



SPEC[®] CINT2006 Result

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Dell Inc.

SPECint[®]_rate2006 = **NC**

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint_rate_base2006 = **NC**

CPU2006 license: 55

Test date: Feb-2014

Test sponsor: Dell Inc.

Hardware Availability: Mar-2014

Tested by: Dell Inc.

Software Availability: Mar-2014

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.

	Copies
400.perlbench	
401.bzip2	
403.gcc	
429.mcf	
445.gobmk	
456.hmmer	
458.sjeng	
462.libquantum	
464.h264ref	
471.omnetpp	
473.astar	
483	

Non-Compliant

Hardware

CPU Name: Intel Xeon E7-4850 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 48 cores, 4 chips, 12 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64)
 3.0.76-0.11-default
 Compiler: C/C++; Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext2
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit

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Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 24 MB I+D on chip per chip
Other Cache: None
Memory: 1 TB (64 x 16 GB 2Rx4 PC3L-12800R-11, ECC)
Disk Subsystem: 1 x 400 GB SAS6 SSD
Other Hardware: None

Peak Processors: 32/64-bit
Compiler Software: Microquill SmartHeap V10.0

Result Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
401.bzip2	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
403.gcc	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
429.mcf	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
445.gobmk	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
456.hmmer	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
458.sjeng	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
462.libquantum	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
464.h264ref	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
471.omnetpp	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
473.astar	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		
483.xs	96	NC	NC	NC	NC	NC	NC	96	NC	NC	NC	NC	NC	NC		

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 Custom

Memory Patrol Scrub set to disabled

Sysinfo program

/root/Desktop/Performance/icc/2013_01_17_2013/config/sysinfo.rev6818

\$Rev: 6818 \$ \$Date: 2012-07-17 #S e86d102572650a6e4d596a3cee98f191

running on slesperf2 Fri Feb 14 17:07:09 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 E7-4850 v2 @ 2.30GHz

4 "physical id"s (chips)

96 "processor"s

cores, siblings (Caution: counting these is hw and system dependent. The

following excerpts from /proc/cpuinfo might not be reliable. Use with

caution.)

processors : 12

siblings : 24

physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13

physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13

physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13

physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13

cache size : 24576 KB

From /proc/meminfo

MemTotal: 1058789108 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

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<http://www.spec.org/>



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Platform Notes (Continued)

```

/usr/bin/lsb_release -d
    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 slesperf2 3.0.76-0.101 default #1 SMP Fri Jun 14 08:21:43 UTC 2013
    (ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 13 00:16 1st=S

SPEC is set to: /root/Desktop/Performance/ic14.0_Oct17_2013
Filesystem      Type      Size      Used Avail Use% Mounted on
/dev/sda2        ext2     30G      190G  174G  53% /

Additional information from dmidecode:
BIOS Dell Inc. 1.00.4 01/27/2014
Memory:
47x 00CE04B300CE M393B2G70BH0-YK0 16 GB 1333 MHz
11x 00CE04B300CE M393B2G70BH0-YK0 16 GB 1333 MHz
6x 00CE04B300CE M393B2G70CB0-YK0 16 GB 1333 MHz

(Kind of data from sysinfo program)

```

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = */root/Desktop/Performance/ic14.0_Oct17_2013/libs/32:/root/Desktop/Performance/ic14.0_Oct17_2013/libs/64:/root/Desktop/Performance/ic14.0_Oct17_2013/sh*

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:

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General Notes (Continued)

```
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through 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:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,--muldefs -L/sh -lsmarthearp
```

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

401.bzip2: -DSPEC_CPU_LP64

456.hmmer: -DSPEC_CPU_LP64

458.sjeng: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LINUX

483.xalancobmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

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Peak Optimization Flags (Continued)

```

400.perlbench: -xSSE4.2(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: -xSSE4.2(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: -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

456.hmmer: -xSSE4.2 -no -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)
            -unroll14 -auto-ilp32

462.quantum: 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

C++ benchmarks:

471.cnetpp: -xSSE4.2(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

```

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Peak Optimization Flags (Continued)

483.xalanbmk: 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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