# SPEC® CINT2006 Result

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## Itautec

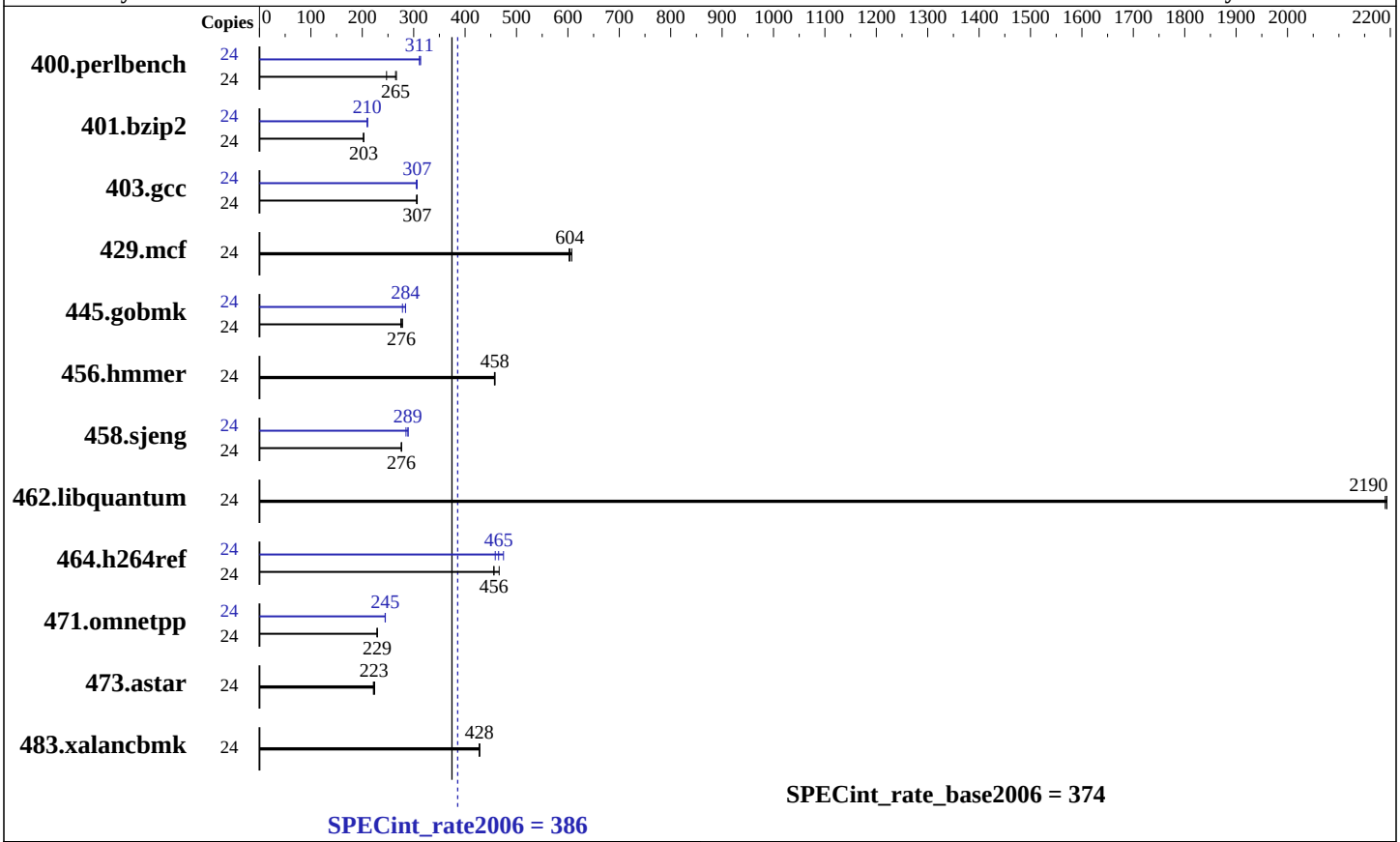
## Servidor Itautec MX225 (Intel Xeon E5-2620)

**SPECint®_rate2006 = 386**

**SPECint_rate_base2006 = 374**

**CPU2006 license:** 9001
**Test sponsor:** Itautec
**Tested by:** Itautec

**Test date:** Jun-2012
**Hardware Availability:** Jun-2012
**Software Availability:** Dec-2011




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5-2620 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.50 GHz |
| CPU MHz: | 2000 |
| FPU: | Integrated |
| CPU(s) enabled: | 12 cores, 2 chips, 6 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 |
| 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, Kernel 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 | 880 | 266 | **886** | **265** | 948 | 247 | 24 | 748 | 314 | 753 | 311 | **753** | **311** |
| 401.bzip2 | 24 | 1144 | 202 | **1143** | **203** | 1142 | 203 | 24 | 1101 | 210 | **1104** | **210** | 1105 | 210 |
| 403.gcc | 24 | **630** | **307** | 633 | 305 | 629 | 307 | 24 | 633 | 305 | **630** | **307** | 630 | 307 |
| 429.mcf | 24 | 360 | 608 | **362** | **604** | 363 | 602 | 24 | 360 | 608 | **362** | **604** | 363 | 602 |
| 445.gobmk | 24 | 904 | 278 | 916 | 275 | **911** | **276** | 24 | 905 | 278 | **886** | **284** | 886 | 284 |
| 456.hmmer | 24 | 489 | 458 | 490 | 457 | **489** | **458** | 24 | 489 | 458 | 490 | 457 | **489** | **458** |
| 458.sjeng | 24 | 1052 | 276 | **1051** | **276** | 1051 | 276 | 24 | 1004 | 289 | **1006** | **289** | 1019 | 285 |
| 462.libquantum | 24 | 227 | 2190 | **227** | **2190** | 227 | 2190 | 24 | 227 | 2190 | **227** | **2190** | 227 | 2190 |
| 464.h264ref | 24 | 1165 | 456 | **1164** | **456** | 1139 | 466 | 24 | 1119 | 475 | 1158 | 459 | **1142** | **465** |
| 471.omnetpp | 24 | 654 | 229 | 656 | 229 | **655** | **229** | 24 | 613 | 245 | 612 | 245 | **613** | **245** |
| 473.astar | 24 | 752 | 224 | **757** | **223** | 760 | 222 | 24 | 752 | 224 | **757** | **223** | 760 | 222 |
| 483.xalancbmk | 24 | 386 | 428 | 387 | 427 | **387** | **428** | 24 | 386 | 428 | 387 | 427 | **387** | **428** |

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 Jun 14 19:56:00 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 E5-2620 0 @ 2.00GHz
      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
```

Continued on next page

## 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:       65918268 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 Jun 14 19:40

  SPEC is set to: /home/rcaneca/cpu2006
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/mapper/vg_it5rh-lv_home
                    ext4    193G  5.4G  178G   3% /home

  (End of data from sysinfo program)
```

## General Notes

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

## Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

C++ benchmarks:

```
icpc -m32
```

## 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

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
458.sjeng: -DSPEC_CPU_LP64
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: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

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

456.hmmer: basepeak = yes

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 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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/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/Intel-ic12.1-official-linux64.20111122.xml


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For other inquiries, please contact webmaster@spec.org.

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