SPEC® CINT2006 Result

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4820 v2, 2.00 GHz)

SPEClnt_rate2006 = NC
SPEClnt_rate_base2006 = NC

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

Test date: Feb-2014
Hardware Availability: Mar-2014
Software Availability: Mar-2014

SPEClnt 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.

Non-Compliant
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Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 16 MB I+D on chip per chip
Other Cache: None
Memory: 1 TB (64 x 16 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 400 GB SAS6 SSD
Other Hardware: None
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0

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.
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Operating System Notes

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

Platform Notes

BIOS settings:
- Virtualization Technology disabled
- Execute Disable disabled
- System Profile set to Performance
- Sysinfo program
  /root/Desktop/Performance/ic14.0_Oct17_2013/config/sysinfo.rev6818
  $Rev: 6818 $ $Date:: 2012-07-17 10:36d102572650a6e4d596a3cee98f191$
  running on slesperf1 Sat Feb 22 12:33:33 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 E7-4820 v2 @ 2.00GHz
- 4 "physical id" (chips)
- 64 "processor"
- 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 : 8
    : 16
  - 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 : 16384 KB

From /proc/meminfo:
- MemTotal: 1058789108 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

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Platform Notes (Continued)

SUSE Linux Enterprise Server 11 (x86_64)
From /etc/*release*/etc/*version*
SUSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 3

uname -a:
Linux slesperf1 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
(ccab990) x86_64 x86_64 x86_64 GNU/Linux
run-level 3 Feb 21 10:50 last=S
SPEC is set to: /root/Desktop/Performance/ic14.0_Oct17_2013
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext2 365G 31G 333G 9% /

Additional information from dmidecode:
BIOS Dell Inc. 0.4.1/27/2014
Memory:
32x 00CE00B300CE M393B2G70BH0-YK0 16 GB 1333 MHz
10x 00CE00B300CE M393B2G70CB0-YK0 16 GB 1333 MHz
22x 00CE04B300CE M393B2G70CB0-YK0 16 GB 1333 MHz

General Notes
Environment variables set by runspec before the start of the run:

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches

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General Notes (Continued)
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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:
-SSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wall -z muldefs -L/sh -lsmartheap

Base Other Flags
C benchmarks:

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Base Other Flags (Continued)
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 -DSPEC_CPU_LP64
- 456.hmmer: -DSPEC_CPU_LP64 -DSPEC_CPU_LP64
- 458.sjeng: -DSPEC_CPU_LP64 -DSPEC_CPU_LP64
- 462.libquantum: -DSPEC_CPU_LINUX
- 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags
C benchmarks:

Continued on next page
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Peak Optimization Flags (Continued)

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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revC.html

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

http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revC.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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