Dell Inc.

PowerEdge FC430 (Intel Xeon E5-2630L v3, 1.80 GHz)

SPECfp®2006 = 91.4
SPECfp_base2006 = 85.7

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

Test date: Jan-2015
Hardware Availability: Apr-2015
Software Availability: Apr-2015

Hardware

CPU Name: Intel Xeon E5-2630L v3
CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz
CPU MHz: 1800
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 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: 256 KB I+D on chip per core

Software

Operating System: SUSE Linux Enterprise Server 12 3.12.28-4-default
Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;
Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
### SPEC CFP2006 Result

**Dell Inc.**

PowerEdge FC430 (Intel Xeon E5-2630L v3, 1.80 GHz)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<td>334</td>
<td>58.4</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 Home Snoop
- Virtualization Technology disabled
- System Profile set to Custom

Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6914

$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on linux-8qjr Thu Jan 22 20:47:25 2015

This section contains SUT (System Under Test) info as seen by

Continued on next page
Dell Inc.

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Platform Notes (Continued)

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 E5-2630L v3 @ 1.80GHz
  2 "physical id"s (chips)
  32 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB

From /proc/meminfo
MemTotal: 132187004 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 0
  # 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"
  VERSION_ID="12"
  PRETTY_NAME="SUSE Linux Enterprise Server 12"
  ID="sles"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:12"

uname -a:
Linux linux-8qjr 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014
(9879bd4) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 22 14:20

SPEC is set to: /root/cpu2006-1.2
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext4 176G 11G 165G 6% /

Additional information from dmidecode:
Continued on next page
Dell Inc.  

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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. 0.4.0 01/08/2015  
Memory:  
8x 00CE00B300CE M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1867 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:  
KMP_AFFINITY = "granularity=fine,compact,1,0"  
LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"  
OMP_NUM_THREADS = "16"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/transparent_hugepage/enabled

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  
433.milc:  -DSPEC_CPU_LP64  
434.zeusmp:  -DSPEC_CPU_LP64  
445.gromacs:  -DSPEC_CPU_LP64  
436.cactusADM:  -DSPEC_CPU_LP64  

Continued on next page
SPEC CFP2006 Result

Dell Inc.
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Base Portability Flags (Continued)

437.lestie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.Gem5: -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 -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

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

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

Peak Compiler Invocation

C benchmarks:
  icc  -m64

C++ benchmarks:
  icpc  -m64

Fortran benchmarks:
  ifort  -m64

Benchmarks using both Fortran and C:
  icc  -m64 ifort  -m64
Dell Inc.

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Software Availability: Apr-2015

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: \-xCORE-AVX2(pass 2) \-prof-gen(pass 1) \-ipo(pass 2)
\-03(pass 2) \-no-prec-div(pass 2) \-prof-use(pass 2)
\-auto-ilp32 \-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: \-xCORE-AVX2 \-ipo \-o3 \-no-prec-div \-unroll2 \-ansi-alias
\-parallel

C++ benchmarks:

444.namd: \-xCORE-AVX2(pass 2) \-prof-gen(pass 1) \-ipo(pass 2)
\-03(pass 2) \-no-prec-div(pass 2) \-prof-use(pass 2)
\-fno-alias \-auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: \-xCORE-AVX2(pass 2) \-prof-gen(pass 1) \-ipo(pass 2)
\-03(pass 2) \-no-prec-div(pass 2) \-prof-use(pass 2) \-unroll4
\-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: \-xCORE-AVX2(pass 2) \-prof-gen(pass 1) \-ipo(pass 2)
\-03(pass 2) \-no-prec-div(pass 2) \-prof-use(pass 2) \-unroll2
\-inline-level=0 \-scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: \-xCORE-AVX2(pass 2) \-prof-gen(pass 1) \-ipo(pass 2)
\-03(pass 2) \-no-prec-div(pass 2) \-prof-use(pass 2) \-unroll2
\-inline-level=0 \-opt-prefetch \-parallel

465.tonto: \-xCORE-AVX2(pass 2) \-prof-gen(pass 1) \-ipo(pass 2)
\-03(pass 2) \-no-prec-div(pass 2) \-prof-use(pass 2)
\-inline-calloc \-opt-malloc-options=3 \-auto \-unroll4
Dell Inc.

PowerEdge FC430 (Intel Xeon E5-2630L v3, 1.80 GHz)

SPECfp2006 = 91.4
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Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-llp32 -ansi-alias
481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revD.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revD.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 CPU2006 v1.2.
Originally published on 16 April 2015.