



SPEC® CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp®2006 = 127

SPECfp_base2006 = 123

CPU2006 license: 19

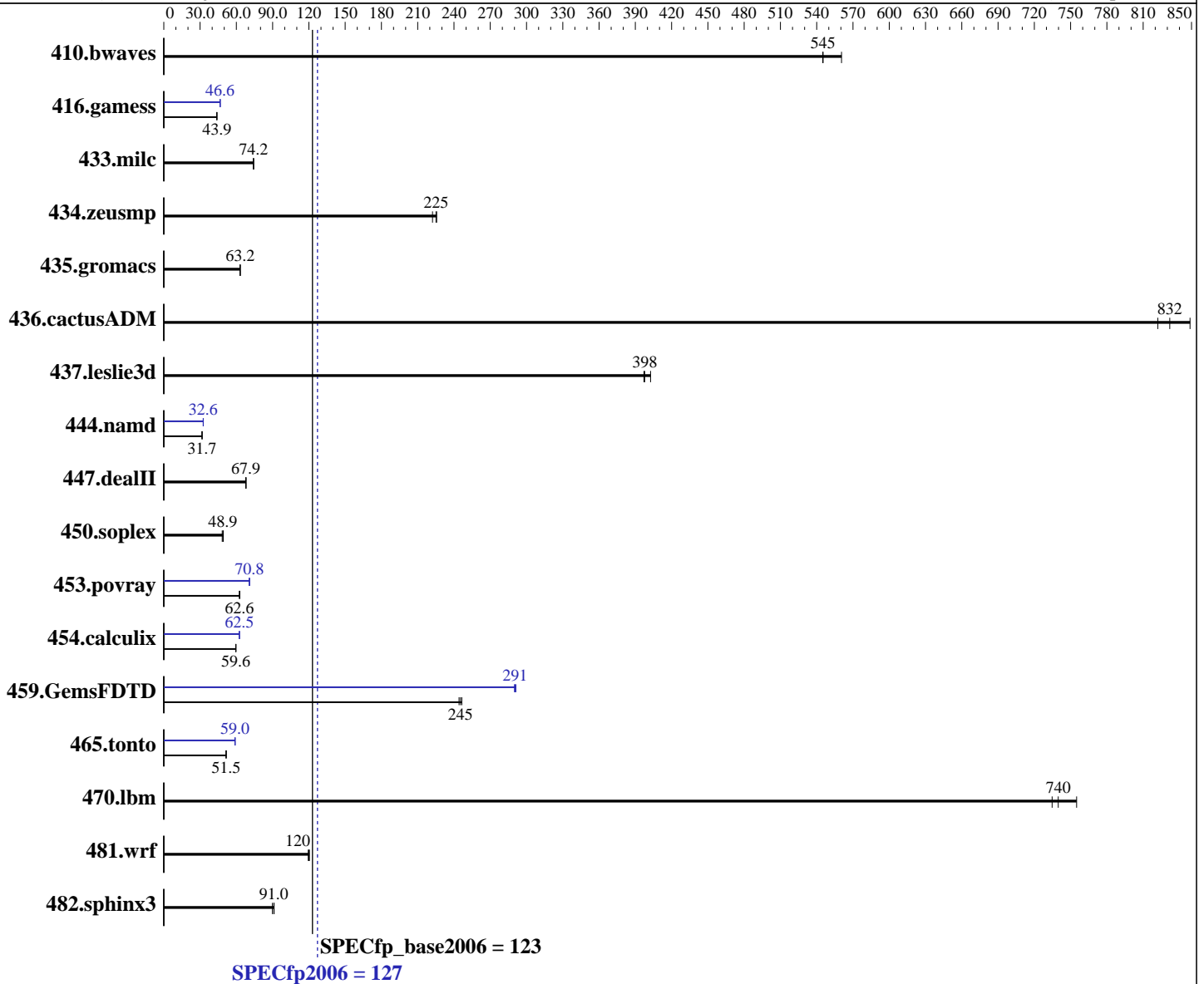
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2016

Hardware Availability: Apr-2016

Software Availability: Sep-2015



Hardware

CPU Name: Intel Xeon E5-2667 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 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 SP1 (x86_64)
 Kernel 3.12.49-11-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: Yes
 File System: xfs
 System State: Run level 5 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp2006 = 127

