Dell Inc.

PowerEdge R540 (Intel Xeon Gold 5122, 3.60 GHz)

**SPECint®2006 = Not Run**

**SPECint_base2006 = 70.0**

**SPECint®2006 = Not Run**

**SPECint_base2006 = 70.0**

### CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Hardware:

- **CPU Name:** Intel Xeon Gold 5122
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz
- **CPU MHz:** 3600
- **FPU:** Integrated
- **CPU(s) enabled:** 8 cores, 2 chips, 4 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:** 1 MB I+D on chip per core
- **L3 Cache:** 16.5 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 192 GB (12 x 16 GB 2Rx8 PC4-2666V-R)
- **Disk Subsystem:** 1 x 1 TB SATA 7200 RPM
- **Other Hardware:** None

### Software:

- **Operating System:** SUSE Linux Enterprise Server 12 SP2 4.4.21-69-default
- **Compiler:** C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
- **Auto Parallel:** Yes
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32/64-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.2
## Dell Inc.

PowerEdge R540 (Intel Xeon Gold 5122, 3.60 GHz)

**SPECint2006 = Not Run**

**SPECint_base2006 = 70.0**

**CPU2006 license:** 55
**Test date:** Aug-2017
**Hardware Availability:** Sep-2017
**Test sponsor:** Dell Inc.
**Software Availability:** Apr-2017
**Tested by:** Dell Inc.

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>210</td>
<td>46.6</td>
<td>210</td>
<td>46.6</td>
<td>209</td>
<td>46.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>401.bzip2</td>
<td>340</td>
<td>28.3</td>
<td>341</td>
<td>28.3</td>
<td>341</td>
<td>28.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>403.gcc</td>
<td>191</td>
<td>42.2</td>
<td>191</td>
<td>42.2</td>
<td>191</td>
<td>42.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>429.mcf</td>
<td>117</td>
<td>77.8</td>
<td>116</td>
<td>78.8</td>
<td>118</td>
<td>77.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>445.gobmk</td>
<td>317</td>
<td>33.1</td>
<td>317</td>
<td>33.1</td>
<td>317</td>
<td>33.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>456.hmmer</td>
<td>95.4</td>
<td>97.8</td>
<td>95.7</td>
<td>97.5</td>
<td>96.0</td>
<td>97.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>458.sjeng</td>
<td>331</td>
<td>36.6</td>
<td>331</td>
<td>36.5</td>
<td>331</td>
<td>36.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>462.libquantum</td>
<td>4.92</td>
<td>4210</td>
<td>5.02</td>
<td>4130</td>
<td>4.91</td>
<td>4220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>464.h264ref</td>
<td>306</td>
<td>72.4</td>
<td>306</td>
<td>72.2</td>
<td>305</td>
<td>72.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>216</td>
<td>28.9</td>
<td>214</td>
<td>29.2</td>
<td>217</td>
<td>28.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>473.astar</td>
<td>183</td>
<td>38.3</td>
<td>184</td>
<td>38.2</td>
<td>182</td>
<td>38.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>85.1</td>
<td>81.1</td>
<td>85.6</td>
<td>80.6</td>
<td>85.2</td>
<td>80.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

### Platform Notes

BIOS settings:
- Sub NUMA Cluster disabled
- Virtualization Technology disabled
- System Profile set to Custom
- CPU Performance set to Maximum Performance
- C States set to Autonomous
- C1E disabled
- Energy Efficient Turbo disabled
- Uncore Frequency set to Dynamic
- Energy Efficiency Policy set to Performance
- Memory Patrol Scrub disabled
- Logical Processor enabled
- CPU Interconnect Bus Link Power Management disabled
- PCI ASPM LL Link Power Management disabled

Sysinfo program /root/cpu2006-1.2_1c17u3/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
runtime on linux-28u4 Wed Aug 30 18:51:18 2017

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

Continued on next page
SPEC CINT2006 Result

Dell Inc.

