



SPEC® CINT2006 Result

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Acer Incorporated

SPECint®_rate2006 = 433

Altos R380 F2 (Intel Xeon E5-2630)

SPECint_rate_base2006 = 418

CPU2006 license: 97

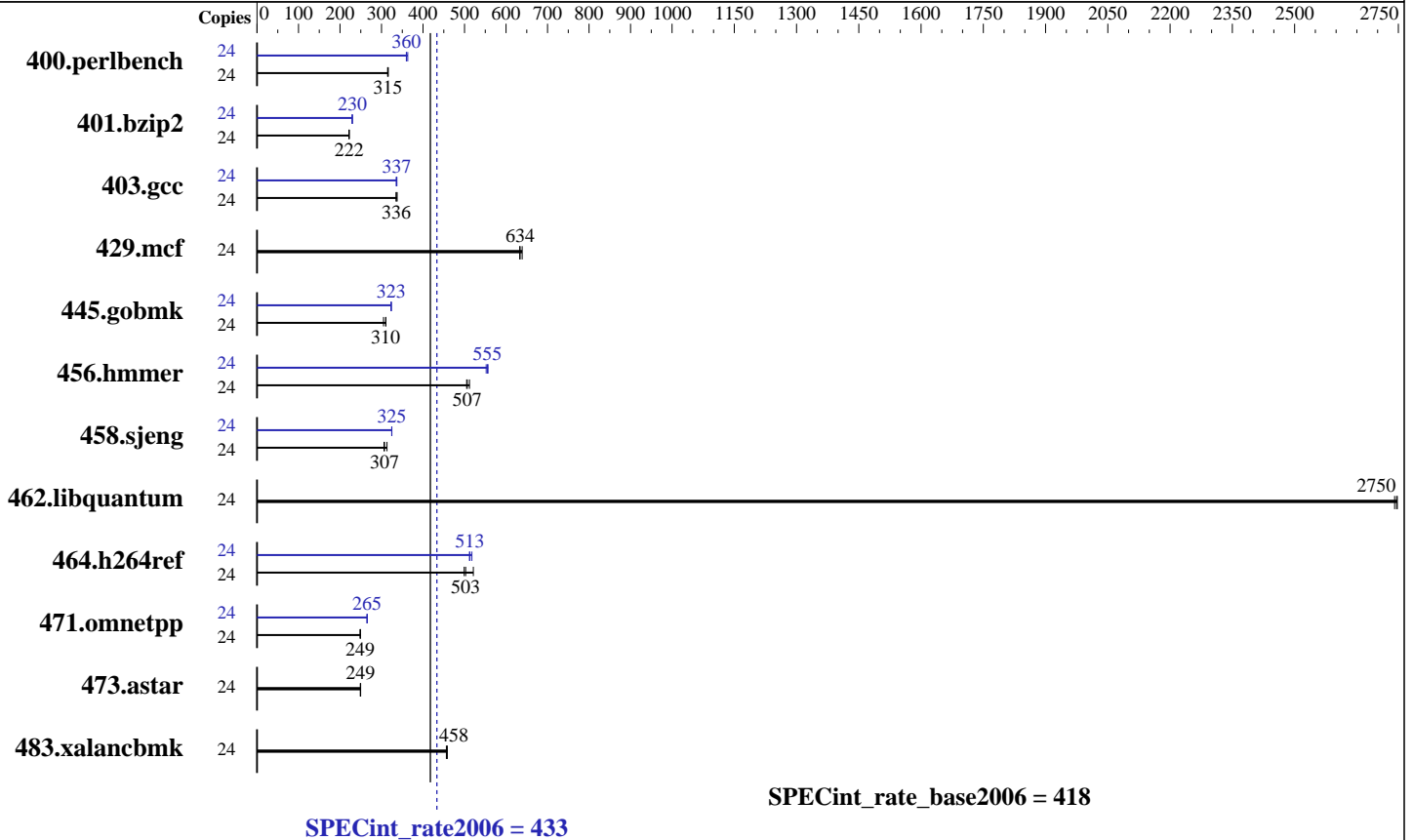
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jul-2013

