SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Dell or Intel.
Dell Inc.
PowerEdge R920 (Intel Xeon E7-2850 v2, 2.30 GHz)

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Results Table

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</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.

Operating System Notes

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

Non-compliant
Dell Inc.

PowerEdge R920 (Intel Xeon E7-2850 v2, 2.30 GHz)

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Dell or Intel.

Platform Notes

BIOS settings:
Virtualization Technology disabled
Execute Disable disabled
System Profile set to Performance
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Mon Jan 27 16:21:19 2014

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 E7-2850 v2 @ 2.30GHz
  2 "physical id"s (chips)
  48 "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 : 12
  siblings  : 24
  physical : 0 1 2 3 4 5 8 9 10 11 12 13
  logical  : 0 1 2 3 4 5 8 9 10 11 12 13
  cache size : 24576 KB

From /proc/meminfo
MemTotal:       529354152 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

/unix/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)

uname -a:
Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64 x86_64 x86_64 GNU/Linux

Non-Compliant
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Dell or Intel.

**Platform Notes (Continued)**

```
run-level 3 Jan 27 16:15
SPEC is set to: /root/cpu2006-1.2
  Filesystem     Type  Size  Used Avail % Mounted on
  /dev/sda2      ext4  271G  8.6G  249G   4% /
Additional information from dmidecode:
  BIOS Dell Inc. 1.0.1 01/13/2014
Memory:
  32x 00AD04B300AD HMT42GR7AFR4A-PB 16 GB 1333 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 = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat 6.4
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
```
runcspec command invoked through numactl i.e.:
```
numactl --interleave=all runspec <etc>
```

**Base Compiler Invocation**

C benchmarks:
```
icc -m32
```

C++ benchmarks:
```
icpc -m32
```
Dell Inc.

PowerEdge R920 (Intel Xeon E7-2850 v2, 2.30 GHz)

SPECint\_rate2006 = NC
SPECint\_rate\_base2006 = NC

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Jan-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Dell or Intel.

### Base Portability Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flag</th>
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<tr>
<td>400.perlbench</td>
<td>-DSPEC_CPU_LINUX_IA32</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>-DSPEC_CPU_LINUX</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>-DSPEC_CPU_LINUX</td>
</tr>
</tbody>
</table>

### Base Optimization Flags

**C benchmarks:**
- -xSSE4.2
- -ipo
- -O3
- -no-prec-div
- -opt-prefetch
- -opt-mem-layout-trans=3

**C++ benchmarks:**
- -xSSE4.2
- -ipo
- -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
  400.zip2: icc -m64
  456.hmmer: icc -m64
  458.sjeng: icc -m64

**C++ benchmarks:**
- icpc -m32
Dell Inc.

PowerEdge R920 (Intel Xeon E7-2850 v2, 2.30 GHz)

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>NC</th>
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<tbody>
<tr>
<td>SPECint_rate_base2006</td>
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CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Jan-2014
Hardware Availability: Mar-2014
Software Availability: Nov-2013

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Dell or Intel.

### 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`
  - `-auto-ilp32`

- 401.bzip2:
  - `-xSSE4.2` `pass 2`
  - `-prof-gen` `pass 1`
  - `-ipo` `pass 2`
  - `-O3` `pass 2`
  - `-no-prec-div` `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`

- 450.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`

Continued on next page
### SPEC CINT2006 Result

**Dell Inc.**

**PowerEdge R920 (Intel Xeon E7-2850 v2, 2.30 GHz)**

<table>
<thead>
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<th>Test date</th>
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**SPECint_rate2006** = NC

**SPECint_rate_base2006** = NC

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#### Peak Optimization Flags (Continued)

**C++ benchmarks:**

- 471.omnetpp: -xSSE4.2, -prof-gen, -l, -l, -l, -l, -l, -l
- -O3, -no-prec-div, -prof-use, -ansi-alias
- -Wl,-z,muldefs, -L/sh, -lsmartheap

- 473.astar: basepeak = yes
- 483.xalancbmk: basepeak = yes

#### Peak Other Flags

**C benchmarks:**

- 403.gcc: -Dalloca=_alloca

The files that were used to format this result can be browsed at:


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


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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.

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