



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itaotec

SPECfp®\_rate2006 = 441

Servidor Itaotec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001

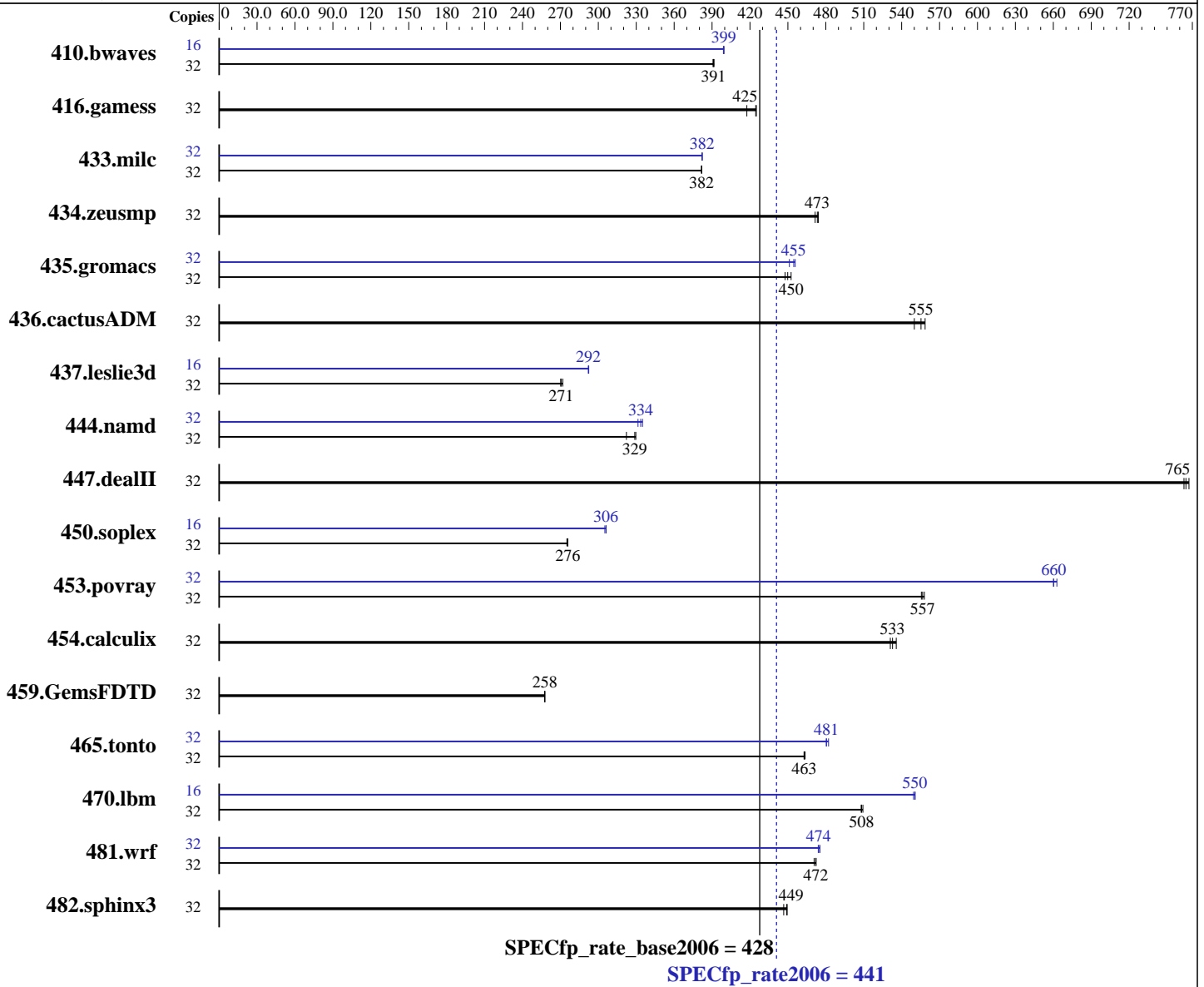
Test date: Apr-2013

Test sponsor: Itaotec

Hardware Availability: Jun-2012

Tested by: Itaotec

Software Availability: Jan-2013



### Hardware

CPU Name: Intel Xeon E5-2650  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 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 6.3, 2.6.32-279.el6.x86\_64  
 Compiler: C/C++/Fortran: Version 13.1.0.146 of Intel Compiler XE Build 20130121  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itaotec

SPECfp\_rate2006 = 441

Servidor Itaotec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001  
Test sponsor: Itaotec  
Tested by: Itaotec

Test date: Apr-2013  
Hardware Availability: Jun-2012  
Software Availability: Jan-2013

L3 Cache: 20 MB I+D on chip per chip  
Other Cache: None  
Memory: 128 GB (16 x 8 GB 2Rx8 PC3-12800R-11, ECC)  
Disk Subsystem: 500 GB, SATA-3, 7200 RPM  
Other Hardware: None

