SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T110 (Intel Xeon X3470, 2.93 GHz)

SPECint®2006 =   32.6

SPECint_base2006 =   28.2

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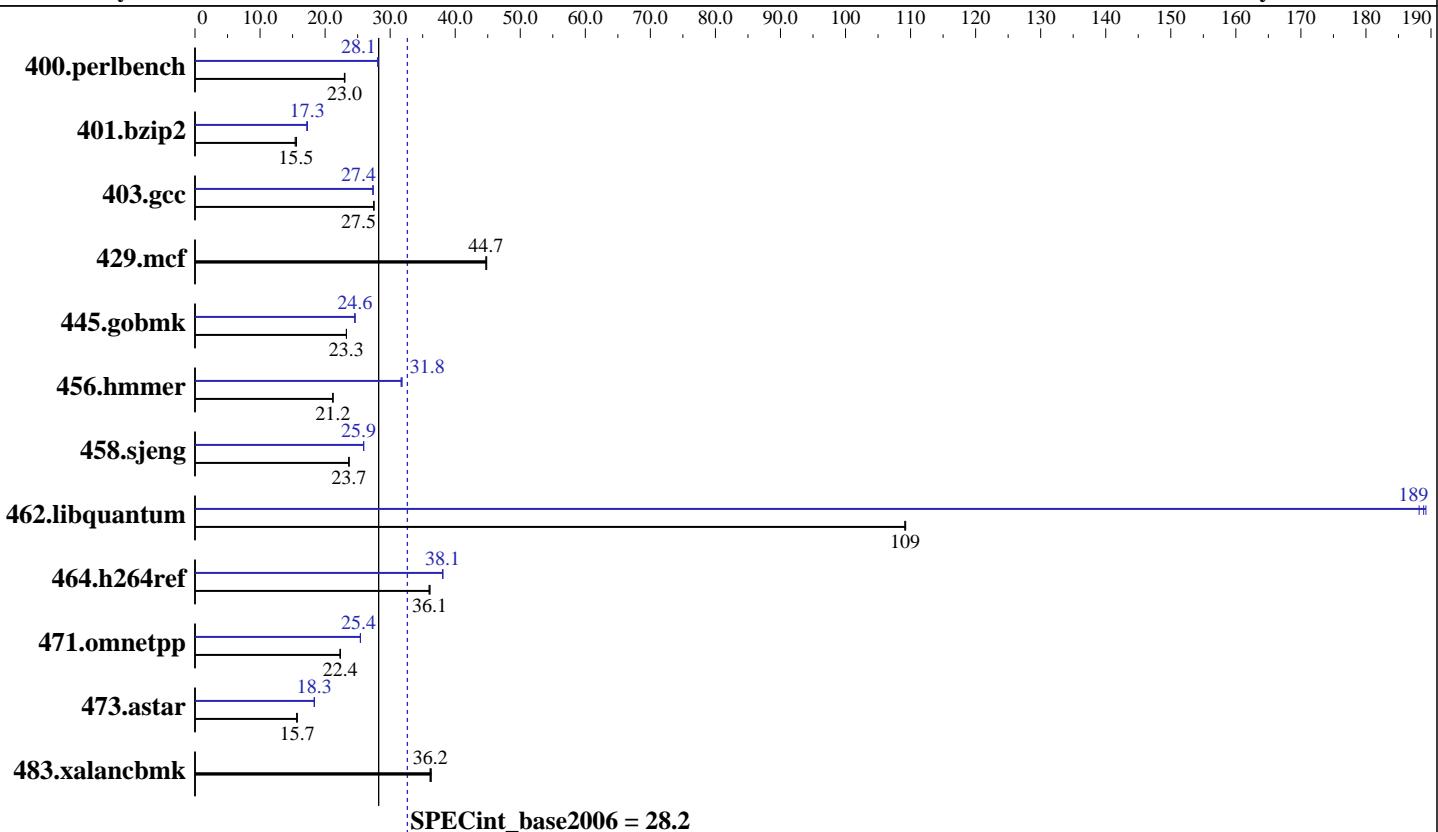**Test sponsor:** Dell Inc.
Tested by: Dell Inc.

Test date: Sep-2009
Hardware Availability: Aug-2009
Software Availability: Jul-2009

400.perlbench	28.1 / 23.0
401.bzip2	17.3 / 15.5
403.gcc	27.4 / 27.5
429.mcf	44.7
445.gobmk	24.6 / 23.3
456.hmmer	31.8 / 21.2
458.sjeng	25.9 / 23.7
462.libquantum	189 / 109
464.h264ref	38.1 / 36.1
471.omnetpp	25.4 / 22.4
473.astar	18.3 / 15.7
483.xalancbmk	36.2

SPECint_base2006 = 28.2
SPECint2006 = 32.6

Hardware

CPU Name:	Intel Xeon X3470
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	2933
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
L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (4 x 2 GB DDR3-1333 DR UDIMM)
Disk Subsystem:	1 x 160 GB 7200 RPM SATA
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 5.3, Kernel 2.6.18-128.el5
Compiler:	Intel C++ Compiler Professional Edition 11.1 for Linux Build 20090511 Package ID: l_cproc_p_11.1.040
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502

SPEC CINT2006 Result

Dell Inc.

