



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge M420 (Intel Xeon E5-2407 v2, 2.40 GHz)

SPECint®2006 = 37.8

SPECint_base2006 = 35.7

CPU2006 license: 55

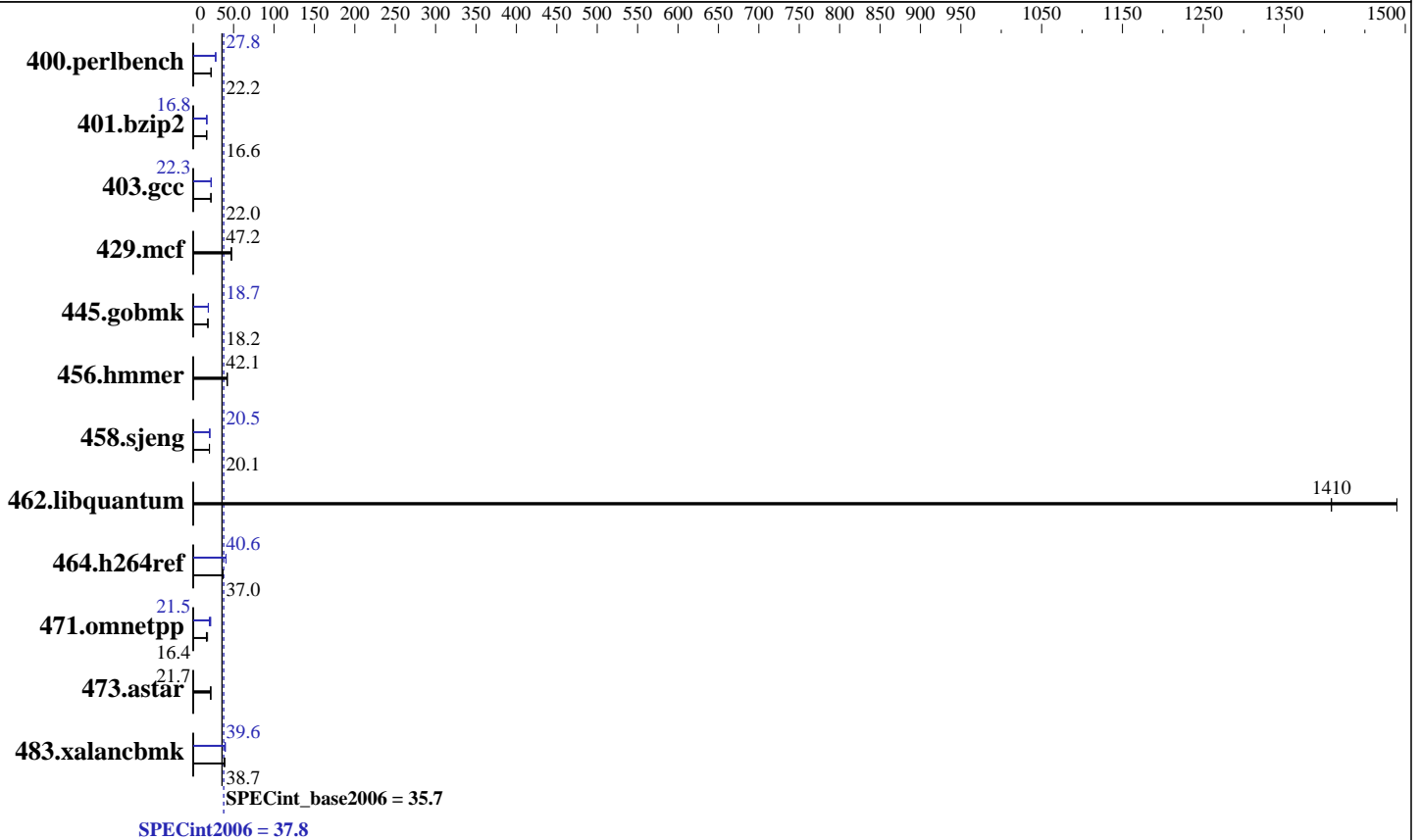
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Nov-2013

Hardware Availability: Jan-2014

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2407 v2
 CPU Characteristics:
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 2 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: 10 MB I+D on chip per chip
 Other Cache: None
 Memory: 96 GB (6 x 16 GB 2Rx4 PC3L-12800R-11, ECC)
 Disk Subsystem: 2 x 50 GB SATA SSD, RAID 0
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) 3.0.70-0.9-default
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext2
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 37.8

PowerEdge M420 (Intel Xeon E5-2407 v2, 2.40 GHz)

SPECint_base2006 = 35.7

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

Test date: Nov-2013
Hardware Availability: Jan-2014
Software Availability: Sep-2013

