Dell Inc. PowerEdge R740 (Intel Xeon Gold 5118, 2.30 GHz) SPECint®_rate2006 =  Not Run
SPECint_rate_base2006 = 1110

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

SPECint_rate_base2006 = 1110

Hardware

<table>
<thead>
<tr>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System: SUSE Linux Enterprise Server 12 SP2</td>
</tr>
<tr>
<td>Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux</td>
</tr>
<tr>
<td>Auto Parallel: No</td>
</tr>
<tr>
<td>File System: xfs</td>
</tr>
<tr>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers: 32-bit</td>
</tr>
<tr>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Other Software: Microquill SmartHeap V10.2</td>
</tr>
</tbody>
</table>

CPU Name: Intel Xeon Gold 5118
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 2300
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 MT/s)
Disk Subsystem: 1 x 960 GB SATA SSD
Other Hardware: None

Test date: May-2017
Hardware Availability: Jul-2017
Software Availability: Nov-2016

Copies 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12000 13000 14000 15000 16000

400.perlbench 48 801
401.bzip2 48 474
403.gcc 48 815
429.mcf 48 1570
445.gobmk 48 615
456.hmmer 48 1590
458.sjeng 48 665
462.libquantum 48
464.h264ref 48 1120
471.omnetpp 48 597
473.astar 48 649
483.xalancbmk 48 1410

SPECint_rate_base2006 = 1110
Dell Inc.

PowerEdge R740 (Intel Xeon Gold 5118, 2.30 GHz)

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---

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</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>48</td>
<td>585</td>
<td>801</td>
<td>587</td>
<td>799</td>
<td>582</td>
<td>805</td>
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<tr>
<td>401.bzip2</td>
<td>48</td>
<td>971</td>
<td>477</td>
<td>977</td>
<td>474</td>
<td>980</td>
<td>472</td>
</tr>
<tr>
<td>403.gcc</td>
<td>48</td>
<td><strong>474</strong></td>
<td><strong>815</strong></td>
<td>475</td>
<td>814</td>
<td>472</td>
<td>818</td>
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<tr>
<td>429.mcf</td>
<td>48</td>
<td>279</td>
<td>1570</td>
<td>278</td>
<td>1570</td>
<td><strong>279</strong></td>
<td><strong>1570</strong></td>
</tr>
<tr>
<td>445.gobmk</td>
<td>48</td>
<td>818</td>
<td>616</td>
<td>820</td>
<td>614</td>
<td><strong>818</strong></td>
<td><strong>615</strong></td>
</tr>
<tr>
<td>456.hmmer</td>
<td>48</td>
<td>282</td>
<td>1590</td>
<td>282</td>
<td>1590</td>
<td>281</td>
<td>1590</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>48</td>
<td>874</td>
<td>665</td>
<td><strong>874</strong></td>
<td><strong>665</strong></td>
<td>875</td>
<td>664</td>
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<tr>
<td>462.libquantum</td>
<td>48</td>
<td>56.0</td>
<td>17700</td>
<td>56.1</td>
<td>17700</td>
<td>55.8</td>
<td>17800</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>48</td>
<td><strong>951</strong></td>
<td><strong>1120</strong></td>
<td>945</td>
<td>1120</td>
<td>951</td>
<td>1120</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>48</td>
<td><strong>503</strong></td>
<td><strong>597</strong></td>
<td>503</td>
<td>597</td>
<td>503</td>
<td>597</td>
</tr>
<tr>
<td>473.astar</td>
<td>48</td>
<td><strong>519</strong></td>
<td><strong>649</strong></td>
<td>518</td>
<td>650</td>
<td>519</td>
<td>649</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>48</td>
<td><strong>236</strong></td>
<td><strong>1410</strong></td>
<td>236</td>
<td>1400</td>
<td>236</td>
<td>1410</td>
</tr>
</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 L1 Link Power Management disabled

Sysinfo program /home/cpu2006-1.2_ic17u3/config/sysinfo.revl6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-bgfp Tue May 30 11:26:55 2017
平台备注（续）

本节包含SUT（系统测试）信息，可通过一些常用工具查看。要删除或添加此节内容，请参阅：
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

从/proc/cpuinfo
- model name: Intel(R) Xeon(R) Gold 5118 CPU @ 2.30GHz
- 2 "physical id"s (chips)
- 48 "processors"
- cores, siblings (注意：计数这些与硬件和系统依赖。以下从/proc/cpuinfo的摘录可能不可靠。带谨慎使用。
  - 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

从/proc/meminfo
- MemTotal: 394732012 KB
- HugePages_Total: 0
- Hugepagesize: 2048 KB

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

从/etc/*release*/etc/*version*
- SuSE-release: SUSE Linux Enterprise Server 12 (x86_64)
- VERSION = 12
- PATCHLEVEL = 2
- #此文件已过时并将在未来服务包或版本中移除。
- #请检查/etc/os-release获取此版本的详情。

- 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
- SPEC is set to: /home/cpu2006-1.2_ic17u3
- Filesystem Type Size Used Avail Use% Mounted on
  /dev/sda4 xfs 405G 8.8G 396G 3% /home
- Additional information from dmidecode:
  Continued on next page
Dell Inc.
PowerEdge R740 (Intel Xeon Gold 5118, 2.30 GHz)

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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. 1.0.0 05/16/2017
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 = "'/home/cpu2006-1.2_ic17u3/lib/ia32:/home/cpu2006-1.2_ic17u3/lib/intel64:/home/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

Continued on next page
### Dell Inc.

**PowerEdge R740 (Intel Xeon Gold 5118, 2.30 GHz)**

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**Test date:** May-2017  
**Hardware Availability:** Jul-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-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


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


---

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

Tested with SPEC CPU2006 v1.2.  