Other Software: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	32	<b>1112</b>	<b>391</b>	1111	392	1113	391	16	544	399	545	399	<b>545</b>	<b>399</b>
416.gamess	32	1501	418	<b>1476</b>	<b>425</b>	1474	425	32	1501	418	<b>1476</b>	<b>425</b>	1474	425
433.milc	32	770	382	769	382	<b>770</b>	<b>382</b>	32	769	382	769	382	<b>769</b>	<b>382</b>
434.zeusmp	32	618	472	<b>615</b>	<b>473</b>	614	474	32	618	472	<b>615</b>	<b>473</b>	614	474
435.gromacs	32	<b>508</b>	<b>450</b>	505	453	510	448	32	506	451	501	456	<b>503</b>	<b>455</b>
436.cactusADM	32	685	559	695	550	<b>689</b>	<b>555</b>	32	685	559	695	550	<b>689</b>	<b>555</b>
437.leslie3d	32	1106	272	1113	270	<b>1112</b>	<b>271</b>	16	<b>515</b>	<b>292</b>	514	292	515	292
444.namd	32	778	330	<b>780</b>	<b>329</b>	796	322	32	<b>769</b>	<b>334</b>	774	331	766	335
447.dealII	32	<b>479</b>	<b>765</b>	480	763	477	767	32	<b>479</b>	<b>765</b>	480	763	477	767
450.soplex	32	970	275	<b>967</b>	<b>276</b>	967	276	16	<b>436</b>	<b>306</b>	437	305	436	306
453.povray	32	<b>306</b>	<b>557</b>	305	558	306	556	32	<b>258</b>	<b>660</b>	257	663	258	660
454.calculix	32	493	536	<b>496</b>	<b>533</b>	497	531	32	493	536	<b>496</b>	<b>533</b>	497	531
459.GemsFDTD	32	<b>1318</b>	<b>258</b>	1318	258	1318	258	32	<b>1318</b>	<b>258</b>	1318	258	1318	258
465.tonto	32	<b>680</b>	<b>463</b>	680	463	679	464	32	653	482	656	480	<b>655</b>	<b>481</b>
470.lbm	32	<b>865</b>	<b>508</b>	863	509	866	508	16	400	549	<b>399</b>	<b>550</b>	399	551
481.wrf	32	759	471	<b>757</b>	<b>472</b>	757	472	32	<b>753</b>	<b>474</b>	752	475	754	474
482.sphinx3	32	1396	447	<b>1389</b>	<b>449</b>	1388	449	32	1396	447	<b>1389</b>	<b>449</b>	1388	449

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.  
Large pages were not enabled for this run

## Platform Notes

Sysinfo program /home/rcaneca/cpu2006/Docs/sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ 8787f7622badcf24e01c368b1db4377c  
running on mx225 Mon Apr 1 10:52:38 2013

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itaotec

SPECfp\_rate2006 = 441

Servidor Itaotec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001  
Test sponsor: Itaotec  
Tested by: Itaotec

Test date: Apr-2013  
Hardware Availability: Jun-2012  
Software Availability: Jan-2013

## 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 E5-2650 0 @ 2.00GHz
 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 1 2 3 4 5 6 7
 physical 1:   cores 0 1 2 3 4 5 6 7
 cache size    : 20480 KB
```

```
From /proc/meminfo
MemTotal:      132104784 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.3 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux mx225 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36 EDT 2012 x86_64
x86_64 x86_64 GNU/Linux
```

```
run-level 3 Apr 1 10:50
```

```
SPEC is set to: /home/rcaneca/cpu2006
Filesystem      Type      Size      Used Avail Use% Mounted on
/dev/mapper/vg_mx225-lv_home
ext4            404G      2.3G    382G    1% /home
```

(End of data from sysinfo program)

## General Notes

This result was measured on the Servidor Itaotec MX225. The Servidor Itaotec MX215 and the Servidor Itaotec MX225 are electronically equivalent.

runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itaotec

SPECfp\_rate2006 = 441

Servidor Itaotec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001  
Test sponsor: Itaotec  
Tested by: Itaotec

Test date: Apr-2013  
Hardware Availability: Jun-2012  
Software Availability: Jan-2013

## General Notes (Continued)

```
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
```

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

## Base Optimization Flags

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itaotec

SPECfp\_rate2006 = 441

Servidor Itaotec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001  
Test sponsor: Itaotec  
Tested by: Itaotec

Test date: Apr-2013  
Hardware Availability: Jun-2012  
Software Availability: Jan-2013

## Base Optimization Flags (Continued)

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3

## Peak Compiler Invocation

C benchmarks:

icc -m64

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  
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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itaotec

SPECfp\_rate2006 = 441

Servidor Itaotec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001

Test date: Apr-2013

Test sponsor: Itaotec

Hardware Availability: Jun-2012

Tested by: Itaotec

Software Availability: Jan-2013

## Peak Portability Flags (Continued)

481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_CASE\_FLAG -DSPEC\_CPU\_LINUX  
482.sphinx3: -DSPEC\_CPU\_LP64

## Peak Optimization Flags

C benchmarks:

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

470.lbm: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3  
-ansi-alias -opt-prefetch -auto-ilp32  
-opt-mem-layout-trans=3

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias  
-auto-ilp32

447.deallI: basepeak = yes

450.soplex: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

459.GemsFDTD: basepeak = yes

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Itautec

SPECfp\_rate2006 = 441

Servidor Itautec MX225 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 428

CPU2006 license: 9001

Test sponsor: Itautec

Tested by: Itautec

Test date: Apr-2013

Hardware Availability: Jun-2012

Software Availability: Jan-2013

## Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

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

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32  
-opt-mem-layout-trans=3

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

[http://www.spec.org/cpu2006/flags/Itautec-Servidor\\_Itautec-Intel-Linux-Platform.20130507.html](http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.20130507.html)

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html>

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

[http://www.spec.org/cpu2006/flags/Itautec-Servidor\\_Itautec-Intel-Linux-Platform.20130507.xml](http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.20130507.xml)

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 15:32:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 May 2013.