## SPEC® CFP2006 Result

### Dell Inc.

PowerEdge T330 (Intel Xeon E3-1230 v6, 3.50 GHz)

<table>
<thead>
<tr>
<th>SPECfp®_rate2006 = Not Run</th>
</tr>
</thead>
</table>

| SPECfp_rate_base2006 = 201 |

**CPU2006 license:** 55

**Test sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**CPU Name:** Intel Xeon E3-1230 v6

**CPU Characteristics:** Intel Turbo Boost Technology up to 3.90 GHz

**CPU MHZ:** 3500

**FPU:** Integrated

**CPU(s) enabled:** 4 cores, 1 chip, 4 cores/chip, 2 threads/core

**CPU(s) orderable:** 1 chip

**Primary Cache:** 32 KB I + 32 KB D on chip per core

**Secondary Cache:** 256 KB I+D on chip per core

**Operating System:** SUSE Linux Enterprise Server 12 SP2 4.10.8-4.geb4ae7d-default

**Compiler:** 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

**Auto Parallel:** No

**File System:** xfs

**System State:** Run level 3 (multi-user)

### Results

| Benchmark | Copies | 15.0 | 30.0 | 45.0 | 60.0 | 75.0 | 90.0 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | 240 | 255 | 270 | 285 | 300 | 315 | 330 | 345 | 360 |
|-----------|--------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 410.bwaves | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 416.gamess  | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 433.milc    | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 434.zeusmp  | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 435.gromacs | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 436.cactusADM | 8     |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 437.leslie3d | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 444.namd    | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 447.dealII  | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 450.soplex  | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 453.povray  | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 454.calculix | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 459.GemsFDTD | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 465.tonto   | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 470.lbm     | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 481.wrf     | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 482.sphinx3 | 8      |      |      |      |      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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SPEC CFP2006 Result

Dell Inc.
PowerEdge T330 (Intel Xeon E3-1230 v6, 3.50 GHz)

SPECfp_rate2006 = Not Run
SPECfp_rate_base2006 = 201

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 2Rx8 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

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</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 T330 (Intel Xeon E3-1230 v6, 3.50 GHz)

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<thead>
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**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test date:** Apr-2017  
**Hardware Availability:** Apr-2017  
**Software Availability:** Sep-2016

### Platform Notes (Continued)

Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6993  
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
running on linux-r1zd Fri Apr  7 14:23:29 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](http://www.spec.org/cpu2006/Docs/config.html#sysinfo)

From /proc/cpuinfo  
- `model name : Intel(R) Xeon(R) CPU E3-1230 v6 @ 3.50GHz`
- `1 "physical id"s (chips)`
- `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 : 8`
  - `physical 0: cores 0 1 2 3`
- `cache size : 8192 KB`

From /proc/meminfo  
- `MemTotal: 65803648 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-r1zd 4.10.8-4.geb4ae7d-default #1 SMP PREEMPT Tue Apr  4 10:46:31 UTC 2017 (eb4ae7d) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Apr 7 10:27

SPEC is set to: /root/cpu2006-1.2
Dell Inc.

PowerEdge T330 (Intel Xeon E3-1230 v6, 3.50 GHz)  SPECfp_rate2006 =  Not Run
SPECfp_rate_base2006 = 201

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

Platform Notes (Continued)

Filesystem      Type  Size  Used  Avail  Use% Mounted on
/dev/sda2       xfs    458G   13G   446G   3%   /
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. 2.0.8 01/12/2017
Memory: 4x 002C0000002C 18ASF2G72AZ-2G3B1 16 GB 2 rank 2400 MHz

(End of data from sysinfo program)

General Notes

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:
ic -m64 ifort -m64

Base Portability Flags

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

Continued on next page
Dell Inc.

PowerEdge T330 (Intel Xeon E3-1230 v6, 3.50 GHz) SPEC CFP2006 Result

SPECfp_rate2006 = Not Run
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CPU2006 license: 55
Test sponsor: Dell Inc.
Test date: Apr-2017
Tested by: Dell Inc.
Hardware Availability: Apr-2017
Software Availability: Sep-2016

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.dealII: -DSPEC_CPU_LP64
- 450.soplex: -DSPEC_CPU_LP64
- 453.povray: -DSPEC_CPU_LP64 -nofor_main
- 454.calculix: -DSPEC_CPU_LP64
- 459.GemsFDTD: -DSPEC_CPU_LP64
- 465.tonto: -DSPEC_CPU_LP64
- 470.lbm: -DSPEC_CPU_LP64 -nofor_main
- 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
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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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