



SPEC® CINT2006 Result

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Itaotec

SPECint®_rate2006 = 409

Servidor Itaotec MX223+ (Intel Xeon X5675)

SPECint_rate_base2006 = 392

CPU2006 license: 9001

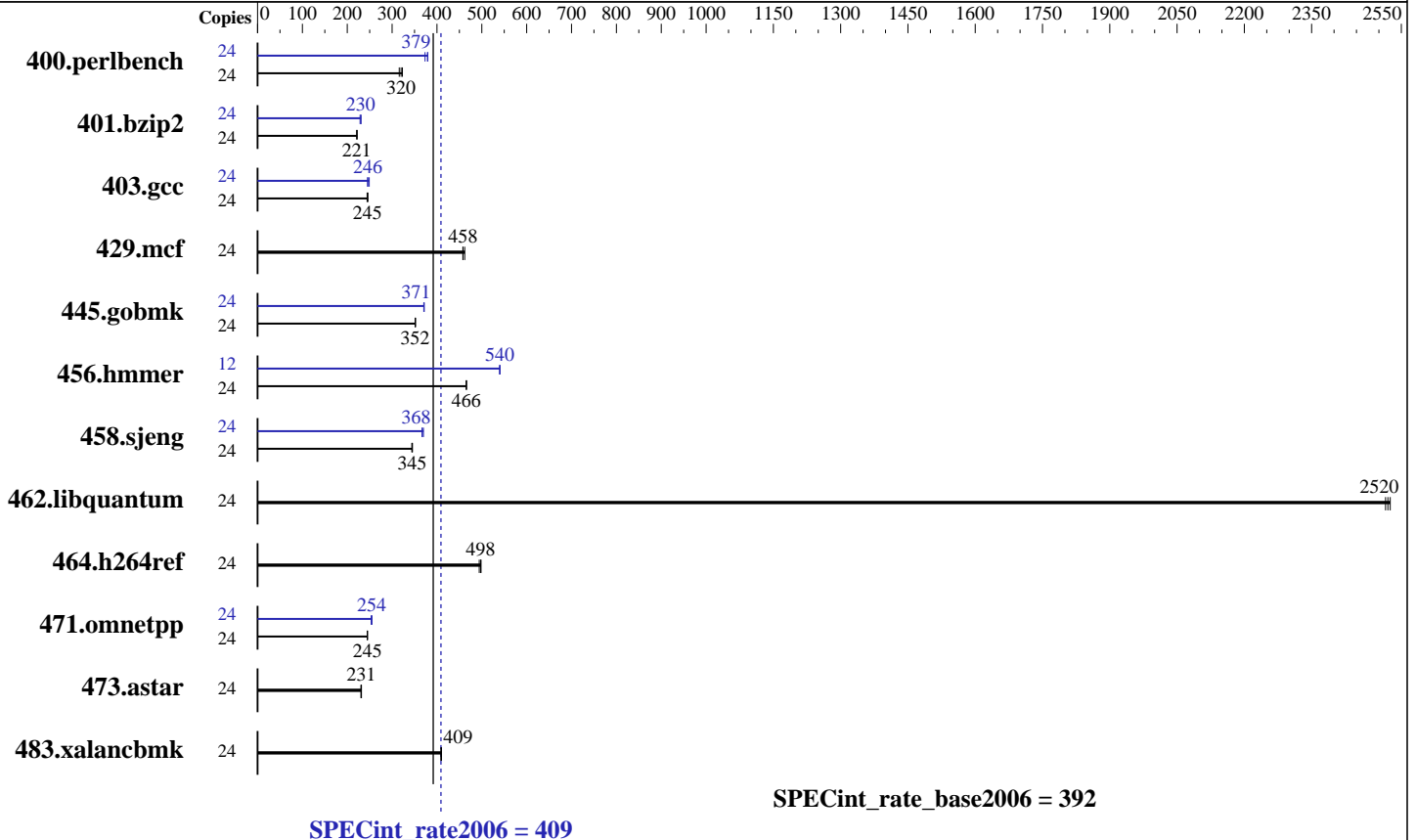
Test date: Dec-2011

Test sponsor: Itaotec

Hardware Availability: Jul-2011

Tested by: Itaotec

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon X5675
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3067
 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: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
 Disk Subsystem: 146 GB, SAS, 15000 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 | 726 | 323 | 742 | 316 | <u>733</u> | <u>320</u> | 24 | 628 | 373 | 618 | 379 | <u>619</u> | <u>379</u> |
| 401.bzip2 | 24 | 1047 | 221 | 1044 | 222 | <u>1046</u> | <u>221</u> | 24 | 1005 | 231 | <u>1006</u> | <u>230</u> | 1013 | 229 |
| 403.gcc | 24 | <u>788</u> | <u>245</u> | 786 | 246 | 791 | 244 | 24 | 776 | 249 | <u>785</u> | <u>246</u> | 788 | 245 |
| 429.mcf | 24 | <u>478</u> | <u>458</u> | 474 | 462 | 478 | 458 | 24 | <u>478</u> | <u>458</u> | 474 | 462 | 478 | 458 |
| 445.gobmk | 24 | <u>716</u> | <u>352</u> | 715 | 352 | 717 | 351 | 24 | 678 | 371 | <u>678</u> | <u>371</u> | 679 | 371 |
| 456.hammer | 24 | <u>481</u> | <u>466</u> | 481 | 465 | 481 | 466 | 12 | 207 | 540 | <u>207</u> | <u>540</u> | 207 | 540 |
| 458.sjeng | 24 | 844 | 344 | <u>842</u> | <u>345</u> | 842 | 345 | 24 | 792 | 367 | <u>790</u> | <u>368</u> | 785 | 370 |
| 462.libquantum | 24 | <u>197</u> | <u>2520</u> | 197 | 2530 | 198 | 2510 | 24 | <u>197</u> | <u>2520</u> | 197 | 2530 | 198 | 2510 |
| 464.h264ref | 24 | 1066 | 498 | 1075 | 494 | <u>1067</u> | <u>498</u> | 24 | 1066 | 498 | 1075 | 494 | <u>1067</u> | <u>498</u> |
| 471.omnetpp | 24 | <u>613</u> | <u>245</u> | 612 | 245 | 613 | 245 | 24 | 589 | 255 | 592 | 253 | <u>589</u> | <u>254</u> |
| 473.astar | 24 | 727 | 232 | 730 | 231 | <u>729</u> | <u>231</u> | 24 | 727 | 232 | 730 | 231 | <u>729</u> | <u>231</u> |
