Dell Inc.

PowerEdge R230 (Intel Xeon E3-1225 v6, 3.30 GHz)

**SPECfp®_rate2006 = Not Run**

**SPECfp_rate_base2006 = 185**

<table>
<thead>
<tr>
<th>Software</th>
<th>Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating System:</strong> SUSE Linux Enterprise Server 12 SP2 4.10.6-1.ge326586-default</td>
<td><strong>CPU Name:</strong> Intel Xeon E3-1225 v6</td>
</tr>
<tr>
<td><strong>Compiler:</strong> C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux; Fortran: Version 17.0.0.098 of Intel Fortran Compiler for Linux</td>
<td><strong>CPU Characteristics:</strong> Intel Turbo Boost Technology up to 3.70 GHz</td>
</tr>
<tr>
<td><strong>Auto Parallel:</strong> No</td>
<td><strong>CPU MHz:</strong> 3300</td>
</tr>
<tr>
<td><strong>File System:</strong> xfs</td>
<td><strong>FPU:</strong> Integrated</td>
</tr>
<tr>
<td><strong>System State:</strong> Run level 3 (multi-user)</td>
<td><strong>CPU(s) enabled:</strong> 4 cores, 1 chip, 4 cores/chip</td>
</tr>
</tbody>
</table>

**Test date:** Apr-2017  
**Hardware Availability:** Apr-2017  
**Test sponsor:** Dell Inc.  
**Software Availability:** Sep-2016  
**Tested by:** Dell Inc.

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*Continued on next page*
Dell Inc.

PowerEdge R230 (Intel Xeon E3-1225 v6, 3.30 GHz)

**SPEC CFP2006 Result**

**SPECfp_rate2006 = Not Run**

**SPECfp_rate_base2006 = 185**

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

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (4 x 16 GB 2Rx4 PC4-2400T-U)
Disk Subsystem: 500 GB SATA 7200 RPM
Other Hardware: None

Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: None

**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>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>410.bwaves</td>
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<td>365</td>
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<td>365</td>
<td>149</td>
<td>365</td>
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<td>416.gamess</td>
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<td>433.milc</td>
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<td>434.zeusmp</td>
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<tr>
<td>435.gromacs</td>
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<td>447.dealII</td>
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<td>459.GemsFDTD</td>
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<td>482.sphinx3</td>
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<td>174</td>
<td>450</td>
<td>173</td>
<td>448</td>
<td>174</td>
<td></td>
<td></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:
Virtualization Technology disabled
System Profile set to Performance

Continued on next page
Dell Inc.

PowerEdge R230 (Intel Xeon E3-1225 v6, 3.30 GHz)  SPECfp_rate2006 =  Not Run
SPECfp_rate_base2006 =  185

CPU2006 license: 55
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SPEC CFP2006 Result

Platform Notes (Continued)

Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-qnlb Tue Apr 4 07:33:12 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 E3-1225 v6 @ 3.30GHz
    1 "physical id"s (chips)
    4 "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
    cache size : 6144 KB

From /proc/meminfo
    MemTotal: 65935844 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:
    Linux linux-qnlb 4.10.6-1.ge326586-default #1 SMP PREEMPT Sun Mar 26 18:39:41 UTC 2017 (e326586) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Apr 3 06:14

SPEC is set to: /root/cpu2006-1.2

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Dell Inc.  
PowerEdge R230 (Intel Xeon E3-1225 v6, 3.30 GHz)  

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Platform Notes (Continued)

Platform Notes (Continued)

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/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:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64

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Standard Performance Evaluation Corporation  
info@spec.org  
http://www.spec.org/
Dell Inc.

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Base Portability Flags (Continued)

433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64 -nofor_main
447.dealll: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64 -nofor_main
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

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

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
### Dell Inc.

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