



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECint®2006 = 59.3

ASUS RS720-E7(Z9PE-D16) Server System
(Intel Xeon E5-2690)

SPECint_base2006 = 55.2

CPU2006 license: 9016

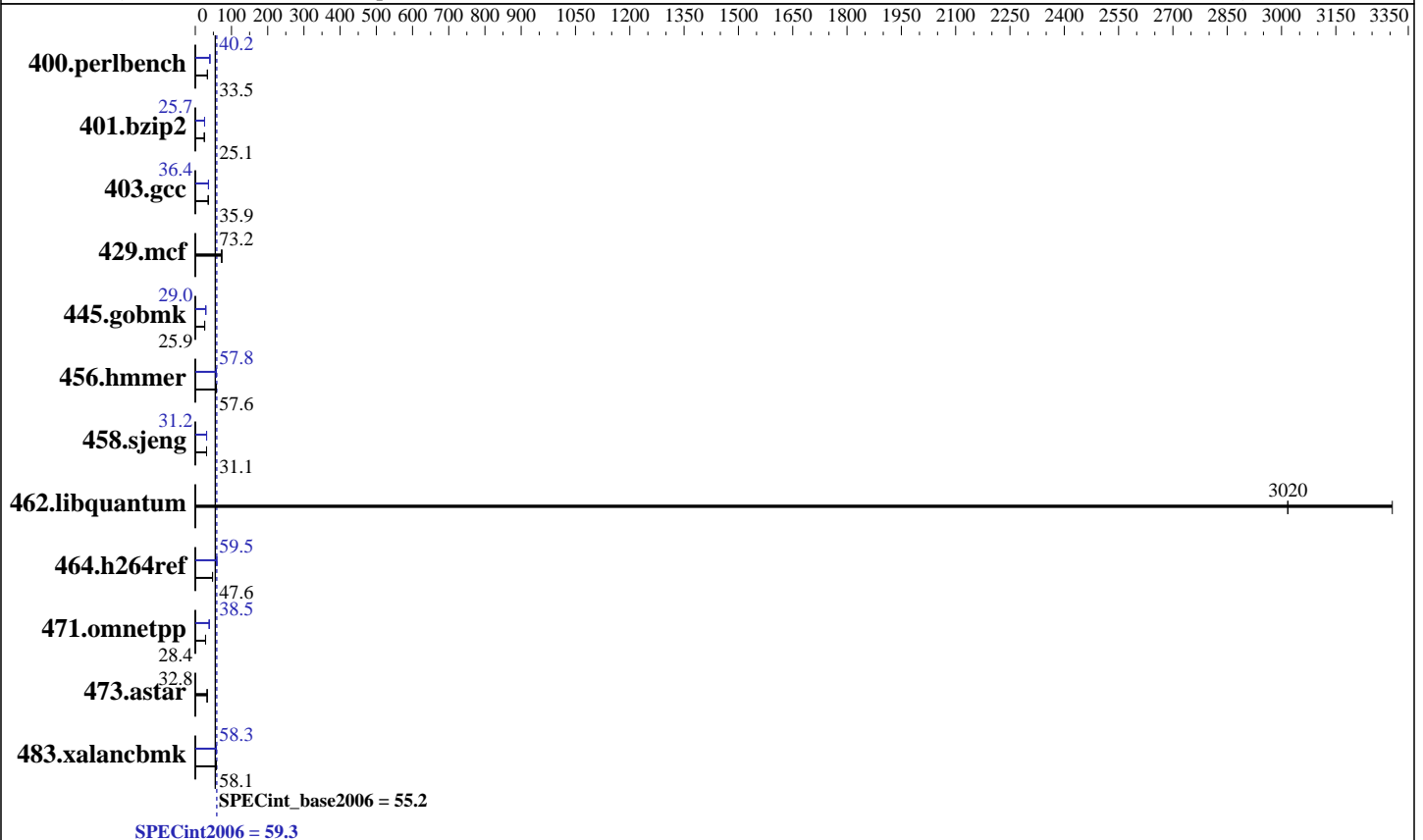
Test date: Apr-2012

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2690
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2900
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: Seagate ST3500320AS 1 x 500 GB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECint2006 = **59.3**

ASUS RS720-E7(Z9PE-D16) Server System
(Intel Xeon E5-2690)