PowerEdge T110 (Intel Xeon X3470, 2.93 GHz)

SPECint2006 = 32.6

SPECint_base2006 = 28.2

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

Test date: Sep-2009
Hardware Availability: Aug-2009
Software Availability: Jul-2009

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	424	23.0	**424**	**23.0**	425	23.0	347	28.1	**347**	**28.1**	348	28.1
401.bzip2	627	15.4	619	15.6	**622**	**15.5**	558	17.3	**559**	**17.3**	562	17.2
403.gcc	**293**	**27.5**	292	27.5	293	27.5	294	27.4	**294**	**27.4**	294	27.4
429.mcf	**204**	**44.7**	203	44.8	204	44.7	**204**	**44.7**	203	44.8	204	44.7
445.gobmk	**451**	**23.3**	451	23.3	450	23.3	426	24.6	**427**	**24.6**	427	24.6
456.hmmer	440	21.2	440	21.2	**440**	**21.2**	293	31.8	**293**	**31.8**	295	31.7
458.sjeng	511	23.7	**511**	**23.7**	512	23.7	467	25.9	467	25.9	**467**	**25.9**
462.libquantum	190	109	**190**	**109**	190	109	110	189	110	188	**110**	**189**
464.h264ref	615	36.0	613	36.1	**613**	**36.1**	**581**	**38.1**	582	38.1	581	38.1
471.omnetpp	281	22.3	279	22.4	**280**	**22.4**	246	25.4	246	25.4	**246**	**25.4**
473.astar	**447**	**15.7**	449	15.6	447	15.7	382	18.4	**383**	**18.3**	383	18.3
483.xalancbmk	191	36.1	**191**	**36.2**	190	36.3	191	36.1	**191**	**36.2**	190	36.3

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

    BIOS Settings:
    Power Management = Maximum Performance (Default = Active Power Controller)

General Notes

    OMP_NUM_THREADS set to number of cores
    KMP_AFFINITY set to granularity=fine,scatter
    The Dell PowerEdge T110 and the Bull NovaScale T810 F2 models are electronically equivalent.
    This result was measured on a Dell PowerEdge T110.

Base Compiler Invocation

C benchmarks:
    icc -m32

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T110 (Intel Xeon X3470, 2.93 GHz)

SPECint2006 =   32.6

SPECint_base2006 =   28.2

CPU2006 license: 55		**Test date:**	Sep-2009
Test sponsor:	Dell Inc.	**Hardware Availability:**	Aug-2009
Tested by:	Dell Inc.	**Software Availability:**	Jul-2009

Base Compiler Invocation (Continued)

C++ benchmarks:
    icpc -m32

Base Portability Flags

    400.perlbench: -DSPEC_CPU_LINUX_IA32
    462.libquantum: -DSPEC_CPU_LINUX
    483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -inline-calloc
    -opt-malloc-options=3

C++ benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
    -L/spec/cpu2006.1.1/lib -lsmartheap

Base Other Flags

C benchmarks:

    403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
    icc -m32

    401.bzip2: icc -m64

    456.hmmer: icc -m64

    458.sjeng: icc -m64

C++ benchmarks (except as noted below):
    icpc -m32

    473.astar: icpc -m64

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T110 (Intel Xeon X3470, 2.93 GHz)

SPECint2006 = 32.6

SPECint_base2006 = 28.2

CPU2006 license: 55		**Test date:**	Sep-2009
Test sponsor: Dell Inc.		**Hardware Availability:**	Aug-2009
Tested by: Dell Inc.		**Software Availability:**	Jul-2009

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
   401.bzip2: -DSPEC_CPU_LP64
   456.hmmer: -DSPEC_CPU_LP64
   458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
   473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -ansi-alias -opt-prefetch

   401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -auto-ilp32 -opt-prefetch

     403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
               -opt-malloc-options=3

     429.mcf: basepeak = yes

   445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
               -ipo -no-prec-div -ansi-alias

   456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
               -ansi-alias -auto-ilp32

   458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel
               -par-runtime-control -opt-prefetch -inline-calloc
               -opt-malloc-options=3

   464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -unroll2 -ansi-alias
```

C++ benchmarks:

```
   471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
               -L/spec/cpu2006.1.1/lib -lsmartheap
```

Continued on next page

Dell Inc.

PowerEdge T110 (Intel Xeon X3470, 2.93 GHz)

SPECint2006 =   32.6

SPECint_base2006 =   28.2

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

Test date: Sep-2009
Hardware Availability: Aug-2009
Software Availability: Jul-2009

Peak Optimization Flags (Continued)

```
473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -ansi-alias -opt-ra-region-strategy=routine -auto-ilp32
           -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revA.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revA.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 03:43:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 December 2009.