| 483.xalancbmk | 24 | 404 | 410 | <u>405</u> | <u>409</u> | 405 | 409 | 24 | 404 | 410 | <u>405</u> | <u>409</u> | 405 | 409 |

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

Data Reuse disabled in BIOS.
DCU Prefetcher disabled in BIOS.
Sysinfo program /home/rcaneca/cpu2006/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ 8787f7622badcf24e01c368b1db4377c
running on itmx224.rca Sun Dec 4 17:40:55 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 X5675 @ 3.07GHz
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.)

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Platform Notes (Continued)

```
cpu cores : 6
siblings  : 12
physical 0: cores 0 1 2 8 9 10
physical 1: cores 0 1 2 8 9 10
cache size : 12288 KB
```

```
From /proc/meminfo
MemTotal:      49416864 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 itmx224.rca 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 4 17:40
```

```
SPEC is set to: /home/rcaneca/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/vg_itmx224-lv_home
ext4 36G 3.4G 31G 11% /home
```

(End of data from sysinfo program)

General Notes

This result was measured on the Servidor Itaotec MX224. The Servidor Itaotec MX203+, Servidor Itaotec MX223+ and the Servidor Itaotec MX224 are electronically equivalent.

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32



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Itautec

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Tested by: Itautec

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Hardware Availability: Jul-2011
Software Availability: Dec-2011

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.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.hmmcr: -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: basepeak = yes

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

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

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