SPEC® CINT2006 Result
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Acer Incorporated

Altos R320 F3 (Intel Xeon E3-1220 v3)

SPECint®_rate2006 = 175

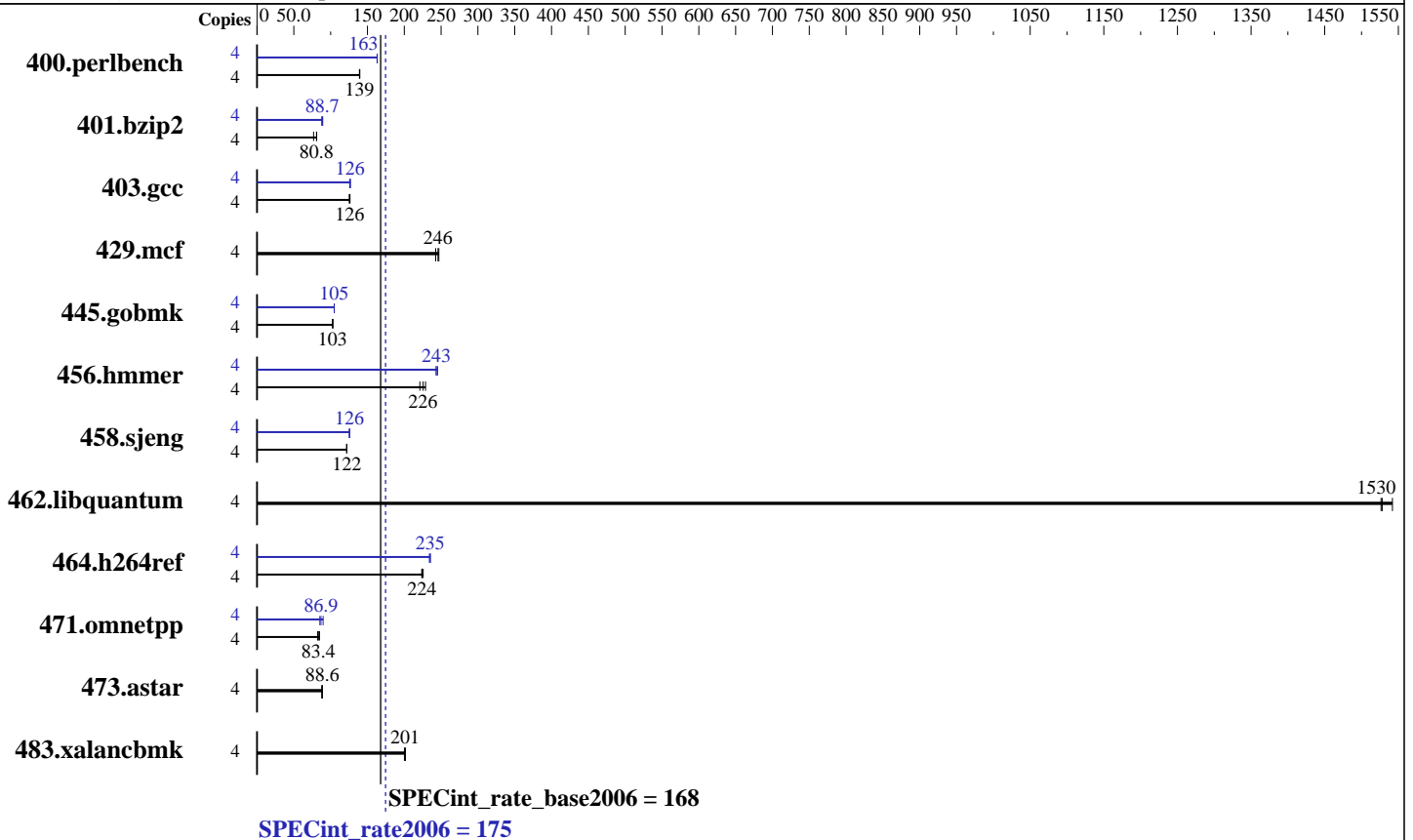SPECint_rate_base2006 = 168

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2013

Hardware Availability: Sep-2013

Software Availability: Feb-2013

Copies

Benchmark		Value
400.perlbench	4	163
	4	139
401.bzip2	4	88.7
	4	80.8
403.gcc	4	126
	4	126
429.mcf	4	246
445.gobmk	4	105
	4	103
456.hmmer	4	243
	4	226
458.sjeng	4	126
	4	122
462.libquantum	4	1530
464.h264ref	4	235
	4	224
471.omnetpp	4	86.9
	4	83.4
473.astar	4	88.6
483.xalancbmk	4	201

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Hardware

CPU Name: Intel Xeon E3-1220 v3

CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz

CPU MHz: 3100

FPU: Integrated

CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip

CPU(s) orderable: 1 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: 8 MB I+D on chip per chip

Other Cache: None

Memory: 16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)

Disk Subsystem: 1 x 500 GB SATA, 7200 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	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	281	139	**280**	**139**	280	140	4	239	163	240	163	**240**	**163**
401.bzip2	4	502	76.8	476	81.0	**478**	**80.8**	4	439	87.8	**435**	**88.7**	432	89.3
403.gcc	4	257	125	255	126	**256**	**126**	4	256	126	254	127	**255**	**126**
429.mcf	4	150	243	148	247	**148**	**246**	4	150	243	148	247	**148**	**246**
445.gobmk	4	408	103	409	103	**408**	**103**	4	400	105	400	105	**400**	**105**
456.hmmer	4	169	221	**165**	**226**	163	229	4	152	245	153	243	**153**	**243**
458.sjeng	4	397	122	**397**	**122**	397	122	4	386	125	**385**	**126**	385	126
462.libquantum	4	**54.2**	**1530**	54.3	1530	53.7	1540	4	**54.2**	**1530**	54.3	1530	53.7	1540
464.h264ref	4	392	226	**395**	**224**	395	224	4	376	235	**376**	**235**	378	234
471.omnetpp	4	295	84.9	304	82.3	**300**	**83.4**	4	**288**	**86.9**	293	85.3	278	89.8
473.astar	4	**317**	**88.6**	319	87.9	316	88.7	4	**317**	**88.6**	319	87.9	316	88.7
483.xalancbmk	4	137	201	138	200	**137**	**201**	4	137	201	138	200	**137**	**201**

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

Submit Notes

