American Megatrends Inc. V5.0.0.11 R1.1.0 for D3373-A1x 10/30/2015

Memory:
4x SK Hynix HMA82GU7MFR8N-TF 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:

LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

For information about Fujitsu please visit: <http://www.fujitsu.com>

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2015
Hardware Availability: Feb-2016
Software Availability: Sep-2015

Base Portability Flags (Continued)

```
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:

```
-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:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
icc -m64 ifort -m64
```



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2015
Hardware Availability: Feb-2016
Software Availability: Sep-2015

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

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

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

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

Fortran benchmarks:

410.bwaves: basepeak = yes

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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX1330 M2, Intel Xeon E3-1220 v5, 3.00 GHz

SPECfp_rate2006 = 176

SPECfp_rate_base2006 = 174

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2015
Hardware Availability: Feb-2016
Software Availability: Sep-2015

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.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 v1.2.
Report generated on Wed Dec 30 19:59:10 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 December 2015.