Hardware Availability: May-2013

Software Availability: Feb-2013



Hardware

CPU Name: Intel Xeon E5-2630
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2300
 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 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
 Disk Subsystem: 1 x 300 GB SAS, 15K RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.el6.x86_64
 Compiler: C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux
 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 V10.0



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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 | 741 | 316 | <u>743</u> | <u>315</u> | 745 | 315 | 24 | 652 | 360 | <u>651</u> | <u>360</u> | 646 | 363 |
| 401.bzip2 | 24 | 1046 | 222 | 1043 | 222 | <u>1043</u> | <u>222</u> | 24 | 1011 | 229 | <u>1008</u> | <u>230</u> | 1008 | 230 |
| 403.gcc | 24 | <u>576</u> | <u>336</u> | 572 | 338 | 576 | 335 | 24 | <u>574</u> | <u>337</u> | 574 | 337 | 576 | 335 |
| 429.mcf | 24 | 346 | 633 | <u>345</u> | <u>634</u> | 343 | 639 | 24 | 346 | 633 | <u>345</u> | <u>634</u> | 343 | 639 |
| 445.gobmk | 24 | <u>812</u> | <u>310</u> | 826 | 305 | 811 | 311 | 24 | 779 | 323 | 778 | 323 | <u>779</u> | <u>323</u> |
| 456.hammer | 24 | 437 | 512 | 443 | 505 | <u>442</u> | <u>507</u> | 24 | <u>403</u> | <u>555</u> | 402 | 557 | 406 | 552 |
| 458.sjeng | 24 | <u>945</u> | <u>307</u> | 927 | 313 | 949 | 306 | 24 | 895 | 325 | 894 | 325 | <u>894</u> | <u>325</u> |
| 462.libquantum | 24 | 181 | 2740 | <u>181</u> | <u>2750</u> | 181 | 2750 | 24 | 181 | 2740 | <u>181</u> | <u>2750</u> | 181 | 2750 |
| 464.h264ref | 24 | 1019 | 521 | 1064 | 499 | <u>1056</u> | <u>503</u> | 24 | <u>1035</u> | <u>513</u> | 1038 | 512 | 1026 | 518 |
| 471.omnetpp | 24 | <u>602</u> | <u>249</u> | 604 | 248 | 602 | 249 | 24 | 564 | 266 | <u>566</u> | <u>265</u> | 566 | 265 |
| 473.astar | 24 | 675 | 250 | <u>676</u> | <u>249</u> | 676 | 249 | 24 | 675 | 250 | <u>676</u> | <u>249</u> | 676 | 249 |
| 483.xalancbmk | 24 | 363 | 456 | <u>362</u> | <u>458</u> | 361 | 458 | 24 | 363 | 456 | <u>362</u> | <u>458</u> | 361 | 458 |

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

Sysinfo program /usr/cpu2006/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Thu Jul 4 10:07:26 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 E5-2630 0 @ 2.30GHz
 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:      132068728 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41
EST 2013 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Jul 4 10:05
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root
ext4            271G    5.4G  252G   3% /
```

```
Additional information from dmidecode:
BIOS Intel Corp. SE5C600.86B.01.06.0002.110120121539 11/01/2012
Memory:
16x 8 GB
16x Hynix HMT31GR7CFR4C-PB 8 GB 1600 MHz 2 rank
8x NO DIMM NO DIMM
```

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"

```
Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
Altos R360 F2 and Altos R380 F2 are electronically equivalent.
```

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General Notes (Continued)

This result was measured on Altos R360 F2.

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:

-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/sh -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

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Peak Compiler Invocation (Continued)

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
 462.libquantum: -DSPEC_CPU_LINUX
 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xAVX(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: -xAVX(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: -xAVX -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xAVX(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: -xAVX(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:

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Peak Optimization Flags (Continued)

471.omnetpp: -xAVX(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/sh -lsmartheap

473.aster: 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-ic13-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.html>

You can also download the XML flags sources by saving the following links:

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

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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