    The taskset mechanism was used to bind copies to processors. The config file option 'submit'
    was used to generate taskset 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 May 30 23:26:10 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 E3-1220 v3 @ 3.10GHz
          1 "physical id"s (chips)
          4 "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 : 4
          siblings : 4

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Platform Notes (Continued)

```
      physical 0: cores 0 1 2 3
    cache size : 8192 KB

  From /proc/meminfo
    MemTotal:       16245384 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 May 30 23:08

  SPEC is set to: /usr/cpu2006
    Filesystem      Type     Size  Used Avail Use% Mounted on
    /dev/mapper/VolGroup-lv_root
                    ext4     451G  5.4G  423G   2% /

  Additional information from dmidecode:
    BIOS Acer P01 04/23/2013
    Memory:
    2x    8 GB
    2x Kingston ACR1GX72D3E16C11G 8 GB 1600 MHz 2 rank
    2x [Empty] [Empty]

  (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
```

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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:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xCORE-AVX2 -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
```

```
458.sjeng: icc -m64
```

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Peak Compiler Invocation (Continued)

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: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -ipo -O3 -no-prec-div

            429.mcf: basepeak = yes

          445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
                       -ansi-alias -opt-mem-layout-trans=3

          456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

           458.sjeng: -xCORE-AVX2(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: -xCORE-AVX2(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: `-xCORE-AVX2(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.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-ic13-official-linux64.20130716.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-linux64.20130716.xml
http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml

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

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