Dell Inc.
PowerEdge T330 (Intel Xeon E3-1260L v5, 2.90 GHz)

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>SPECfp_base2006</th>
</tr>
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<tbody>
<tr>
<td>97.0</td>
<td>94.8</td>
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CPU2006 license: 55
Test sponsor: Dell Inc.
Test date: Sep-2015
Hardware Availability: Nov-2015

Tested by: Dell Inc.
Software Availability: Sep-2015

<table>
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<tr>
<th>Benchmark</th>
<th>Result</th>
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<tr>
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<tr>
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<td>481.wrf</td>
<td>125</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>100</td>
</tr>
</tbody>
</table>

| SPECfp_base2006 | 94.8 |
| SPECfp2006      | 97.0 |

Hardware

- CPU Name: Intel Xeon E3-1260L v5
- CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
- CPU MHz: 2900
- 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

Software

- Operating System: SUSE Linux Enterprise Server 12 3.12.28-4-default
- Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;
  Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
- Auto Parallel: Yes
- File System: ext4
- System State: Run level 3 multi-user
### Dell Inc.

Dell Poweredge T330 (Intel Xeon E3-1260L v5, 2.90 GHz)

**SPECfp2006** = 97.0

**SPECfp_base2006** = 94.8

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<td>Dell Inc.</td>
</tr>
</tbody>
</table>

L3 Cache: 8 MB I+D on chip per chip

Other Cache: None

Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2133P-U)

Disk Subsystem: 1 x 500 GB 7200 RPM SATA

Other Hardware: None

Base Pointers: 64-bit

Peak Pointers: 32/64-bit

Other Software: None

---

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>194</td>
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</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**:  
Virtualization Technology disabled  
System Profile set to Performance  
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6914

$Rev: 6914 $ $Date:: 2014-06-25 $ $e3fbb8667b5a285932ceab81e28219e1
running on linux-l6fb Tue Sep 22 09:24:50 2015

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
Continued on next page
Dell Inc. PowerEdge T330 (Intel Xeon E3-1260L v5, 2.90 GHz)  

SPECfp2006 =  97.0  
SPECfp_base2006 =  94.8  

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

Test date: Sep-2015  
Hardware Availability: Nov-2015  
Software Availability: Sep-2015  

Platform Notes (Continued)

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) CPU E3-1260L v5 @ 2.90GHz
  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:  66066084 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-l6fb 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 Sep 22 05:10

SPEC is set to: /root/cpu2006-1.2
  Filesystem   Type  Size  Used Avail Use% Mounted on
  /dev/sda2    ext4  451G  10G  440G  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

Continued on next page
SPEC CFP2006 Result

Dell Inc.

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Platform Notes (Continued)

hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Dell Inc. 0.3.16 09/09/2015
Memory:
1x 00AD00000000 HMA82GU7MFR8N-TF 16 GB 2 rank 2133 MHz
2x 00AD0000020B HMA82GU7MFR8N-TF 16 GB 2 rank 2133 MHz
1x 00AD00000800 HMA82GU7MFR8N-TF 16 GB 2 rank 2133 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 = "4"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1
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
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64

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## SPEC CFP2006 Result

**Dell Inc.**

PowerEdge T330 (Intel Xeon E3-1260L v5, 2.90 GHz)

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### Base Portability Flags (Continued)

- `447.dealII`: `-DSPEC_CPU_LP64`
- `450.soplex`: `-DSPEC_CPU_LP64`
- `453.povray`: `-DSPEC_CPU_LP64`
- `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`
  - `-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

<table>
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<tr>
<th>C benchmarks:</th>
<th><code>icc  -m64</code></th>
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<td><code>icpc  -m64</code></td>
</tr>
<tr>
<td>Fortran benchmarks:</td>
<td><code>ifort  -m64</code></td>
</tr>
</tbody>
</table>

**Benchmarks using both Fortran and C:**

- `icc  -m64 ifort  -m64`

### Peak Portability Flags

Same as Base Portability Flags
SPEC CFP2006 Result

Dell Inc.

PowerEdge T330 (Intel Xeon E3-1260L v5, 2.90 GHz)

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Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes
470.lbm: basepeak = yes
482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias
-auto-iipt32

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes
416.gamess: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:
Dell Inc. PowerEdge T330 (Intel Xeon E3-1260L v5, 2.90 GHz)

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**Peak Optimization Flags (Continued)**

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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The flags files that were used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html


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You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml

http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revD.20151006.xml

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