SPECint_base2006 = **55.2**

CPU2006 license: 9016

Test date: Apr-2012

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	290	33.6	292	33.5	<u>292</u>	<u>33.5</u>	242	40.4	<u>243</u>	<u>40.2</u>	243	40.2
401.bzip2	384	25.1	385	25.1	<u>384</u>	<u>25.1</u>	376	25.7	<u>376</u>	<u>25.7</u>	376	25.7
403.gcc	<u>224</u>	<u>35.9</u>	224	35.9	225	35.8	221	36.4	221	36.4	<u>221</u>	<u>36.4</u>
429.mcf	125	73.2	<u>125</u>	<u>73.2</u>	126	72.7	125	73.2	<u>125</u>	<u>73.2</u>	126	72.7
445.gobmk	405	25.9	405	25.9	<u>405</u>	<u>25.9</u>	362	29.0	<u>362</u>	<u>29.0</u>	362	29.0
456.hammer	162	57.6	<u>162</u>	<u>57.6</u>	163	57.2	162	57.7	<u>162</u>	<u>57.8</u>	162	57.8
458.sjeng	<u>389</u>	<u>31.1</u>	388	31.2	389	31.1	387	31.2	<u>387</u>	<u>31.2</u>	387	31.3
462.libquantum	<u>6.87</u>	<u>3020</u>	6.87	3020	6.27	3310	<u>6.87</u>	<u>3020</u>	6.87	3020	6.27	3310
464.h264ref	466	47.5	465	47.6	<u>465</u>	<u>47.6</u>	<u>372</u>	<u>59.5</u>	374	59.1	372	59.5
471.omnetpp	221	28.3	219	28.5	<u>220</u>	<u>28.4</u>	163	38.4	<u>162</u>	<u>38.5</u>	161	38.7
473.astar	214	32.9	<u>214</u>	<u>32.8</u>	214	32.8	214	32.9	<u>214</u>	<u>32.8</u>	214	32.8
483.xalancbmk	119	58.0	118	58.3	<u>119</u>	<u>58.1</u>	118	58.4	<u>118</u>	<u>58.3</u>	119	57.8

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

```
Sysinfo program /cpu2006/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost Tue Apr 17 16:52:46 2012
```

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 E5-2690 @ 2.90GHz
2 "physical id"s (chips)
32 "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 : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

```
From /proc/meminfo
MemTotal: 132144492 kB
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECint2006 = 59.3

ASUS RS720-E7(Z9PE-D16) Server System
(Intel Xeon E5-2690)

SPECint_base2006 = 55.2

CPU2006 license: 9016

Test date: Apr-2012

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011

Platform Notes (Continued)

HugePages_Total: 0
Hugepagesize: 2048 kB

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.2 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011
x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Apr 17 16:39

```
SPEC is set to: /cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext4 459G 71G 365G 17% /
```

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 = "/cpu2006/libs/32:/cpu2006/libs/64"
OMP_NUM_THREADS = "16"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

Transparent Huge Pages enabled with:

```
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

Base Compiler Invocation

C benchmarks:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECint2006 = 59.3

ASUS RS720-E7(Z9PE-D16) Server System
(Intel Xeon E5-2690)

SPECint_base2006 = 55.2

CPU2006 license: 9016

Test date: Apr-2012

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011

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:

`-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32`

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/smartheap -lsmartheap64`

Base Other Flags

C benchmarks:

`403.gcc: -Dalloca=_alloca`

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`



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECint2006 = 59.3

ASUS RS720-E7(Z9PE-D16) Server System
(Intel Xeon E5-2690)

SPECint_base2006 = 55.2

CPU2006 license: 9016

Test date: Apr-2012

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011

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: -xAVX(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: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -inline-calloc
          -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

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

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
            -ansi-alias

458.sjeng: -xAVX(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: -xAVX(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: -xAVX(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/smartheap -lsmartheap

```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECint2006 = 59.3

ASUS RS720-E7(Z9PE-D16) Server System
(Intel Xeon E5-2690)

SPECint_base2006 = 55.2

CPU2006 license: 9016

Test date: Apr-2012

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011

Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/smartheap -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-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/ASUSTekPlatform.20120313.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/ASUSTekPlatform.20120313.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 09:13:53 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 1 August 2012.

Standard Performance Evaluation Corporation

info@spec.org

<http://www.spec.org/>