SPEC® CINT2006 Result

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Itautec

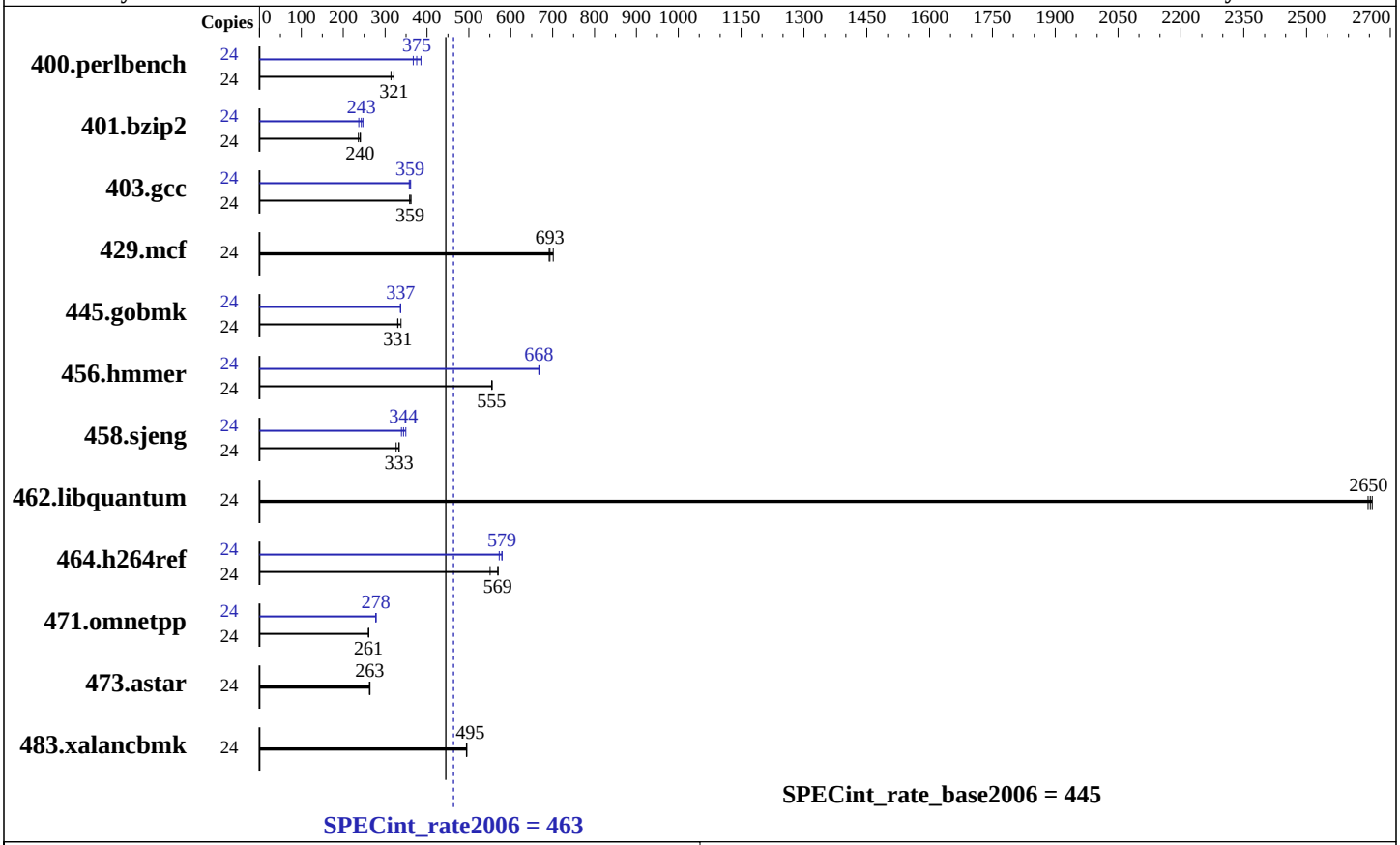
Servidor Itautec MX225 (Intel Xeon E5-2640)

SPECint®_rate2006 = 463

SPECint_rate_base2006 = 445

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

Test date: Mar-2013
Hardware Availability: Jun-2012
Software Availability: Jun-2012



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:	64 GB (16 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem:	1000 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 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	730	321	**731**	**321**	747	314	24	**625**	**375**	639	367	608	386
401.bzip2	24	**964**	**240**	960	241	981	236	24	**953**	**243**	976	237	938	247
403.gcc	24	538	359	**538**	**359**	534	362	24	535	361	**538**	**359**	540	358
429.mcf	24	312	701	316	692	**316**	**693**	24	312	701	316	692	**316**	**693**
445.gobmk	24	745	338	763	330	**762**	**331**	24	747	337	748	337	**747**	**337**
456.hmmer	24	**404**	**555**	404	554	403	556	24	**335**	**668**	335	668	336	667
458.sjeng	24	**871**	**333**	871	333	890	326	24	831	349	857	339	**844**	**344**
462.libquantum	24	187	2660	**187**	**2650**	188	2650	24	187	2660	**187**	**2650**	188	2650
464.h264ref	24	965	551	**934**	**569**	932	570	24	928	572	**917**	**579**	917	579
471.omnetpp	24	**575**	**261**	577	260	575	261	24	539	278	540	278	**540**	**278**
473.astar	24	638	264	642	262	**640**	**263**	24	638	264	642	262	**640**	**263**
483.xalancbmk	24	335	494	**335**	**495**	335	495	24	335	494	**335**	**495**	335	495

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 Sat Mar  9 04:28:48 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
```

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:       65917564 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 Mar 8 15:50

  SPEC is set to: /home/rcaneca/cpu2006
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/mapper/vg_mx225-lv_home
                    ext4    836G  2.2G  791G   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.
```

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`

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) -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: -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 -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 -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/Intel-ic12.1-official-linux64.20111122.html`
`http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml`
`http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.xml`

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