



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-WRF (X9DRW-iF, Intel Xeon E5-2650)

SPECint®2006 = 44.4

SPECint_base2006 = 41.5

CPU2006 license: 001176

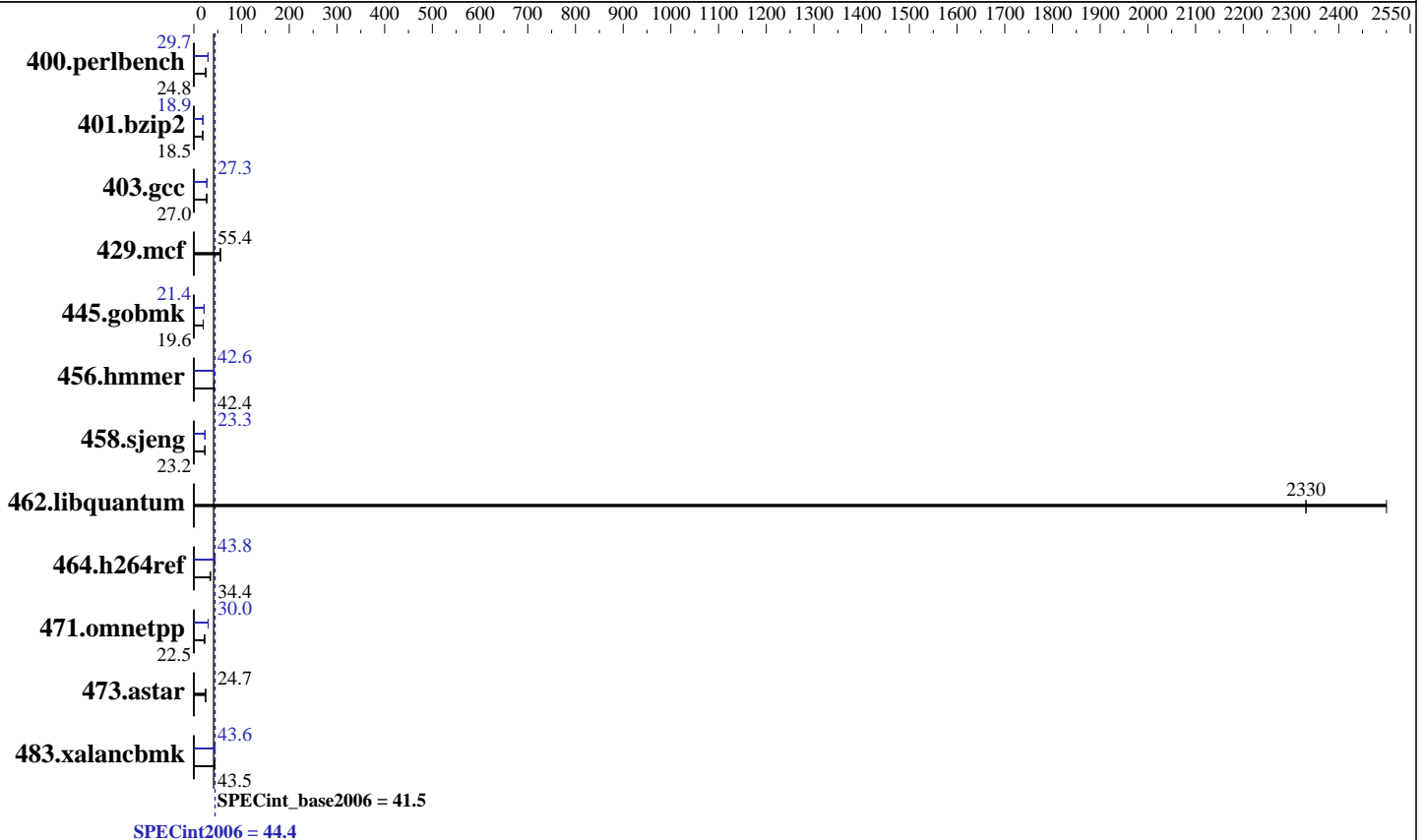
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2650
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2000
 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: 1 x 750 GB SATA III, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, Kernel 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

Supermicro

SuperServer 2027R-WRF (X9DRW-iF, Intel Xeon E5-2650)

SPECint2006 = 44.4

SPECint_base2006 = 41.5

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Jun-2012
Hardware Availability: Mar-2012
Software Availability: Dec-2011

Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|----------------|------------|-------------|-------------|-------------|------------|-------------|------------|-------------|-------------|-------------|------------|-------------|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 393 | 24.8 | 392 | 24.9 | <u>393</u> | <u>24.8</u> | 329 | 29.7 | 328 | 29.8 | <u>329</u> | <u>29.7</u> |
| 401.bzip2 | 520 | 18.6 | 521 | 18.5 | <u>520</u> | <u>18.5</u> | 509 | 18.9 | <u>509</u> | <u>18.9</u> | 509 | 19.0 |
| 403.gcc | <u>299</u> | <u>27.0</u> | 299 | 27.0 | 299 | 26.9 | <u>294</u> | <u>27.3</u> | 295 | 27.3 | 294 | 27.3 |
| 429.mcf | <u>165</u> | <u>55.4</u> | 165 | 55.4 | 164 | 55.6 | <u>165</u> | <u>55.4</u> | 165 | 55.4 | 164 | 55.6 |
| 445.gobmk | 534 | 19.6 | 536 | 19.6 | <u>534</u> | <u>19.6</u> | <u>490</u> | <u>21.4</u> | 490 | 21.4 | 490 | 21.4 |
| 456.hammer | <u>220</u> | <u>42.4</u> | 221 | 42.2 | 219 | 42.5 | 221 | 42.3 | <u>219</u> | <u>42.6</u> | 219 | 42.6 |
| 458.sjeng | 522 | 23.2 | 523 | 23.2 | <u>522</u> | <u>23.2</u> | 519 | 23.3 | 523 | 23.2 | <u>520</u> | <u>23.3</u> |
| 462.libquantum | 8.89 | 2330 | <u>8.89</u> | <u>2330</u> | 8.29 | 2500 | 8.89 | 2330 | <u>8.89</u> | <u>2330</u> | 8.29 | 2500 |
| 464.h264ref | 638 | 34.7 | 643 | 34.4 | <u>643</u> | <u>34.4</u> | 504 | 43.9 | <u>505</u> | <u>43.8</u> | 506 | 43.7 |
| 471.omnetpp | 278 | 22.5 | <u>278</u> | <u>22.5</u> | 278 | 22.5 | 209 | 30.0 | 209 | 30.0 | <u>209</u> | <u>30.0</u> |
| 473.astar | <u>284</u> | <u>24.7</u> | 292 | 24.0 | 284 | 24.7 | <u>284</u> | <u>24.7</u> | 292 | 24.0 | 284 | 24.7 |
| 483.xalancbmk | 159 | 43.5 | 160 | 43.1 | <u>159</u> | <u>43.5</u> | 158 | 43.6 | 159 | 43.5 | <u>158</u> | <u>43.6</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"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Platform Notes

Sysinfo program /usr/cpu2006/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ 8787f7622badcf24e01c368b1db4377c
running on localhost.localdomain Thu Jun 21 05:24:06 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 E5-2650 0 @ 2.00GHz
 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
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-WRF (X9DRW-iF, Intel Xeon E5-2650)

SPECint2006 = 44.4

SPECint_base2006 = 41.5

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Jun-2012
Hardware Availability: Mar-2012
Software Availability: Dec-2011

Platform Notes (Continued)

```

From /proc/meminfo
  MemTotal:      132139336 kB
  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.localdomain 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 Jun 19 15:51

SPEC is set to: /usr/cpu2006
  Filesystem      Type      Size  Used Avail Use% Mounted on
  /dev/sda2       ext4      577G  70G  479G  13% /

(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 = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "16"

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

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-WRF (X9DRW-iF, Intel Xeon E5-2650)

SPECint2006 = 44.4

SPECint_base2006 = 41.5

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

Base Portability Flags (Continued)

```

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/smarterheap -lsmarterheap64

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

Supermicro

SuperServer 2027R-WRF (X9DRW-iF, Intel Xeon E5-2650)

SPECint2006 = 44.4

SPECint_base2006 = 41.5

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2012

Hardware Availability: Mar-2012

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

Supermicro

SuperServer 2027R-WRF (X9DRW-iF, Intel Xeon E5-2650)

SPECint2006 = 44.4

SPECint_base2006 = 41.5

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2012

Hardware Availability: Mar-2012

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 file that was used to format this result can be browsed at

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

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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 12:37:36 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 17 July 2012.