PowerEdge R540 (Intel Xeon Gold 5122, 3.60 GHz)

SPECint2006 = Not Run
SPECint_base2006 = 70.0

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

Test date: Aug-2017
Hardware Availability: Sep-2017
Software Availability: Apr-2017

---

Platform Notes (Continued)

model name : Intel(R) Xeon(R) Gold 5122 CPU @ 3.60GHz
2 "physical id"s (chips)
16 "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 : 4
siblings : 8
physical 0: cores 2 3 4 10
physical 1: cores 1 5 9 13
 cache size : 16896 KB

From /proc/meminfo
MemTotal: 196687620 kB
 HugePages_Total: 0
 Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
SuSE-release:
 SUSE Linux Enterprise Server 12 (x86_64)
 VERSION = 12
 PATCHLEVEL = 2
 # This file is deprecated and will be removed in a future service pack or
 # release.
 # Please check /etc/os-release for details about this release.
os-release:
 NAME="SLES"
 VERSION="12-SP2"
 VERSION_ID="12.2"
 PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
 ID="sles"
 ANSI_COLOR="0;32"
 CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
(9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Aug 30 18:50

SPEC is set to: /root/cpu2006-1.2_ic17u3
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 xfs 927G 9.1G 918G 1% /

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.

Continued on next page
# SPEC CINT2006 Result

### Dell Inc.

**PowerEdge R540 (Intel Xeon Gold 5122, 3.60 GHz)**

<table>
<thead>
<tr>
<th>SPECint2006</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_base2006</td>
<td>70.0</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Test date:** Aug-2017  
**Hardware Availability:** Sep-2017  
**Tested by:** Dell Inc.  
**Software Availability:** Apr-2017

### Platform Notes (Continued)

- BIOS Dell Inc. 1.0.0 08/10/2017  
- Memory:  
  - 8x 002C00B30002C 18ASF2G72PDZ-2G6D1 16 GB 2 rank 2666 MHz  
  - 4x 002C06320002C 18ASF2G72PDZ-2G6D1 16 GB 2 rank 2666 MHz  
  - 4x Not Specified Not Specified

(End of data from sysinfo program)

### General Notes

Environment variables set by runspec before the start of the run:  
- KMP_AFFINITY = "granularity=fine,scatter"  
- LD_LIBRARY_PATH = "/root/cpu2006-1.2ic17u3/lib/ia32:/root/cpu2006-1.2ic17u3/lib/intel64:/root/cpu2006-1.2ic17u3/sh10.2"  
- OMP_NUM_THREADS = "8"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM  
Memory using Redhat Enterprise Linux 7.2  
Transparent Huge Pages enabled by default.  
Filesystem page cache cleared with:  
shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run

### Base Compiler Invocation

- **C benchmarks:**  
  - icc -m64
- **C++ benchmarks:**  
  - icpc -m64

### Base Portability Flags

- 400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64  
- 401.bzip2: -DSPEC_CPU_LP64  
- 403.gcc: -DSPEC_CPU_LP64  
- 429.mcf: -DSPEC_CPU_LP64  
- 445.gobmk: -DSPEC_CPU_LP64  
- 456.hmmer: -DSPEC_CPU_LP64  
- 458.sjeng: -DSPEC_CPU_LP64  
- 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX  
- 464.h264ref: -DSPEC_CPU_LP64  
- 471.omnetpp: -DSPEC_CPU_LP64  
- 473.astar: -DSPEC_CPU_LP64  
- 483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
SPEC CINT2006 Result

Dell Inc.  

PowerEdge R540 (Intel Xeon Gold 5122, 3.60 GHz)  

SPECint2006 = Not Run  
SPECint_base2006 = 70.0

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

Test date: Aug-2017  
Hardware Availability: Sep-2017  
Software Availability: Apr-2017

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-autop32

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -autop32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64

Base 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-ic17.0-official-linux64-revF.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. 
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2. 
Report generated on Wed Sep 20 11:02:57 2017 by SPEC CPU2006 PS/PDF formatter v6932. 
Originally published on 19 September 2017.