## SPECint®_rate2006 = 565
### SPECint_rate_base2006 = 545

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

<table>
<thead>
<tr>
<th>Test date:</th>
<th>Sep-2013</th>
</tr>
</thead>
</table>

### Hardware

- **CPU Name:** Intel Xeon E5-2650L v2  
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.10 GHz  
- **CPU MHz:** 1700  
- **FPU:** Integrated  
- **CPU(s) enabled:** 20 cores, 2 chips, 10 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:** 25 MB I+D on chip per chip  
- **Other Cache:** None  
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC, running at 1600 MHz)  
- **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:** CIC++ 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 R720xd (Intel Xeon E5-2650L v2, 1.70 GHz)

SPECint_rate2006 = 565
SPECint_rate_base2006 = 545

Results Table

<table>
<thead>
<tr>
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<th>Seconds</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 Tue Sep  3 11:54:49 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 E5-2650L v2 @ 1.70GHz
2 "physical id"s (chips)
40 "processors"

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**SPEC CINT2006 Result**

### Dell Inc.

**PowerEdge R720xd (Intel Xeon E5-2650L v2, 1.70 GHz)**

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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 : 10
siblings : 20
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 25600 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
```

```
runtime 3 Sep 3 11:52 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. 2.0.19 08/29/2013
Memory:
 8x 00CE00B300CE M393B2G70DB0-CMA 16 GB 1600 MHz
 8x 00CE04B300CE M393B2G70DB0-CMA 16 GB 1600 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 + 8 GB memory using RHEL5.5

Transparent Huge Pages enabled with:

```
echo always > /sys/kernel/mm/transparent_hugepage/enabled
```

Filesystem page cache cleared with:

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Dell Inc.
PowerEdge R720xd (Intel Xeon E5-2650L v2, 1.70 GHz)  

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**General Notes (Continued)**

```
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numaclt i.e.:  
umaclt --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

C benchmarks:
- `400.perlbench`: `icc` -m64
- `401.bzip2`: `icc` -m64

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Dell Inc.
PowerEdge R720xd (Intel Xeon E5-2650L v2, 1.70 GHz)

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Specint\_rate2006 = 565
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Peak Compiler Invocation (Continued)

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

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
SPEC CINT2006 Result

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### Peak Optimization Flags (Continued)

**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-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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