## SPEC® CINT2006 Result

### Dell Inc. PowerEdge R740 (Intel Xeon Silver 4116T, 2.10 GHz)

**SPECint®_rate2006 = Not Run**

**SPECint_rate_base2006 = 1040**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>759</td>
<td></td>
</tr>
<tr>
<td>401.bzip2</td>
<td>455</td>
<td></td>
</tr>
<tr>
<td>403.gcc</td>
<td>772</td>
<td></td>
</tr>
<tr>
<td>429.mcf</td>
<td>1530</td>
<td>48</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>650</td>
<td>48</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>1560</td>
<td>48</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>696</td>
<td>48</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>759</td>
<td></td>
</tr>
<tr>
<td>464.h264ref</td>
<td>1210</td>
<td>48</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>556</td>
<td>48</td>
</tr>
<tr>
<td>473.astar</td>
<td>611</td>
<td>48</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>1300</td>
<td>48</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test date:** Sep-2017  
**Hardware Availability:** Sep-2017  
**Software Availability:** Nov-2016

### Hardware

- **CPU Name:** Intel Xeon Silver 4116T  
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.00 GHz  
- **CPU MHz:** 2100  
- **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:** 1 MB I+D on chip per core  
- **L3 Cache:** 16.5 MB I+D on chip per chip  
- **Other Cache:** None  
- **Memory:** 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R, running at 2400 MHz)  
- **Disk Subsystem:** 1 x 960 GB SATA SSD  
- **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:** No  
- **File System:** xfs  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 32-bit  
- **Peak Pointers:** 32/64-bit  
- **Other Software:** Microquill SmartHeap V10.2
### Dell Inc.

PowerEdge R740 (Intel Xeon Silver 4116T, 2.10 GHz)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Base Copies</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>48</td>
<td>617</td>
<td>760</td>
<td>757</td>
<td>618</td>
<td>759</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>48</td>
<td>1006</td>
<td>460</td>
<td>1023</td>
<td>453</td>
<td>777</td>
</tr>
<tr>
<td>403.gcc</td>
<td>48</td>
<td>502</td>
<td>770</td>
<td>501</td>
<td>501</td>
<td>772</td>
</tr>
<tr>
<td>429.mcf</td>
<td>48</td>
<td>286</td>
<td>1530</td>
<td>288</td>
<td>1520</td>
<td>287</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>48</td>
<td>775</td>
<td>650</td>
<td>774</td>
<td>650</td>
<td>776</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>48</td>
<td>288</td>
<td>1560</td>
<td>290</td>
<td>1560</td>
<td>287</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>48</td>
<td>835</td>
<td>696</td>
<td>835</td>
<td>696</td>
<td>834</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>48</td>
<td>94.3</td>
<td>10500</td>
<td>94.3</td>
<td>10500</td>
<td>94.1</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>48</td>
<td>879</td>
<td>1210</td>
<td>886</td>
<td>1200</td>
<td>854</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>48</td>
<td>538</td>
<td>557</td>
<td>540</td>
<td>555</td>
<td>540</td>
</tr>
<tr>
<td>473.astar</td>
<td>48</td>
<td>553</td>
<td>609</td>
<td>551</td>
<td>611</td>
<td>552</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>48</td>
<td>256</td>
<td>1300</td>
<td>255</td>
<td>1300</td>
<td>256</td>
</tr>
</tbody>
</table>

### Operating System Notes

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

### Platform Notes

- **BIOS settings:**
  - Sub NUMA Cluster enabled
  - Virtualization Technology disabled
  - System Profile set to Custom
  - CPU Performance set to Maximum Performance
  - C States set to Autonomous
  - C1E 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 L1 Link Power Management disabled

Sysinfo program /root/cpu2006-1.2_ic17u3/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-wwko Fri Sep 15 10:37:49 2017
**SPEC CINT2006 Result**

**Dell Inc.**

PowerEdge R740 (Intel Xeon Silver 4116T, 2.10 GHz)

<table>
<thead>
<tr>
<th>SPECint_rate2006 =</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006 =</td>
<td>1040</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 55  
**Test date:** Sep-2017  
**Test sponsor:** Dell Inc.  
**Hardware Availability:** Sep-2017  
**Tested by:** Dell Inc.  
**Software Availability:** Nov-2016

---

**Platform Notes (Continued)**

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) Silver 4116T CPU @ 2.10GHz
- 2 "physical id"s (chips)
- 48 "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 : 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 : 16896 KB

From `/proc/meminfo`
- MemTotal: 394867840 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:  
(x86_64) x86_64 x86_64 GNU/Linux  
run-level 3 Sep 15 10:34
```

SPEC is set to: /root/cpu2006-1.2_ic17u3

```
Filesystem  Type  Size  Used  Avail  Use%  Mounted on
/dev/sda2  xfs  892G  38G  855G  5%  /
```

Additional information from `dmidecode`:

Continued on next page
Dell Inc.

PowerEdge R740 (Intel Xeon Silver 4116T, 2.10 GHz)

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1040

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

Test date: Sep-2017
Hardware Availability: Sep-2017
Software Availability: Nov-2016

Platform Notes (Continued)

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. 1.0.7 07/01/2017
Memory:
24x 00AD00B300AD HMA82GR7AFR8N-VK 16 GB 2 rank 2666 MHz, configured at 2400 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_ic17u3/lib/ia32:/root/cpu2006-1.2_ic17u3/lib/intel64:/root/cpu2006-1.2_ic17u3/sh10.2"

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
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

Base Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -D_FILE_OFFSET_BITS=64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
Dell Inc.

PowerEdge R740 (Intel Xeon Silver 4116T, 2.10 GHz)

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1040

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.
Test date: Sep-2017
Hardware Availability: Sep-2017
Software Availability: Nov-2016

Base Portability Flags (Continued)
473.astar: -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Base Optimization Flags
C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3
C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap

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.
Originally published on 3 October 2017.