### Dell Inc.

**PowerEdge M630 (Intel Xeon E5-2643 v3, 3.40 GHz)**

<table>
<thead>
<tr>
<th>SPECint&lt;sup&gt;®&lt;/sup&gt; _rate2006 = 689</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint&lt;sup&gt;®&lt;/sup&gt; _rate_base2006 = 667</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test date:** Oct-2014  
**Hardware Availability:** Dec-2014  
**Software Availability:** Jan-2014

#### Hardware

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2643 v3</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.70 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>3400</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>12 cores, 2 chips, 6 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)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>1 x 800 GB SAS SSD</td>
</tr>
<tr>
<td>Other Hardware</td>
<td>None</td>
</tr>
</tbody>
</table>

#### Software

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Red Hat Enterprise Linux Server release 6.5 (Santiago)</td>
</tr>
<tr>
<td>Compiler</td>
<td>C/C++: Version 14.0.0.080 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>
Dell Inc.

PowerEdge M630 (Intel Xeon E5-2643 v3, 3.40 GHz)

SPEC CINT2006 Result

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SPECint_rate2006 = 689
SPECint_rate_base2006 = 667

Dell Inc.

PowerEdge M630 (Intel Xeon E5-2643 v3, 3.40 GHz)

SPEC CINT2006 Result

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SPEC CINT2006 Result

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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
Execute Disable disabled
System Profile set to Custom
Memory Patrol Scrub set to Disabled
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Mon Oct 27 18:47:00 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 E5-2643 v3 @ 3.40GHz
  2 "physical id"s (chips)

Continued on next page
Dell Inc.  
PowerEdge M630 (Intel Xeon E5-2643 v3, 3.40 GHz)  

**SPEC CINT2006 Result**  

<table>
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<tr>
<th>SPECint_rate2006</th>
<th>689</th>
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### Platform Notes (Continued)

24 "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 : 6  
siblings : 12  
physical 0: cores 0 1 2 3 4 5  
physical 1: cores 0 1 2 3 4 5  
cache size : 20480 KB
```

From /proc/meminfo

```
MemTotal: 264437532 kB  
HugePages_Total: 0  
Hugepagesize: 2048 kB
```

/usr/bin/lsb_release -d  
Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*

```
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)  
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)  
```

```
uname -a:  
Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Oct 27 18:44

SPEC is set to: /root/cpu2006-1.2  

```
Filesystem Type Size Used Avail Use% Mounted on  
/dev/sda2 ext4 730G 9.7G 683G 2% /
```

Additional information from dmidecode:

```
BIOS Dell Inc. 1.0.1 10/15/2014  
Memory:  
8x 000000000000 Not Specified 2133 MHz 1 rank  
16x 002C00B3002C 36ASF2G72P2-2G1A1 16 GB 2133 MHz 2 rank
```

(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/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/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/redhat_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 numacll i.e.:  
umacll --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:  
`-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 -W1,-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
```

Continued on next page
Dell Inc.  
PowerEdge M630 (Intel Xeon E5-2643 v3, 3.40 GHz)  

SPECint\_rate\_base\_2006 = 667

CPU\_2006 \ license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

**Peak Compiler Invocation (Continued)**

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: -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: basepeak = yes

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 -unroll12 -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

462.libquantum: basepeak = yes

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### Peak Optimization Flags (Continued)

```plaintext
464.h264ref: -xCORE-AVX2(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:**

```plaintext
471.omnetpp: -xCORE-AVX2(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
```

```plaintext
473.astar: basepeak = yes
```

```plaintext
483.xalanchbmk: basepeak = yes
```

### Peak Other Flags

**C benchmarks:**

```plaintext
403.gcc: -Dalloca=_alloca
```

The flags files that were used to format this result can be browsed at


http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.html

You can also download the XML flags sources by saving the following links:


http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.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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