Dell Inc.

PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

**SPECfp®2006 = 67.7**

**SPECfp_base2006 = 65.5**

<table>
<thead>
<tr>
<th>Test date:</th>
<th>Feb-2012</th>
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<tbody>
<tr>
<td>Hardware Availability:</td>
<td>Mar-2012</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Feb-2012</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 55

**CPU Name:** Intel Xeon E5-2637

**CPU Characteristics:** Intel Turbo Boost Technology up to 3.50 GHz

**CPU MHz:** 3000

**Compiler:** C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux

**Operating System:** SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default

**Software**

**Auto Parallel:** Yes

**File System:** ext3

**System State:** Run level 3 (multi-user)
SPEC CFP2006 Result

Dell Inc.
PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

SPECfp2006 = 67.7
SPECfp_base2006 = 65.5

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.
L3 Cache: 5 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 1 TB 7200 RPM SATA
Other Hardware: None
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<th>Seconds</th>
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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

System Profile set to Custom
CPU Power Management set to Maximum Performance
Memory Frequency set to Maximum Performance
Turbo Boost set to Enabled
C States/C1E set to Enabled
Sysinfo program /root/CPU2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on linux-Sandy Thu Feb 9 17:20:25 2012

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

Continued on next page
Dell Inc.

PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

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SPECfp_base2006 = 65.5

CPU2006 license: 55
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Tested by: Dell Inc.

Test date: Feb-2012
Hardware Availability: Mar-2012
Software Availability: Feb-2012

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 E5-2637 0 @ 3.00GHz
  2 "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
cautions.)
cpu cores : 2
siblings : 4
physical 0: cores 0 1
physical 1: cores 0 1

From /proc/meminfo
MemTotal: 132122692 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 11 (x86_64)
  VERSION = 11
  PATCHLEVEL = 2

uname -a:
Linux linux-Sandy 3.0.13-0.9-default #1 SMP Mon Jan 16 17:33:03 UTC 2012
(54ddfaf) x86_64 x86_64 x86_64 GNU/Linux
	run-level 3 Feb 9 11:06 last=5

SPEC is set to: /root/CPU2006-1.2
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext3 197G 69G 119G 37% /

Additional information from dmidecode:

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/root/CPU2006-1.2/libs/32:/root/CPU2006-1.2/libs/64"
OMP_NUM_THREADS = "4"
The Dell PowerEdge T620 and
SPEC CFP2006 Result

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General Notes (Continued)

the Bull NovaScale T840 F3 models are electronically equivalent.
The results have been measured on a Dell PowerEdge T620 model
Transparent Huge Pages disabled with:
echo never > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

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 -nofor_main
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
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:
   -xAVX  -ipo  -O3  -no-prec-div  -static  -parallel  -opt-prefetch
   -ansi-alias

Continued on next page
Base Optimization Flags (Continued)

C++ benchmarks:
- xAVX -ipo -03 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:
- xAVX -ipo -03 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
- xAVX -ipo -03 -no-prec-div -static -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

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

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

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -03 -no-prec-div -unroll2 -ansi-alias
  -parallel

Continued on next page
Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll14 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel -static

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -inline-level=0 -scalar-rep -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -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-ic12.1-official-linux64.20111122.html
## SPEC CFP2006 Result

### Dell Inc.

**PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)**

| SPECfp2006 | 67.7 |
| SPECfp_base2006 | 65.5 |

### Details

- **CPU2006 license:** 55
- **Test sponsor:** Dell Inc.
- **Tested by:** Dell Inc.
- **Test date:** Feb-2012
- **Hardware Availability:** Mar-2012
- **Software Availability:** Feb-2012

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


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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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