



SPEC[®] CINT2006 Result

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Itautec

SPECint[®]_rate2006 = 465

Servidor Itautec MX215 (Intel Xeon E5-2640)

SPECint_rate_base2006 = 451

CPU2006 license: 9001

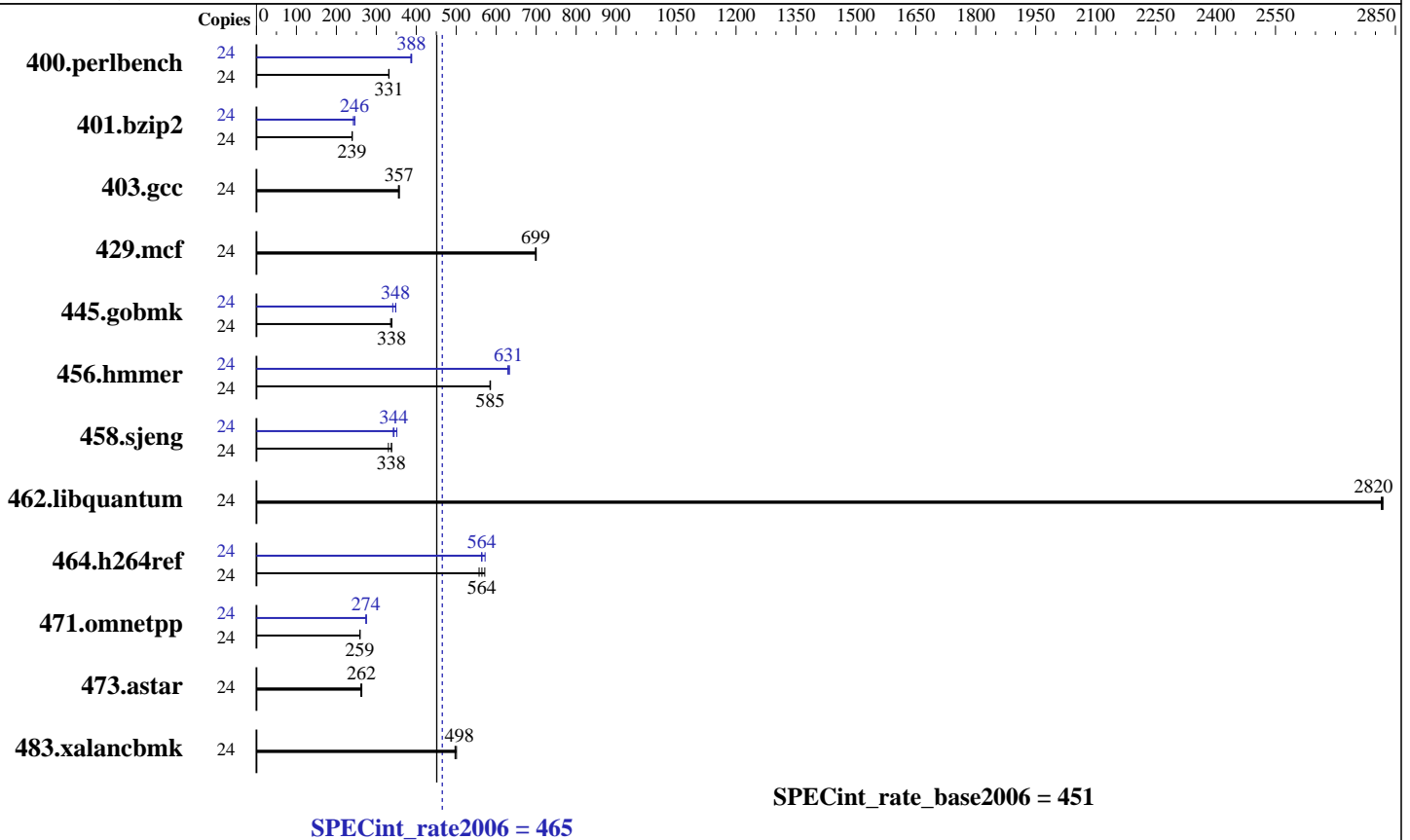
Test date: Apr-2013

Test sponsor: Itautec

Hardware Availability: Jun-2012

Tested by: Itautec

Software Availability: Jan-2013



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: 128 GB (16 x 8 GB 2Rx8 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
 Disk Subsystem: 500 GB, SATA-3, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server Release 6.3, 2.6.32-279.el6.x86_64
 Compiler: C/C++: Version 13.1.0.146 of Intel Compiler XE Build 20130121
 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	708	331	<u>707</u>	<u>331</u>	707	332	24	<u>605</u>	<u>388</u>	604	388	607	386
401.bzip2	24	968	239	<u>967</u>	<u>239</u>	967	240	24	942	246	<u>943</u>	<u>246</u>	955	242
403.gcc	24	<u>542</u>	<u>357</u>	544	355	540	358	24	<u>542</u>	<u>357</u>	544	355	540	358
429.mcf	24	313	700	<u>313</u>	<u>699</u>	314	698	24	313	700	<u>313</u>	<u>699</u>	314	698
445.gobmk	24	743	339	<u>744</u>	<u>338</u>	750	336	24	738	341	<u>723</u>	<u>348</u>	722	349
456.hammer	24	383	585	382	586	<u>383</u>	<u>585</u>	24	356	629	<u>355</u>	<u>631</u>	354	633
458.sjeng	24	<u>860</u>	<u>338</u>	859	338	880	330	24	<u>844</u>	<u>344</u>	827	351	848	342
462.libquantum	24	<u>177</u>	<u>2820</u>	177	2810	176	2820	24	<u>177</u>	<u>2820</u>	177	2810	176	2820
464.h264ref	24	930	571	<u>941</u>	<u>564</u>	953	557	24	<u>941</u>	<u>564</u>	928	572	943	563
471.omnetpp	24	579	259	<u>579</u>	<u>259</u>	579	259	24	545	275	<u>547</u>	<u>274</u>	547	274
473.astar	24	<u>642</u>	<u>262</u>	645	261	639	264	24	<u>642</u>	<u>262</u>	645	261	639	264
483.xalancbmk	24	331	501	333	497	<u>332</u>	<u>498</u>	24	331	501	333	497	<u>332</u>	<u>498</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 mx225 Thu Apr 4 13:01:16 2013

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:      132104788 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.3 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux mx225 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36 EDT 2012 x86_64
x86_64 x86_64 GNU/Linux
```

```
run-level 3 Apr 4 12:02
```

```
SPEC is set to: /home/rcaneca/cpu2006
Filesystem      Type      Size Used Avail Use% Mounted on
/dev/mapper/vg_mx225-lv_home
                ext4      404G  3.6G  380G   1% /home
```

(End of data from sysinfo program)

General Notes

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

```
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

```
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
```



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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

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32



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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
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)
-auto-ilp32
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
403.gcc: basepeak = yes
429.mcf: basepeak = yes
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3
456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
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
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

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Peak Optimization Flags (Continued)

483.xalanbmk: 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.20130507.html
<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.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.20130507.xml
<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml>

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