Dell Inc.

PowerEdge R720 (Intel Xeon E5-2650 v2, 2.60 GHz)

SPECint_rate2006 = 683
SPECint_rate_base2006 = 661

Hardware

- CPU Name: Intel Xeon E5-2650 v2
- CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
- CPU MHz: 2600
- FPU: Integrated
- CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
- Primary Cache: 32 KB I + 32 KB D on chip per core
- 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 (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)
- Disk Subsystem: 1 x 1 TB 7200 RPM SATA
- Other Hardware: None

Software

- Operating System: SUSE Linux Enterprise Server 11 SP3 (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
- Peak Pointers: 32/64-bit
- Other Software: Microquill SmartHeap V10.0

Test date: Aug-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.
CPU(s) orderable: 1, 2 chip
Dell Inc. PowerEdge R720 (Intel Xeon E5-2650 v2, 2.60 GHz) SPEC CINT2006 Result

SPECint_rate2006 = 683
SPECint_rate_base2006 = 661

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

Test date: Aug-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

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
Logical Processor enabled
System Profile set to Performance
Sysinfo program /root/cpu2006.1.2.ic13/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on linux Sat Aug 31 11:16:15 2013

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 E5-2650 v2 @ 2.60GHz
2 "physical id"s (chips)
32 "processors"

Continued on next page
SPEC CINT2006 Result

Dell Inc.
PowerEdge R720 (Intel Xeon E5-2650 v2, 2.60 GHz)  

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SPECint_rate_base2006 = 661

CPU2006 license: 55  
Test sponsor: Dell Inc.  
Tested by: Dell Inc.  
Test date: Aug-2013  
Hardware Availability: Sep-2013  
Software Availability: Sep-2013

Platform Notes (Continued)

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
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
  
cache size : 20480 KB

From /proc/meminfo
  
MemTotal: 264601772 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 linux 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 Aug 31 11:13 last=S

SPEC is set to: /root/cpu2006.1.2.ic13
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext2 817G 11G 806G 2% /

Additional information from dmidecode:
  
BIOS Dell Inc. 2.0.18 08/10/2013
Memory:
  
8x 00CE00B300CE M393B2G70DB0-CMA 16 GB 1866 MHz
8x 00CE04B300CE M393B2G70DB0-CMA 16 GB 1866 MHz

(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.ic13/libs/32:/root/cpu2006.1.2.ic13/libs/64:/root/cpu2006.1.2.ic13/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:

Continued on next page
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General Notes (Continued)

```
echo 1>     /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
The Dell PowerEdge R720 and
the Dell PowerEdge R720xd models are electronically equivalent.
The result has been measured on a Dell PowerEdge R720xd model.
```

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 R720 (Intel Xeon E5-2650 v2, 2.60 GHz)

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Hardware Availability: Sep-2013
Software Availability: Sep-2013

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: basepeak = yes
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.
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Test date: Aug-2013
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Software Availability: Sep-2013

Peak Optimization Flags (Continued)

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

C++ benchmarks:
471.omnetpp: -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
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-revB.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-revB.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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