



# SPEC® CINT2006 Result

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Itaotec

SPECint®\_rate2006 = 466

Servidor Itaotec MX225+ (Intel Xeon E5-2640)

SPECint\_rate\_base2006 = 446

CPU2006 license: 9001

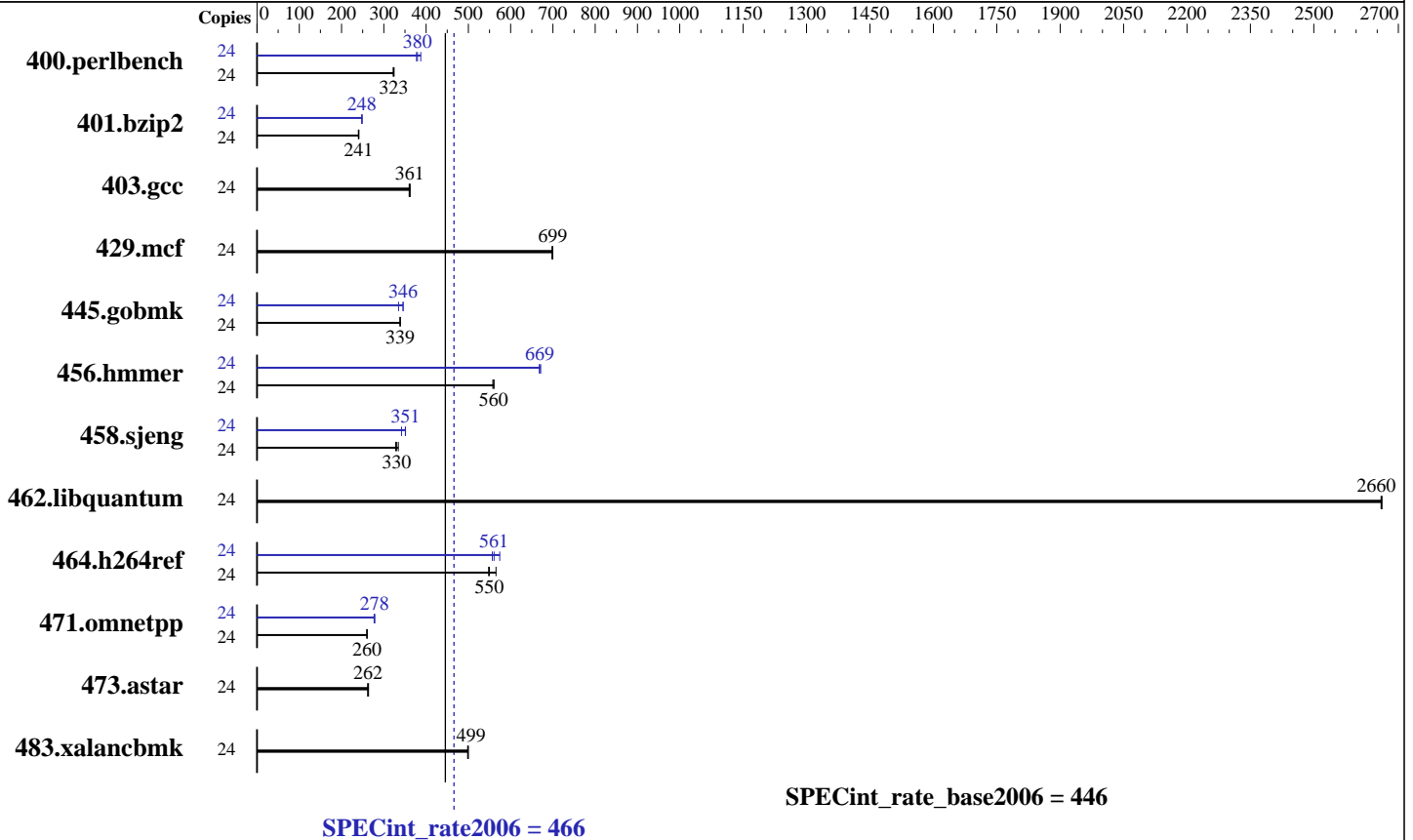
Test date: Jan-2012

Test sponsor: Itaotec

Hardware Availability: Jun-2012

Tested by: Itaotec

Software Availability: Dec-2011



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## Hardware

CPU Name: Intel Xeon E5-2640  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz  
 CPU MHz: 2500  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 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  
 L3 Cache: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 64 GB (16 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 500 GB, SATA-2, 7200 RPM  
 Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, 2.6.32-220.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0 of Intel Compiler XE Build 20111011  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	723	324	<u>725</u>	<u>323</u>	728	322	24	605	387	<u>618</u>	<u>380</u>	622	377
401.bzip2	24	<u>963</u>	<u>241</u>	961	241	966	240	24	<u>933</u>	<u>248</u>	934	248	932	248
403.gcc	24	<u>535</u>	<u>361</u>	537	360	533	362	24	<u>535</u>	<u>361</u>	537	360	533	362
429.mcf	24	314	698	<u>313</u>	<u>699</u>	313	699	24	314	698	<u>313</u>	<u>699</u>	313	699
445.gobmk	24	744	338	<u>743</u>	<u>339</u>	743	339	24	752	335	<u>729</u>	<u>346</u>	729	346
456.hammer	24	401	558	<u>400</u>	<u>560</u>	400	560	24	334	671	335	668	<u>335</u>	<u>669</u>
458.sjeng	24	885	328	<u>880</u>	<u>330</u>	869	334	24	<u>828</u>	<u>351</u>	827	351	849	342
462.libquantum	24	187	2660	<u>187</u>	<u>2660</u>	187	2660	24	187	2660	<u>187</u>	<u>2660</u>	187	2660
464.h264ref	24	969	548	939	565	<u>966</u>	<u>550</u>	24	<u>947</u>	<u>561</u>	954	557	925	574
471.omnetpp	24	<u>577</u>	<u>260</u>	577	260	576	261	24	539	278	541	277	<u>539</u>	<u>278</u>
473.astar	24	643	262	<u>642</u>	<u>262</u>	638	264	24	643	262	<u>642</u>	<u>262</u>	638	264
483.xalancbmk	24	332	499	331	500	<u>332</u>	<u>499</u>	24	332	499	331	500	<u>332</u>	<u>499</u>

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 localhost Sun Jan 1 16:56:31 2012

