Dell Inc. PowerEdge R740 (Intel Xeon Gold 6138T, 2.00 GHz) SPECint\textsuperscript{®}\textsubscript{rate2006} = Not Run SPECint\textsuperscript{rate\_base2006} = 1750

<table>
<thead>
<tr>
<th>Test sponsor: Dell Inc.</th>
<th>Test date: Sep-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Hardware Availability: Sep-2017</td>
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<tr>
<td>CPU2006 license: 55</td>
<td>Software Availability: Nov-2016</td>
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</table>

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>SPECint_rate_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Run</td>
<td>1750</td>
</tr>
</tbody>
</table>

### 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

### Hardware
- **CPU Name:** Intel Xeon Gold 6138T
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz
- **CPU MHz:** 2100
- **FPU:** Integrated
- **CPU(s) enabled:** 40 cores, 2 chips, 20 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:** 27.5 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)
- **Disk Subsystem:** 1 x 960 GB SATA SSD
- **Other Hardware:** None

<table>
<thead>
<tr>
<th>SPECint_rate_base2006 = 1750</th>
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Dell Inc.
**SPEC CINT2006 Result**

Dell Inc.

PowerEdge R740 (Intel Xeon Gold 6138T, 2.00 GHz)

**SPECint_rate2006 = Not Run**

**SPECint_rate_base2006 = 1750**

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<td>2050</td>
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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:
  - 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 Li Link Power Management disabled
  - Sysinfo program /root/ram_cpu2006/config/sysinfo.rev6993
  - Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
  - running on linux-wwko Thu Sep 7 10:59:03 2017

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Dell Inc.
PowerEdge R740 (Intel Xeon Gold 6138T, 2.00 GHz)

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1750

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)

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) Gold 6138T CPU @ 2.00GHz
2 "physical id"s (chips)
80 "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 : 20
siblings : 40
physical 0: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
physical 1: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
cache size : 28160 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:
    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 Sep 7 10:30

SPEC is set to: /root/ram_cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 xfs 892G 41G 851G 5% /

Additional information from dmidecode:
Continued on next page
SPEC CINT2006 Result

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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

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/root/ram_cpu2006/lib/ia32:/root/ram_cpu2006/lib/intel64:/root/ram_cpu2006/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
473.astar: -D_FILE_OFFSET_BITS=64

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

Base Optimization Flags
C benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX512 -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

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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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