SPEC® CINT2006 Result

Acer Incorporated
Acer AR580 F2 (Xeon E5-4650)  

<table>
<thead>
<tr>
<th>SPECint®_rate2006 = NC</th>
<th>SPECint_rate_base2006 = NC</th>
</tr>
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</table>

CPU2006 license: 97  
Test sponsor: Acer Incorporated  
Tested by: Acer Incorporated  

Test date: Sep-2012  
Hardware Availability: Dec-2012  
Software Availability: Dec-2011

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### Hardware

<table>
<thead>
<tr>
<th>Copy</th>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>perlbench</td>
<td>Operating System: Red Hat Enterprise Linux Server release 6.3 (Santiago)</td>
</tr>
<tr>
<td>401</td>
<td>bzip2</td>
<td>Compiler: C/C++ Version 12.1.0.225 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>403</td>
<td>gcc</td>
<td>Auto Parallel: No</td>
</tr>
<tr>
<td>429</td>
<td>mcf</td>
<td>File System: ext4</td>
</tr>
<tr>
<td>445</td>
<td>gobmk</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>456</td>
<td>hmer</td>
<td></td>
</tr>
<tr>
<td>458</td>
<td>sjeng</td>
<td></td>
</tr>
<tr>
<td>462</td>
<td>libquantum</td>
<td></td>
</tr>
<tr>
<td>464</td>
<td>h264ref</td>
<td></td>
</tr>
<tr>
<td>471</td>
<td>omnetpp</td>
<td></td>
</tr>
<tr>
<td>473</td>
<td>astar</td>
<td></td>
</tr>
<tr>
<td>483</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CPU Name: Intel Xeon E5-4650  
CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz  
CPU MHz: 2700  
FPU: Integrated  
CPU(s) enabled: 32 cores, 4 chips, 8 cores/chip, 2 threads/core  
CPU(s) orderable: 2,4 chips  
Primary Cache: 32 KB I + 32 KB D on chip per core  

Non-Compliant
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Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (32 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 300 GB SAS, 15K RPM
Other Hardware: None
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>perlbench</td>
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<td>xalancbmk</td>
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<td>NC</td>
<td>NC</td>
<td>NC</td>
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</tr>
</tbody>
</table>

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.
SPEC CINT2006 Result

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CPU2006 license: 97
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Operating System Notes
Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes
Sysinfo program /usr/cpu2006/config/sysinfo_rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on spec Sat Sep 22 17:32:31 2012

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 : Genuine Intel(R) CPU @ 2.70GHz
  4 "physical id" (chips)
  64 "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 : 16
  siblings : 4
  physical 0: cores 0 1 2 3 4 5 6 7
  physical 1: cores 0 1 2 3 4 5 6 7
  physical 2: cores 0 1 2 3 4 5 6 7
  physical 3: cores 0 1 2 3 4 5 6 7
  cache size : 20480 KB

From /proc/meminfo
  MemTotal: 264591176 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)

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Platform Notes (Continued)


uname -a:
    Linux spec 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 Sep 21 19:10

SPEC is set to: /usr/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext4 152G 89G 56G 62% /

Additional information from dmidecode:
Memory:
    32x Hynix HMT31GR7CFR4C-PB 8 GB 1600 MHz 2 rank
(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"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Page Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
File system page cache cleared with:
echo 1>/proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
    icc -m32

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Base Compiler Invocation (Continued)

C++ benchmarks:
  icpc -m32

Base Portability Flags

400.perlbmk: -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,ldefs /smartheap -lsmartheap

Base Other Flags

C benchmarks:
  403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
  icc -m32

Continued on next page
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Peak Compiler Invocation (Continued)

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
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
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Peak Optimization Flags (Continued)

429.mcf: basepeak = yes
445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
             -ansi-alias -opt-rep-lay-out-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) -unroll14
           -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) -unroll12
              -ansi-alias

C++ benchmarks:
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-r-regin-strategy=block -Wl,-z,muldefs
             -L/smartheap -lsmartheap
473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Other Flags

C++ benchmarks:
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-r-regin-strategy=block -Wl,-z,muldefs
             -L/smartheap -lsmartheap
473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

C benchmarks:
403.gcc: -Dalloca=_alloca
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The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html

You can also download the XML flags source by visiting the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linum64.20111122.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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