SPECfp_base2006 = 123

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

Test date: Mar-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

L3 Cache: 25 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24.2	561	<u>24.9</u>	<u>545</u>	24.9	545	24.2	561	<u>24.9</u>	<u>545</u>	24.9	545
416.gamess	447	43.8	<u>446</u>	<u>43.9</u>	446	43.9	420	46.6	<u>420</u>	<u>46.6</u>	420	46.6
433.milc	<u>124</u>	<u>74.2</u>	123	74.3	124	74.1	<u>124</u>	<u>74.2</u>	123	74.3	124	74.1
434.zeusmp	40.3	226	40.9	222	<u>40.4</u>	<u>225</u>	40.3	226	40.9	222	<u>40.4</u>	<u>225</u>
435.gromacs	113	63.0	<u>113</u>	<u>63.2</u>	113	63.3	113	63.0	<u>113</u>	<u>63.2</u>	113	63.3
436.cactusADM	<u>14.4</u>	<u>832</u>	14.1	849	14.5	822	<u>14.4</u>	<u>832</u>	14.1	849	14.5	822
437.leslie3d	23.7	397	<u>23.6</u>	<u>398</u>	23.3	403	23.7	397	<u>23.6</u>	<u>398</u>	23.3	403
444.namd	253	31.7	<u>253</u>	<u>31.7</u>	254	31.6	246	32.6	<u>246</u>	<u>32.6</u>	246	32.6
447.dealII	<u>168</u>	<u>67.9</u>	168	68.1	169	67.7	<u>168</u>	<u>67.9</u>	168	68.1	169	67.7
450.soplex	<u>170</u>	<u>48.9</u>	173	48.3	169	49.2	<u>170</u>	<u>48.9</u>	173	48.3	169	49.2
453.povray	85.1	62.5	<u>84.9</u>	<u>62.6</u>	84.6	62.9	<u>75.2</u>	<u>70.8</u>	75.3	70.6	74.9	71.0
454.calculix	138	59.7	139	59.6	<u>138</u>	<u>59.6</u>	132	62.6	132	62.5	<u>132</u>	<u>62.5</u>
459.GemsFDTD	<u>43.2</u>	<u>245</u>	43.5	244	43.0	246	<u>36.5</u>	<u>291</u>	36.4	291	36.6	290
465.tonto	190	51.7	<u>191</u>	<u>51.5</u>	191	51.5	167	59.0	<u>167</u>	<u>59.0</u>	167	58.8
470.lbm	<u>18.6</u>	<u>740</u>	18.7	735	18.2	755	<u>18.6</u>	<u>740</u>	18.7	735	18.2	755
481.wrf	92.8	120	93.5	119	<u>93.0</u>	<u>120</u>	92.8	120	93.5	119	<u>93.0</u>	<u>120</u>
482.sphinx3	<u>214</u>	<u>91.0</u>	217	89.8	214	91.2	<u>214</u>	<u>91.0</u>	217	89.8	214	91.2

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

Operating System Notes

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

Platform Notes

BIOS configuration:
Energy Performance = Performance
Utilization Profile = Unbalanced
QPI snoop mode: Home Snoop
COD Enable = Disabled, Early Snoop = Disabled, Home Snoop Dir OSB = Disabled
CPU ClE Support = Disabled
Sysinfo program /home/SPECcpu2006/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on RX2560M21 Wed Mar 23 14:50:44 2016

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp2006 = 127

SPECfp_base2006 = 123

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

Test date: Mar-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

Platform Notes (Continued)

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 E5-2667 v4 @ 3.20GHz
 2 "physical id"s (chips)
 32 "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    : 8
  siblings     : 16
  physical 0   : cores 0 2 3 4 8 10 11 12
  physical 1   : cores 0 2 3 4 8 10 11 12
cache size    : 25600 KB
```

```
From /proc/meminfo
MemTotal:      264318888 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP1
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 1
# 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-SP1"
VERSION_ID="12.1"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp1"
```

```
uname -a:
Linux RX2560M21 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 5 Mar 23 10:04
```

```
SPEC is set to: /home/SPECcpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/md126p3    xfs   889G  62G  827G   7% /home
```

Additional information from dmidecode:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp2006 = 127

SPECfp_base2006 = 123

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

Test date: Mar-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

Platform Notes (Continued)

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 R1.6.0 for D3289-B1x 03/11/2016

Memory:

16x Hynix Semiconductor HMA42GR7AFR4N-UH 16 GB 2 rank 2400 MHz
8x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

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

KMP_AFFINITY = "granularity=fine,compact,1,0"

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

OMP_NUM_THREADS = "16"

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp2006 = 127

SPECfp_base2006 = 123

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

Test date: Mar-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

Base 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
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 -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

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

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

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 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp2006 = 127

SPECfp_base2006 = 123

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

Test date: Mar-2016
Hardware Availability: Apr-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) -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) -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: -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 -opt-prefetch -parallel

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) -inline-calloc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2667 v4, 3.20 GHz

SPECfp2006 = 127

SPECfp_base2006 = 123

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2016

Hardware Availability: Apr-2016

Software Availability: Sep-2015

Peak Optimization Flags (Continued)

465.tonto (continued):

`-opt-malloc-options=3 -auto -unroll4`

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: `-xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias`

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 Jun 1 19:09:47 2016 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 1 June 2016.