



# SPEC® CINT2006 Result

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**Itautec**

**SPECint®\_rate2006 = 532**

Servidor Itautec MX225+ (Intel Xeon E5-2650)

**SPECint\_rate\_base2006 = 508**

CPU2006 license: 9001

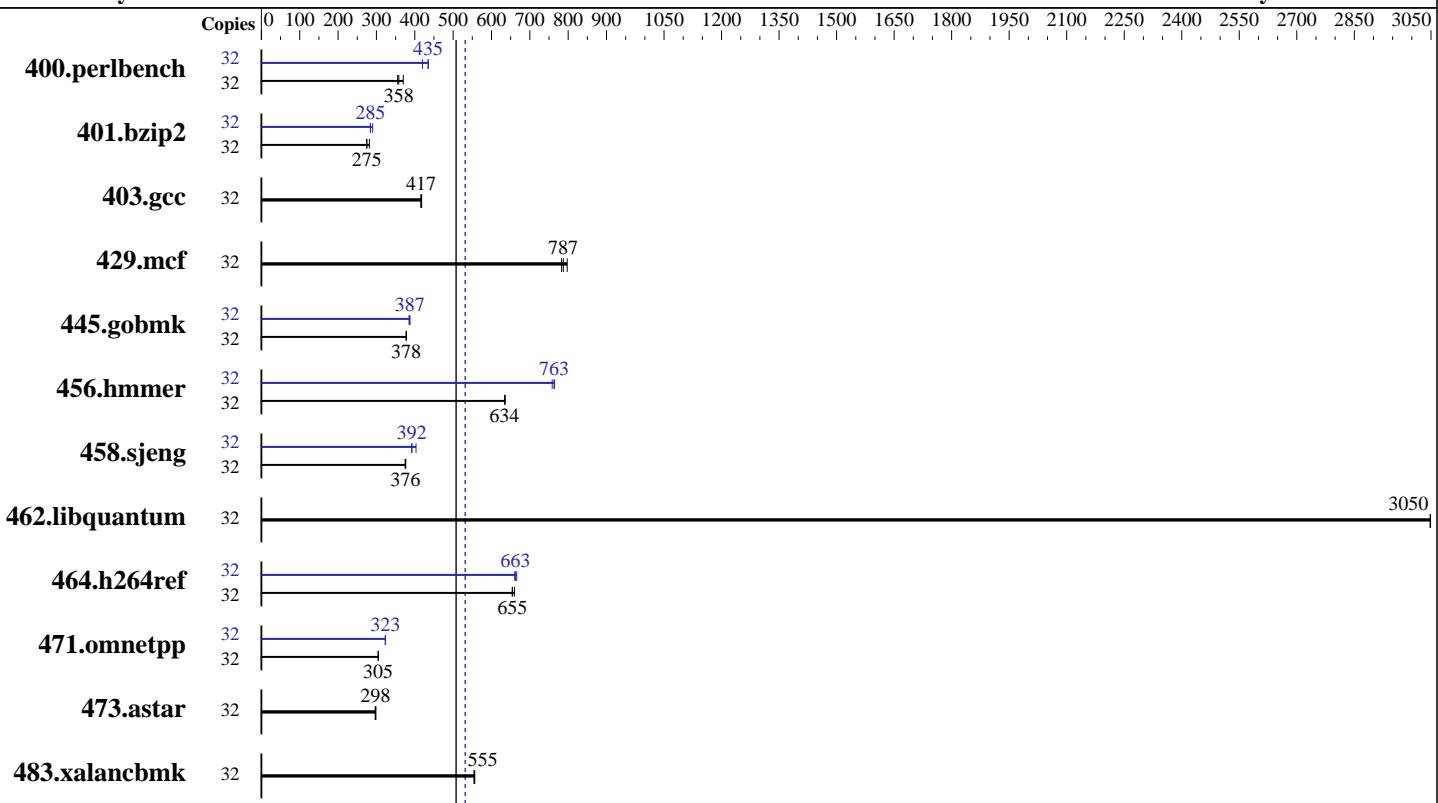
Test date: Dec-2011

Test sponsor: Itautec

Hardware Availability: Jun-2012

Tested by: Itautec

Software Availability: Dec-2011



**SPECint\_rate\_base2006 = 508**

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## 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                     |
| 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     | 845        | 370        | 880         | 355         | <b>872</b>  | <b>358</b> | 32     | 744        | 420        | 718         | 435         | <b>719</b>  | <b>435</b> |
| 401.bzip2      | 32     | 1097       | 282        | 1124        | 275         | <b>1123</b> | <b>275</b> | 32     | 1087       | 284        | 1064        | 290         | <b>1085</b> | <b>285</b> |
| 403.gcc        | 32     | <b>618</b> | <b>417</b> | 616         | 418         | 619         | 416        | 32     | <b>618</b> | <b>417</b> | 616         | 418         | 619         | 416        |
| 429.mcf        | 32     | 366        | 797        | 373         | 783         | <b>371</b>  | <b>787</b> | 32     | 366        | 797        | 373         | 783         | <b>371</b>  | <b>787</b> |
| 445.gobmk      | 32     | 889        | 378        | <b>888</b>  | <b>378</b>  | 888         | 378        | 32     | 872        | 385        | 867         | 387         | <b>867</b>  | <b>387</b> |
| 456.hmmer      | 32     | <b>471</b> | <b>634</b> | 471         | 634         | 469         | 636        | 32     | <b>391</b> | <b>763</b> | 391         | 764         | 394         | 758        |
| 458.sjeng      | 32     | 1033       | 375        | 1028        | 376         | <b>1030</b> | <b>376</b> | 32     | 988        | 392        | <b>987</b>  | <b>392</b>  | 960         | 403        |
| 462.libquantum | 32     | 217        | 3050       | <b>217</b>  | <b>3050</b> | 218         | 3050       | 32     | 217        | 3050       | <b>217</b>  | <b>3050</b> | 218         | 3050       |
| 464.h264ref    | 32     | 1083       | 654        | <b>1081</b> | <b>655</b>  | 1073        | 660        | 32     | 1064       | 666        | <b>1068</b> | <b>663</b>  | 1072        | 661        |
| 471.omnetpp    | 32     | 655        | 305        | 657         | 305         | <b>656</b>  | <b>305</b> | 32     | 618        | 324        | 619         | 323         | <b>618</b>  | <b>323</b> |
| 473.astar      | 32     | 753        | 298        | <b>754</b>  | <b>298</b>  | 757         | 297        | 32     | 753        | 298        | <b>754</b>  | <b>298</b>  | 757         | 297        |
| 483.xalancbmk  | 32     | <b>398</b> | <b>555</b> | 398         | 554         | 397         | 556        | 32     | <b>398</b> | <b>555</b> | 398         | 554         | 397         | 556        |

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/rcaaneca/cpu2006/Docs/sysinfo
$Rev: 6775 $ $Date::: 2011-08-16 #$
running on localhost Fri Dec 30 16:39:37 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 : 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
```

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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:       65942288 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 30 16:37

SPEC is set to: /home/rccaneca/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 Itaute MX205.

The Servidor Itaute MX205, the Servidor Itaute LX205 and the Servidor Itaute 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/rcaaneca/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.xalancbmk: -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.hammer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll12 -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)
            -unroll14 -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)
              -unroll12 -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 -lsmartheap
```

473.astar: basepeak = yes

483.xalancbmk: 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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