



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint®2006 = 46.7

SPECint_base2006 = 43.2

CPU2006 license: 55

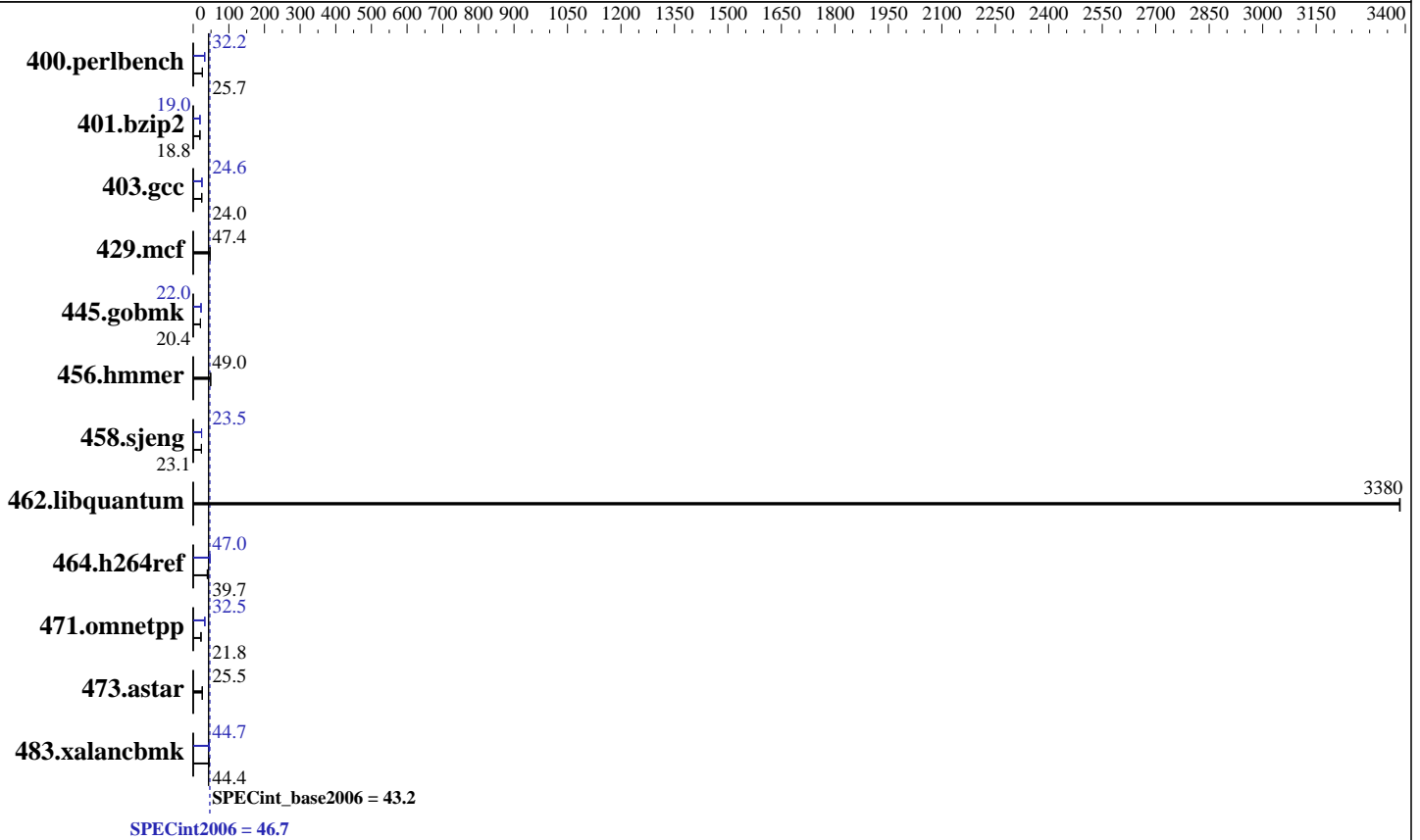
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2014

Hardware Availability: Mar-2014

Software Availability: May-2014



Hardware

CPU Name: Intel Xeon E7-4850 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 48 cores, 4 chips, 12 cores/chip
 CPU(s) orderable: 2,4 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: 24 MB I+D on chip per chip
 Other Cache: None
 Memory: 1 TB (64 x 16 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz)
 Disk Subsystem: 1 x 400 GB SAS SSD SSD
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) 3.0.76-0.11-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.

