Dell Inc.

PowerEdge R530xd (Intel Xeon E5-2630L v3, 1.80 GHz)

SPECint\_rate2006 = 590
SPECint\_rate_base2006 = 565

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

Hardware

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2630L v3</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 2.90 GHz</td>
</tr>
<tr>
<td>CPU MHZ</td>
<td>1800</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>16 cores, 2 chips, 8 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1,2 chip</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache</td>
<td>20 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>500 GB 7200 RPM SATA</td>
</tr>
<tr>
<td>Other Hardware</td>
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</tbody>
</table>

Software

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Red Hat Enterprise Linux Server release 7.0 (Maipo)</td>
</tr>
<tr>
<td>Compiler</td>
<td>CIC++: Version 15.0.0.090 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>No</td>
</tr>
<tr>
<td>File System</td>
<td>ext4</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>32-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software</td>
<td>Microquill SmartHeap V10.0</td>
</tr>
</tbody>
</table>
## SPEC CINT2006 Result

### Dell Inc.

PowerEdge R530xd (Intel Xeon E5-2630L v3, 1.80 GHz)

<table>
<thead>
<tr>
<th>CPU2006 license: 55</th>
<th>SPECint_rate2006 = 590</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor: Dell Inc.</td>
<td>SPECint_rate_base2006 = 565</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Test date: May-2015</td>
</tr>
<tr>
<td>Hardware Availability: May-2015</td>
<td></td>
</tr>
<tr>
<td>Software Availability: Nov-2014</td>
<td></td>
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</table>

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>32</td>
<td>817</td>
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<td>401.bzip2</td>
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<td>403.gcc</td>
<td>32</td>
<td>568</td>
<td>453</td>
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<td>454</td>
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<td>445.gobmk</td>
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<td>464.h264ref</td>
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<td>1116</td>
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<td>471.omnetpp</td>
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<td>364</td>
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<td>363</td>
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<td>473.astar</td>
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<td>693</td>
<td>324</td>
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<tr>
<td>483.xalancbmk</td>
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<td>635</td>
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<td>349</td>
<td>632</td>
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<td>348</td>
<td>635</td>
<td>348</td>
<td>635</td>
<td>349</td>
<td>632</td>
</tr>
</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:**
- Snoop Mode set to Cluster on Die
- Virtualization Technology disabled
- System Profile set to Performance
- Sysinfo program: `/root/cpu2006-1.2/config/sysinfo.rev6914`

Running on localhost.localdomain Sat May 9 10:15:24 2015

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](http://www.spec.org/cpu2006/Docs/config.html#sysinfo)

From `/proc/cpuinfo`

```
model name : Intel(R) Xeon(R) CPU E5-2630L v3 @ 1.80GHz
2 "physical id"s (chips)
32 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
Continued on next page
```
SPEC CINT2006 Result

Dell Inc.
PowerEdge R530xd (Intel Xeon E5-2630L v3, 1.80 GHz)

SPECint_rate2006 = 590
SPECint_rate_base2006 = 565

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Nov-2014

Platform Notes (Continued)

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: 264045624 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
s-os-release:
  NAME="Red Hat Enterprise Linux Server"
  VERSION="7.0 (Maipo)"
  ID="rhel"
  ID_LIKE="fedora"
  VERSION_ID="7.0"
  PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
  ANSI_COLOR="0;31"
  CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

uname -a:
  Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 9 10:14

SPEC is set to: /root/cpu2006-1.2
  Filesystem  Type Size Used Avail Use% Mounted on
  /dev/sda1  ext4  489G  8.1G  456G  2% /

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Dell Inc. 1.0.0 04/16/2015
Memory:
  13x 00AD00B300AD HMA42GR7MFR4N-TFTD 16 GB 2 rank 2133 MHz, configured at 1866 MHz
  3x 00AD063200AD HMA42GR7MFR4N-TFT1 16 GB 2 rank 2133 MHz, configured at 1866 MHz

(End of data from sysinfo program)
SPEC CINT2006 Result

Dell Inc.

PowerEdge R530xd (Intel Xeon E5-2630L v3, 1.80 GHz)

SPECint_rate2006 = 590
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CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0
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.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
  icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

C++ benchmarks:
  icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Base Portability Flags

  400.perlbench: -DSPEC_CPU_LINUX_IA32
  462.libquantum: -DSPEC_CPU_LINUX
  483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
  -opt-mem-layout-trans=3

C++ benchmarks:
  -xCORE-AVX2 -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
Dell Inc.  
PowerEdge R530xd (Intel Xeon E5-2630L v3, 1.80 GHz)  
Dell Inc.  
Dell Inc.  

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

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: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

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SPEC CINT2006 Result

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Software Availability: Nov-2014

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes
464.h264ref:
  -xCORE-AVX2(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:
  -xCORE-AVX2(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-ic15.0-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.20150421.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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