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	440	22.2	441	22.1	<u>441</u>	<u>22.2</u>	351	27.8	<u>351</u>	<u>27.8</u>	351	27.8
401.bzip2	580	16.6	579	16.7	<u>580</u>	<u>16.6</u>	<u>573</u>	<u>16.8</u>	573	16.8	574	16.8
403.gcc	368	21.9	365	22.0	<u>365</u>	<u>22.0</u>	<u>362</u>	<u>22.3</u>	361	22.3	362	22.2
429.mcf	193	47.2	193	47.3	<u>193</u>	<u>47.2</u>	193	47.2	193	47.3	<u>193</u>	<u>47.2</u>
445.gobmk	575	18.2	<u>577</u>	<u>18.2</u>	577	18.2	<u>560</u>	<u>18.7</u>	560	18.7	560	18.7
456.hammer	222	42.1	221	42.2	<u>221</u>	<u>42.1</u>	222	42.1	221	42.2	<u>221</u>	<u>42.1</u>
458.sjeng	<u>603</u>	<u>20.1</u>	602	20.1	603	20.1	591	20.5	590	20.5	<u>591</u>	<u>20.5</u>
462.libquantum	13.9	1490	14.7	1410	<u>14.7</u>	<u>1410</u>	13.9	1490	14.7	1410	<u>14.7</u>	<u>1410</u>
464.h264ref	600	36.9	<u>598</u>	<u>37.0</u>	597	37.1	<u>545</u>	<u>40.6</u>	545	40.6	545	40.6
471.omnetpp	352	17.8	382	16.3	<u>381</u>	<u>16.4</u>	313	20.0	290	21.5	<u>291</u>	<u>21.5</u>
473.astar	<u>323</u>	<u>21.7</u>	324	21.7	323	21.7	<u>323</u>	<u>21.7</u>	324	21.7	323	21.7
483.xalancbmk	<u>178</u>	<u>38.7</u>	181	38.1	176	39.2	174	39.7	<u>174</u>	<u>39.6</u>	174	39.6

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
Execute Disable disabled
Logical Processor disabled
System Profile set to Performance
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on linux Mon Nov 25 12:27:02 2013

```

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>

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2407 v2 @ 2.40GHz
 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
caution.)
cpu cores : 4
siblings : 4
physical 0: cores 0 1 2 3

```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 37.8

PowerEdge M420 (Intel Xeon E5-2407 v2,
2.40 GHz)

SPECint_base2006 = 35.7

CPU2006 license: 55

Test date: Nov-2013

Test sponsor: Dell Inc.

Hardware Availability: Jan-2014

Tested by: Dell Inc.

Software Availability: Sep-2013

Platform Notes (Continued)

physical 1: cores 0 1 2 3
cache size : 10240 KB

From /proc/meminfo
MemTotal: 99123324 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 = 3

uname -a:
Linux linux 3.0.70-0.9-default #1 SMP Tue Apr 2 13:01:38 UTC 2013 (25ae5d2)
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 25 12:11 last=S

SPEC is set to: /root/cpu2006-1.2
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext2 83G 7.7G 74G 10% /

Additional information from dmidecode:
BIOS Dell Inc. 2.0.22 09/23/2013
Memory:
6x 00CE04B300CE M393B2G70BH0-YK0 16 GB 1333 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/sh"
OMP_NUM_THREADS = "8"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge M420 (Intel Xeon E5-2407 v2,
2.40 GHz)

SPECint2006 = 37.8

SPECint_base2006 = 35.7

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

Test date: Nov-2013
Hardware Availability: Jan-2014
Software Availability: Sep-2013

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge M420 (Intel Xeon E5-2407 v2,
2.40 GHz)

SPECint2006 = 37.8

SPECint_base2006 = 35.7

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Nov-2013

Hardware Availability: Jan-2014

Software Availability: Sep-2013

Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

401.bzip2: `-DSPEC_CPU_LP64`

403.gcc: `-DSPEC_CPU_LP64`

429.mcf: `-DSPEC_CPU_LP64`

456.hmmer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LP64 -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) -prof-use(pass 2)
-opt-prefetch -ansi-alias`

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

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias`

456.hmmer: `basepeak = yes`

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 37.8

PowerEdge M420 (Intel Xeon E5-2407 v2, 2.40 GHz)

SPECint_base2006 = 35.7

CPU2006 license: 55

Test date: Nov-2013

Test sponsor: Dell Inc.

Hardware Availability: Jan-2014

Tested by: Dell Inc.

Software Availability: Sep-2013

Peak Optimization Flags (Continued)

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

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(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)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revB.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revB.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 21:05:48 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 January 2014.