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint2006 = 46.7

SPECint_base2006 = 43.2

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

Test date: Sep-2014
Hardware Availability: Mar-2014
Software Availability: May-2014

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	379	25.8	<u>380</u>	<u>25.7</u>	381	25.6	<u>303</u>	<u>32.2</u>	303	32.2	303	32.2
401.bzip2	513	18.8	513	18.8	<u>513</u>	<u>18.8</u>	507	19.0	<u>507</u>	<u>19.0</u>	508	19.0
403.gcc	<u>336</u>	<u>24.0</u>	337	23.9	335	24.0	328	24.6	<u>328</u>	<u>24.6</u>	328	24.6
429.mcf	192	47.5	<u>192</u>	<u>47.4</u>	193	47.2	192	47.5	<u>192</u>	<u>47.4</u>	193	47.2
445.gobmk	<u>514</u>	<u>20.4</u>	516	20.3	514	20.4	476	22.0	<u>476</u>	<u>22.0</u>	476	22.0
456.hammer	190	49.0	<u>190</u>	<u>49.0</u>	192	48.7	190	49.0	<u>190</u>	<u>49.0</u>	192	48.7
458.sjeng	523	23.1	<u>524</u>	<u>23.1</u>	524	23.1	513	23.6	<u>514</u>	<u>23.5</u>	515	23.5
462.libquantum	<u>6.12</u>	<u>3380</u>	6.12	3380	6.12	3390	<u>6.12</u>	<u>3380</u>	6.12	3380	6.12	3390
464.h264ref	557	39.7	<u>558</u>	<u>39.7</u>	559	39.6	470	47.1	471	47.0	<u>471</u>	<u>47.0</u>
471.omnetpp	285	21.9	<u>286</u>	<u>21.8</u>	288	21.7	<u>192</u>	<u>32.5</u>	191	32.7	192	32.5
473.astar	275	25.5	276	25.4	<u>276</u>	<u>25.5</u>	275	25.5	276	25.4	<u>276</u>	<u>25.5</u>
483.xalancbmk	<u>155</u>	<u>44.4</u>	155	44.4	159	43.4	154	44.7	154	44.7	<u>154</u>	<u>44.7</u>

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 Custom
CPU Power Management set to Maximum Performance
C1E set to disabled
C States set to disabled
Memory Patrol Scrub set to disabled
Sysinfo program
/root/Desktop/Performance/ic14.0_Oct17_2013/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on slesperf3 Sat Sep 20 16:25:18 2014

```

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 E7-4850 v2 @ 2.30GHz
4 "physical id"s (chips)
48 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The

```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint2006 = 46.7

SPECint_base2006 = 43.2

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

Test date: Sep-2014
Hardware Availability: Mar-2014
Software Availability: May-2014

Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 12
siblings  : 12
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13
cache size : 24576 KB
```

```
From /proc/meminfo
MemTotal:      1058789108 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 slesperf3 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
(ccab990) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Sep 20 16:15 last=S
```

```
SPEC is set to: /root/Desktop/Performance/ic14.0_Oct17_2013
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        ext2  365G  263G  101G   73% /
```

```
Additional information from dmidecode:
BIOS Dell Inc. 1.2.2 05/05/2014
Memory:
64x 00CE00B300CE M393B2G70BH0-YK0 16 GB 1066 MHz
```

(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/Desktop/Performance/ic14.0_Oct17_2013/libs/32:/root/Desktop/Performance/ic14.0_Oct17_2013/libs/64:/root/Desktop/Performance/ic14.0_Oct17_2013/sh"

OMP_NUM_THREADS = "48"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4
Transparent Huge Pages enabled with:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4850
v2, 2.30 GHz)

SPECint2006 = 46.7

SPECint_base2006 = 43.2

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2014

Hardware Availability: Mar-2014

Software Availability: May-2014

General Notes (Continued)

```
echo always > /sys/kernel/mm/transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

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



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint2006 = 46.7

SPECint_base2006 = 43.2

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2014

Hardware Availability: Mar-2014

Software Availability: May-2014

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

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-alloc
-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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint2006 = 46.7

SPECint_base2006 = 43.2

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2014

Hardware Availability: Mar-2014

Software Availability: May-2014

Peak Optimization Flags (Continued)

456.hmmcr: basepeak = yes

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-revC.html>

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

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



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R920 (Intel Xeon E7-4850 v2, 2.30 GHz)

SPECint2006 = 46.7

SPECint_base2006 = 43.2

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2014

Hardware Availability: Mar-2014

Software Availability: May-2014

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 Wed Oct 8 19:41:46 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 October 2014.