



# SPEC® CINT2006 Result

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Itautec

SPECint®\_rate2006 = 630

Servidor Itautec MX225+ (Intel Xeon E5-2670)

SPECint\_rate\_base2006 = 605

CPU2006 license: 9001

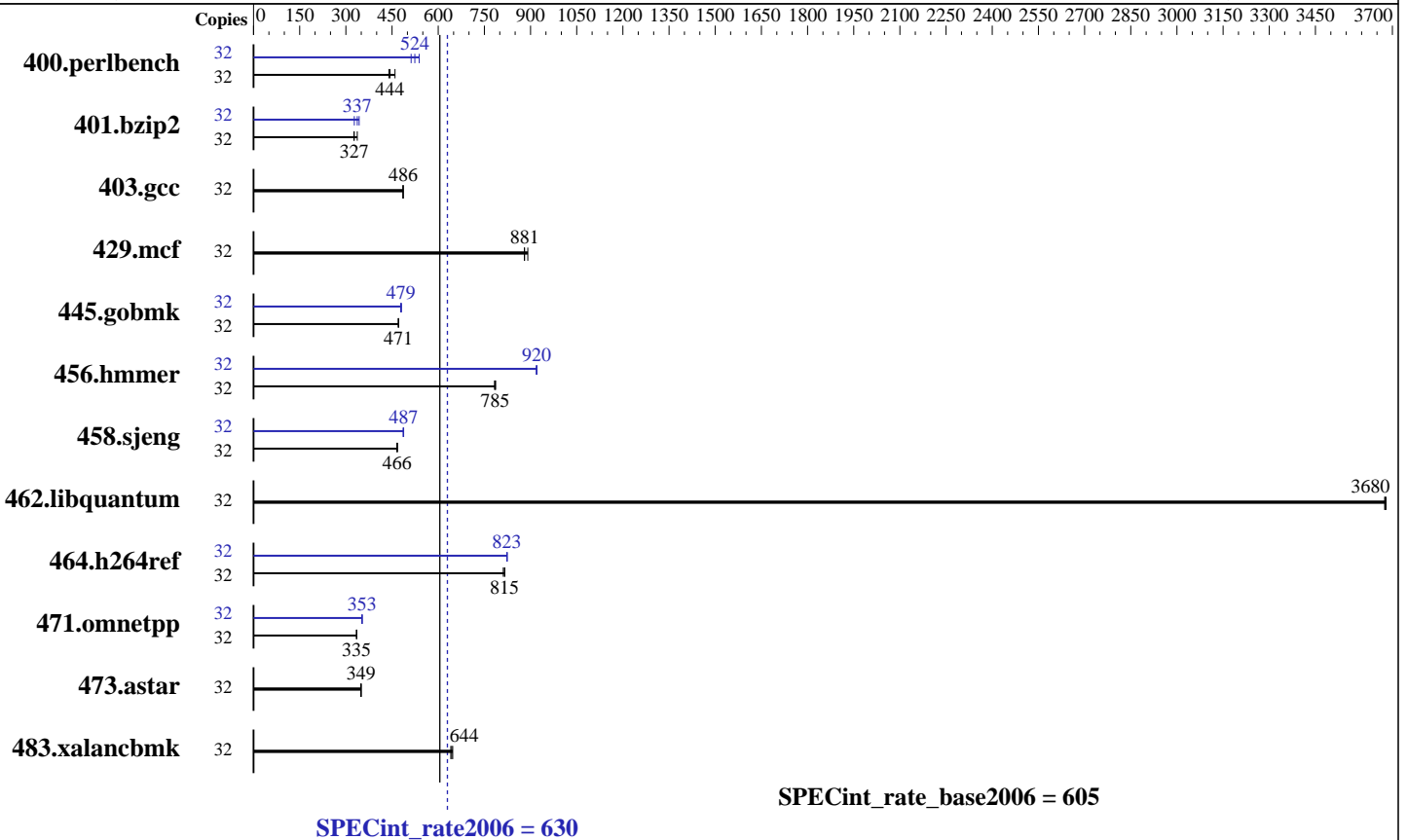
Test date: Dec-2011

Test sponsor: Itautec

Hardware Availability: Jun-2012

Tested by: Itautec

Software Availability: Dec-2011



## Hardware

CPU Name: Intel Xeon E5-2670  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz  
 CPU MHz: 2600  
 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  
 L3 Cache: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 64 GB (16 x 4 GB 1Rx4 PC3-12800R-11, 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	32	680	460	711	440	<u>705</u>	<u>444</u>	32	611	512	581	538	<u>597</u>	<u>524</u>
401.bzip2	32	916	337	<u>944</u>	<u>327</u>	946	326	32	<u>916</u>	<u>337</u>	900	343	943	327
403.gcc	32	<u>530</u>	<u>486</u>	531	485	530	486	32	<u>530</u>	<u>486</u>	531	485	530	486
429.mcf	32	328	891	<u>331</u>	<u>881</u>	332	880	32	328	891	<u>331</u>	<u>881</u>	332	880
445.gobmk	32	714	470	712	471	<u>713</u>	<u>471</u>	32	702	478	698	481	<u>701</u>	<u>479</u>
456.hammer	32	381	783	380	787	<u>380</u>	<u>785</u>	32	325	919	324	921	<u>325</u>	<u>920</u>
458.sjeng	32	828	468	<u>830</u>	<u>466</u>	831	466	32	797	486	<u>795</u>	<u>487</u>	794	488
462.libquantum	32	<u>180</u>	<u>3680</u>	180	3680	180	3670	32	<u>180</u>	<u>3680</u>	180	3680	180	3670
464.h264ref	32	<u>869</u>	<u>815</u>	868	816	873	811	32	860	823	<u>860</u>	<u>823</u>	859	824
471.omnetpp	32	597	335	597	335	<u>597</u>	<u>335</u>	32	<u>567</u>	<u>353</u>	567	353	568	352
473.astar	32	645	348	<u>643</u>	<u>349</u>	642	350	32	645	348	<u>643</u>	<u>349</u>	642	350
483.xalancbmk	32	341	647	<u>343</u>	<u>644</u>	345	641	32	341	647	<u>343</u>	<u>644</u>	345	641

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 Thu Dec 29 15:04:27 2011

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 : Genuine Intel(R) CPU @ 2.60GHz  
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

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## Platform Notes (Continued)

```
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:      65943164 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 Dec 29 15:01
```

```
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 Itaotec MX205.  
The Servidor Itaotec MX205, the Servidor Itaotec LX205 and the Servidor Itaotec 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.hmmmer: 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.hmmmer: -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/Itautec-Servidor\\_Itautec-Intel-Linux-Platform.html](http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-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/Itautec-Servidor\\_Itautec-Intel-Linux-Platform.xml](http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-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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