Dell Inc. PowerEdge R730 (Intel Xeon E5-2623 v4, 2.60 GHz) SPECint®2006 = Not Run SPECint_base2006 = 56.2

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

Software
Operating System: SUSE Linux Enterprise Server 12 SP1 3.12.49-11-default
Compiler: C/C++: Version 17.0.0.098 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

Hardware
CPU Name: Intel Xeon E5-2623 v4
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
CPU(s) orderable: 1.2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 10 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx8 PC4-2400T-R, running at 2133 MHz)
Disk Subsystem: 1 x 120 GB SATA SSD
Other Hardware: None

Test date: Feb-2017
Hardware Availability: Mar-2016
Software Availability: Nov-2016
Dell Inc.

PowerEdge R730 (Intel Xeon E5-2623 v4, 2.60 GHz)

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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>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>266</td>
<td>36.7</td>
<td>267</td>
<td>36.7</td>
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<td>36.7</td>
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<tr>
<td>401.bzip2</td>
<td>403</td>
<td>23.9</td>
<td>407</td>
<td>23.7</td>
<td>405</td>
<td>23.8</td>
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<tr>
<td>403.gcc</td>
<td>243</td>
<td>33.2</td>
<td>244</td>
<td>33.0</td>
<td>244</td>
<td>33.0</td>
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<tr>
<td>429.mcf</td>
<td>140</td>
<td>64.9</td>
<td>137</td>
<td>66.4</td>
<td>136</td>
<td>66.9</td>
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<tr>
<td>445.gobmk</td>
<td>383</td>
<td>27.4</td>
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<td>27.4</td>
<td>384</td>
<td>27.3</td>
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<tr>
<td>456.hmmer</td>
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<td>118</td>
<td>78.9</td>
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<td>78.9</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>393</td>
<td>30.8</td>
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<td>30.8</td>
<td>392</td>
<td>30.8</td>
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<tr>
<td>462.libquantum</td>
<td>6.78</td>
<td>3060</td>
<td>7.22</td>
<td>2870</td>
<td>6.70</td>
<td>3090</td>
</tr>
<tr>
<td>464.h264ref</td>
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<td>55.1</td>
<td>402</td>
<td>55.0</td>
<td>401</td>
<td>55.1</td>
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<tr>
<td>471.omnetpp</td>
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<td>22.6</td>
<td>279</td>
<td>22.4</td>
<td>276</td>
<td>22.6</td>
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<tr>
<td>473.astar</td>
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<td>30.9</td>
<td>226</td>
<td>31.0</td>
<td>228</td>
<td>30.7</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>104</td>
<td>66.2</td>
<td>104</td>
<td>66.1</td>
<td>106</td>
<td>65.1</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:
Snoop Mode set to Opportunistic Snoop Broadcast
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 disabled
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-b0uv Mon Feb  6 19:19:22 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
model name : Intel(R) Xeon(R) CPU E5-2623 v4 @ 2.60GHz
2 "physical id"s (chips)

Continued on next page
Dell Inc.

PowerEdge R730 (Intel Xeon E5-2623 v4, 2.60 GHz)

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**CPU2006 license:** 55

**Test date:** Feb-2017

**Test sponsor:** Dell Inc.

**Hardware Availability:** Mar-2016

**Tested by:** Dell Inc.

**Software Availability:** Nov-2016

### Platform Notes (Continued)

8 "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  : 4
physical 0: cores 0 1 2 3
physical 1: cores 0 1 2 3
cache size : 10240 KB
```

From /proc/meminfo

```
MemTotal:       264568092 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
```

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12 SP1

From /etc/*release* /etc/*version*

SuSE-release:

```
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 1
# 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-SP1"
VERSION_ID="12.1"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp1"
```

uname -a:

```
Linux linux-b0uv 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Feb 6 19:18

SPEC is set to: /root/cpu2006-1.2

```
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda2      xfs   110G   22G   89G  20% /
```

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.

BIOS Dell Inc. 2.2.5 09/06/2016

Continued on next page
Dell Inc.

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Platform Notes (Continued)

Memory:
4x 00AD00B300AD HMA82GR7MFR8N-UH 16 GB 2 rank 2400 MHz, configured at 2133 MHz
1x 00AD063200AD HMA82GR7MFR8N-UH 16 GB 2 rank 2400 MHz, configured at 2133 MHz
1x 00CE00B300CE M393A2K43BB1-CRC 16 GB 2 rank 2400 MHz, configured at 2133 MHz
8x 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/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh10.2"
OMP_NUM_THREADS = "8"

Binaries compiled on a system with 1x Intel Core i7-4790K CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled

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.hmmer: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
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Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-auto-p32

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-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.html http://www.spec.org/cpu2006/flags/Dell-Platform-Flags-PowerEdge13G-revE.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.xml

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For other inquiries, please contact webmaster@spec.org.

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