Cray
(Test Sponsor: Indiana University)

**Intel Xeon E5-2697 v2**
Cray XC30

| SPECaccel_omp_base = 1.75 |

**ACCEL license:** 3440A  
**Test date:** Aug-2017

**Test sponsor:** Indiana University  
**Hardware Availability:** Apr-2013

**Tested by:** Indiana University  
**Software Availability:** Mar-2017

| SPECaccel_omp_peak = Not Run |

| Test Sponsor: Indiana University |

**CPU Name:** Intel Xeon E5-2697 v2  
**CPU Characteristics:** Intel Turbo Boost Technology off, Hyper-threading on.

<table>
<thead>
<tr>
<th>CPU</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU MHz:</td>
<td>2700</td>
</tr>
<tr>
<td>CPU MHz Maximum:</td>
<td>2700</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>24 cores, 2 chips, 12 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1-2 chips</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache:</td>
<td>30 MB I+D on chip per chip</td>
</tr>
</tbody>
</table>

---

**Accelerator**

<table>
<thead>
<tr>
<th>Accel Model Name:</th>
<th>Intel Xeon E5-2697 v2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accel Vendor:</td>
<td>Intel</td>
</tr>
<tr>
<td>Accel Name:</td>
<td>Intel Xeon E5-2697 v2</td>
</tr>
<tr>
<td>Type of Accel:</td>
<td>CPU</td>
</tr>
<tr>
<td>Accel Connection:</td>
<td>N/A</td>
</tr>
<tr>
<td>Does Accel Use ECC:</td>
<td>Yes</td>
</tr>
<tr>
<td>Accel Description:</td>
<td>Intel Xeon E5-2697 v2 @ 2.7 GHz</td>
</tr>
<tr>
<td>Accel Driver:</td>
<td>None</td>
</tr>
</tbody>
</table>

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Continued on next page

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SPEC ACCEL OMP Result

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SPECaccel_omp_base = 1.75

ACCEL license: 3440A
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Hardware (Continued)
Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem: None
Other Hardware: None

Software
Operating System: SUSE Linux Enterprise Server 11 (x86_64),
Cray Linux Environment 5.2,
3.0.101-0.46.1_1.0502.8871-cray_ari_c
Compiler: Version 17.0.2.174 of Intel Parallel Studio XE
for Linux Build 20170213
File System: Lustre 2.5 (DDN SFA12K) over QDR InfiniBand
System State: Run level 3 (multi-user)
Other Software: None

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>
</tr>
</thead>
<tbody>
<tr>
<td>503.postencil</td>
<td>281</td>
<td>0.388</td>
<td>243</td>
<td>0.449</td>
<td>223</td>
<td>0.488</td>
</tr>
<tr>
<td>504.polbm</td>
<td>169</td>
<td>0.720</td>
<td>170</td>
<td>0.720</td>
<td>178</td>
<td>0.686</td>
</tr>
<tr>
<td>514.pomriq</td>
<td>659</td>
<td>0.942</td>
<td>658</td>
<td>0.944</td>
<td>659</td>
<td>0.942</td>
</tr>
<tr>
<td>550.pmd</td>
<td>169</td>
<td>1.43</td>
<td>169</td>
<td>1.43</td>
<td>169</td>
<td>1.43</td>
</tr>
<tr>
<td>551.ppalm</td>
<td>281</td>
<td>1.93</td>
<td>285</td>
<td>1.91</td>
<td>282</td>
<td>1.93</td>
</tr>
<tr>
<td>552.pep</td>
<td>165</td>
<td>1.40</td>
<td>160</td>
<td>1.44</td>
<td>160</td>
<td>1.44</td>
</tr>
<tr>
<td>553.pclvleaf</td>
<td>672</td>
<td>1.70</td>
<td>673</td>
<td>1.70</td>
<td>676</td>
<td>1.69</td>
</tr>
<tr>
<td>554.pcg</td>
<td>101</td>
<td>3.29</td>
<td>101</td>
<td>3.29</td>
<td>101</td>
<td>3.31</td>
</tr>
<tr>
<td>555.pseismic</td>
<td>286</td>
<td>0.986</td>
<td>300</td>
<td>0.940</td>
<td>287</td>
<td>0.983</td>
</tr>
<tr>
<td>556.psp</td>
<td>130</td>
<td>6.27</td>
<td>144</td>
<td>5.69</td>
<td>143</td>
<td>5.71</td>
</tr>
<tr>
<td>557.pcs</td>
<td>139</td>
<td>6.17</td>
<td>129</td>
<td>6.66</td>
<td>137</td>
<td>6.28</td>
</tr>
<tr>
<td>559.pmniGhost</td>
<td>311</td>
<td>1.28</td>
<td>293</td>
<td>1.35</td>
<td>305</td>
<td>1.30</td>
</tr>
<tr>
<td>560.pilbdc</td>
<td>585</td>
<td>1.12</td>
<td>587</td>
<td>1.11</td>
<td>585</td>
<td>1.12</td>
</tr>
<tr>
<td>563.pswim</td>
<td>124</td>
<td>1.28</td>
<td>120</td>
<td>1.33</td>
<td>122</td>
<td>1.30</td>
</tr>
<tr>
<td>570.pbt</td>
<td>77.4</td>
<td>10.1</td>
<td>76.5</td>
<td>10.2</td>
<td>84.5</td>
<td>9.23</td>
</tr>
</tbody>
</table>