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 E5-2640 0 @ 2.50GHz  
2 "physical id"s (chips)  
24 "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 : 6  
siblings : 12

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## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5
physical 1: cores 0 1 2 3 4 5
cache size : 15360 KB
```

```
From /proc/meminfo
MemTotal:      65943312 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.2 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Jan 1 16:49
```

```
SPEC is set to: /home/rcaneca/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/vg_it5rh-lv_home
                ext4      193G  2.1G  181G   2% /home
```

(End of data from sysinfo program)

## General Notes

This result was measured on the Servidor Itautec MX205. The Servidor Itautec MX205, the Servidor Itautec LX205 and the Servidor Itautec MX225+ are electronically equivalent.

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/home/rcaneca/sh/SmartHeap\_8.1/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32  
400.perlbench: icc -m64  
401.bzip2: icc -m64  
456.hmmer: icc -m64  
458.sjeng: icc -m64  
C++ benchmarks:  
icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalanbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -auto-ilp32

456.hmmr: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll4 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/home/rcaneca/sh/SmartHeap\_8.1/lib -lsmarheap

473.astar: basepeak = yes

483.xalanbmk: basepeak = yes



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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

[http://www.spec.org/cpu2006/flags/Itaotec-Servidor\\_Itaotec-Intel-Linux-Platform.html](http://www.spec.org/cpu2006/flags/Itaotec-Servidor_Itaotec-Intel-Linux-Platform.html)  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

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

[http://www.spec.org/cpu2006/flags/Itaotec-Servidor\\_Itaotec-Intel-Linux-Platform.xml](http://www.spec.org/cpu2006/flags/Itaotec-Servidor_Itaotec-Intel-Linux-Platform.xml)  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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