Dell Inc.

PowerEdge R620 (Intel Xeon E5-2695 v2, 2.40 GHz)

SPECint\_rate\_2006 = 915
SPECint\_rate\_base\_2006 = 887

Dell Inc.

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

CPU Name: Intel Xeon E5-2695 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 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: 30 MB I+D on chip per chip
Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)
Other Cache: None
Disk Subsystem: 1 x 300 GB 15000 RPM SAS
Other Hardware: None

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
Dell Inc. PowerEdge R620 (Intel Xeon E5-2695 v2, 2.40 GHz)  

SPEC CINT2006 Result  

<table>
<thead>
<tr>
<th>Benchmark</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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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"

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 Mon Aug 19 11:21:32 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 E5-2695 v2 @ 2.40GHz
  2 "physical id"s (chips)
  48 "processors"
Dell Inc.  
PowerEdge R620 (Intel Xeon E5-2695 v2, 2.40 GHz)  

**SPEC CINT2006 Result**  

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>915</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>887</td>
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</tbody>
</table>

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

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### 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 : 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
- cache size : 30720 KB

From /proc/meminfo

- MemTotal: 264634596 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From /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

From /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
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From /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 19 11:06 last=S

### 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:

(End of data from sysinfo program)

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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>

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

400.perlbench: icc -m64
401.bzip2: icc -m64

Continued on next page
SPEC CINT2006 Result

Dell Inc.
PowerEdge R620 (Intel Xeon E5-2695 v2, 2.40 GHz)

SPECint\textsubscript{rate\textsubscript{2006}} = 915
SPECint\textsubscript{rate\textsubscript{base\textsubscript{2006}}} = 887

CPU2006 license: 55
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Tested by: Dell Inc.

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

Peak Compiler Invocation (Continued)

\begin{verbatim}
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
icpc -m32
\end{verbatim}

Peak Portability Flags

\begin{verbatim}
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
\end{verbatim}

Peak Optimization Flags

C benchmarks:

\begin{verbatim}
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

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
\end{verbatim}

Continued on next page
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Peak Optimization Flags (Continued)

C++ benchmarks:

471.omnetpp: -xSSE4.2(pas 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.

Tested with SPEC CPU2006 v1.2.
Originally published on 22 October 2013.