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

Platform Notes

Sysinfo program /N/dc2/projects/hpc/lijunj/spec/accel-1.2-run/br2p/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on nid00570 Sat Aug 12 19:54:36 2017

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**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/accel/Docs/config.html#sysinfo

From `/proc/cpuinfo`

```plaintext
model name : Intel(R) Xeon(R) CPU E5-2697 v2 @ 2.70GHz
2 "physical id"s (chips)
48 "processors"
core, 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 : 30720 KB
```

From `/proc/meminfo`

```plaintext
MemTotal:       66072376 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
```

```plaintext
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)
```

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

```plaintext
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 3
```

```plaintext
uname -a:
Linux nid00570 3.0.101-0.46.1_1.0502.8871-cray_ari_c #1 SMP Tue Jul 18
17:24:02 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
```

```plaintext
SPEC is set to: /N/dc2/projects/hpc/lijunj/spec/accel-1.2-run/br2p
Filesystem       Type  Size  Used Avail Use% Mounted on
10.10.0.171o2ib:10.10.0.172@o2ib:/dc2 lustre  5.3P  5.0P  198T  97% /N/dc2
```

Cannot run dmidecode; consider saying 'chmod +s /usr/sbin/dmidecode'

(End of data from sysinfo program)
Base Compiler Invocation

C benchmarks:
  icc

Fortran benchmarks:
  ifort

Benchmarks using both Fortran and C:
  icc ifort

Base Portability Flags

503.postencil: -DSPEC_USE_INNER_SIMD
504.polbm: -DSPEC_USE_INNER_SIMD
514.pomriq: -DSPEC_USE_INNER_SIMD
  -80
550.pmd: -DSPEC_USE_INNER_SIMD
551.ppalm: -DSPEC_USE_INNER_SIMD
552.pep: -DSPEC_USE_INNER_SIMD
553.pclvleaf: -DSPEC_USE_INNER_SIMD
554.pcg: -DSPEC_USE_INNER_SIMD
555.pseismic: -DSPEC_USE_INNER_SIMD
556.psp: -DSPEC_USE_INNER_SIMD
557.pcsps: -DSPEC_USE_INNER_SIMD
559.pmniGhost: -DSPEC_USE_INNER_SIMD -nofor-main
560.pilbdc: -DSPEC_USE_INNER_SIMD
563.pswim: -DSPEC_USE_INNER_SIMD
570.pbt: -DSPEC_USE_INNER_SIMD

Base Optimization Flags

C benchmarks:
  -O3 -qopenmp -qopenmp-offload=host -xHost

Fortran benchmarks:
  -O3 -qopenmp -qopenmp-offload=host -xHost

Benchmarks using both Fortran and C:
  -O3 -qopenmp -qopenmp-offload=host -xHost

The flags file that was used to format this result can be browsed at
https://www.spec.org/accel/flags/Intel-icc17.0-linux64.20170830.html
## SPEC ACCEL OMP Result

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You can also download the XML flags source by saving the following link:

https://www.spec.org/accel/flags/Intel-icc17.0-linux64.20170830.xml

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

Tested with SPEC ACCEL v1.2.  
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