### SPECint®_rate2006 = 1820

### SPECint_rate_base2006 = 1750

#### CPU2006 license: 55

#### Test sponsor: Dell Inc.

#### Tested by: Dell Inc.

#### Test date: Feb-2014

#### Hardware Availability: Mar-2014

#### Software Availability: Mar-2014

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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<tr>
<td>400.perlbench</td>
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<td>401.bzip2</td>
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<td>403.gcc</td>
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<td>429.mcf</td>
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<td>462.libquantum</td>
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<td>464.h264ref</td>
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<td>471.omnetpp</td>
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<td>473.astar</td>
<td>1010</td>
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<tr>
<td>483.xalancbmk</td>
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</tbody>
</table>

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### Dell Inc.

PowerEdge R920 (Intel Xeon E7-8891 v2, 3.20 GHz)

**CPU Name:** Intel Xeon E7-8891 v2  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz  
**CPU MHz:** 3200  
**FPU:** Integrated  
**CPU(s) enabled:** 40 cores, 4 chips, 10 cores/chip, 2 threads/core  
**CPU(s) orderable:** 2,4 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:** 37.5 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

---

### Software

**Operating System:** SUSE Linux Enterprise Server 11 (x86_64) 3.76-0.11-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  
**Peak Pointers:** 32/64-bit  
**Other Software:** Microquill SmartHeap V10.0
**SPEC CINT2006 Result**

Dell Inc.

PowerEdge R920 (Intel Xeon E7-8891 v2, 3.20 GHz)

SPECint_rate2006 = 1820
SPECint_rate_base2006 = 1750

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

**Results Table**

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</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"

**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/ic14_0_Oct17_2013/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on slesperf3 Tue Feb 4 17:18:02 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 E7-8891 v2 @ 3.20GHz
   4 "physical id"s (chips)
SPEC CINT2006 Result

Dell Inc.

PowerEdge R920 (Intel Xeon E7-8891 v2, 3.20 GHz)

SPECint_rate2006 = 1820
SPECint_rate_base2006 = 1750

CPU2006 license: 55
Test date: Feb-2014
Test sponsor: Dell Inc.
Hardware Availability: Mar-2014
Tested by: Dell Inc.
Software Availability: Mar-2014

Platform Notes (Continued)

80 "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 : 10
siblings : 20
physical 0: cores 2 3 4 5 6 7 8 10 11 12
physical 1: cores 2 3 4 5 6 7 8 10 11 12
physical 2: cores 2 3 4 5 6 7 8 10 11 12
physical 3: cores 2 3 4 5 6 7 8 10 11 12
cache size : 38400 KB

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

/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 slesperf3 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 4 08:51 last=S

SPEC is set to: /root/Desktop/Performance/ic14.0_Oct17_2013

Additional information from dmidecode:
BIOS Dell Inc. 1.0.4 01/27/2014
Memory:
31x 00CE00B300CE M393B2G70BH0-YK0 16 GB 1333 MHz
19x 00CE00B300CE M393B2G70CB0-YK0 16 GB 1333 MHz
8x 00CE04B300CE M393B2G70BH0-YK0 16 GB 1333 MHz
6x 00CE04B300CE M393B2G70CB0-YK0 16 GB 1333 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
Dell Inc. PowerEdge R920 (Intel Xeon E7-8891 v2, 3.20 GHz)

SPECint_rate2006 = 1820
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CPU2006 license: 55
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Hardware Availability: Mar-2014
Software Availability: Mar-2014

General Notes (Continued)
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
runspec command invoked through numactl i.e.:
umactl --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,-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

Continued on next page
Dell Inc.

PowerEdge R920 (Intel Xeon E7-8891 v2, 3.20 GHz)

SPECint_rate2006 = 1820
SPECint_rate_base2006 = 1750

CPU2006 license: 55
Test sponsor: Dell Inc.
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Test date: Feb-2014
Hardware Availability: Mar-2014
Software Availability: Mar-2014

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: -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 -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
Dell Inc.  
PowerEdge R920 (Intel Xeon E7-8891 v2, 3.20 GHz)  

SPECint_rate2006 = 1820  
SPECint_rate_base2006 = 1750

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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-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 other inquiries, please contact webmaster@spec.org.

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