



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

SPECint<sup>®</sup>\_rate2006 = 393

ASUS RS700-E7(Z9PP-D24) Server System  
(Intel Xeon E5-2620)

SPECint\_rate\_base2006 = 374

CPU2006 license: 9016

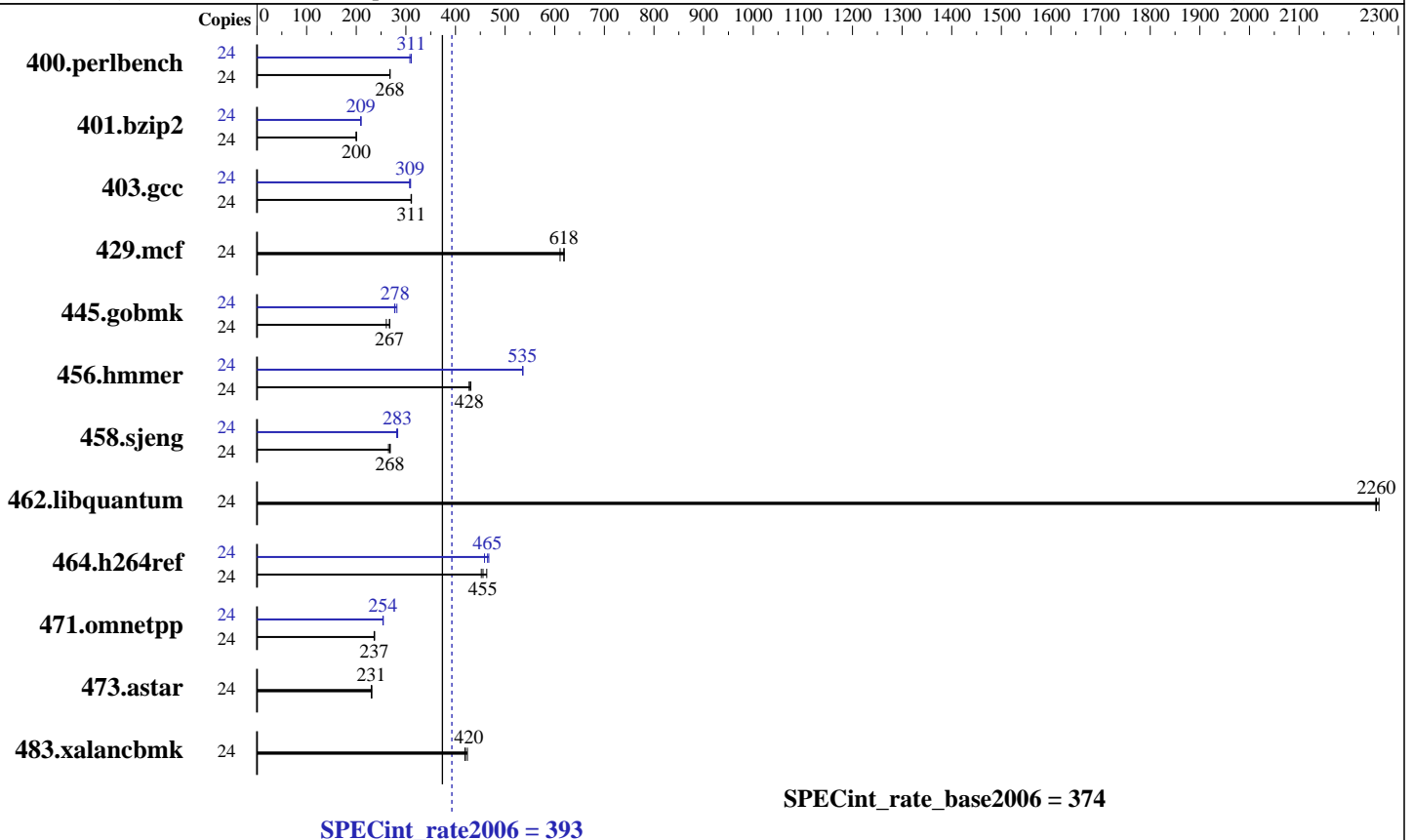
Test date: Jun-2013

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: May-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E5-2620  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 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: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: HITACHI HDP725050GLA380 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: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-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.

SPECint\_rate2006 = 393

ASUS RS700-E7(Z9PP-D24) Server System  
(Intel Xeon E5-2620)

SPECint\_rate\_base2006 = 374

CPU2006 license: 9016

Test date: Jun-2013

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: May-2012

Tested by: ASUSTeK Computer Inc.

Software Availability: Dec-2011

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	876	268	<u>875</u>	<u>268</u>	875	268	24	754	311	761	308	<u>755</u>	<u>311</u>
401.bzip2	24	1154	201	1159	200	<u>1158</u>	<u>200</u>	24	1108	209	<u>1106</u>	<u>209</u>	1105	210
403.gcc	24	<u>622</u>	<u>311</u>	621	311	622	311	24	628	308	624	310	<u>626</u>	<u>309</u>
429.mcf	24	<u>354</u>	<u>618</u>	353	619	358	611	24	<u>354</u>	<u>618</u>	353	619	358	611
445.gobmk	24	<u>943</u>	<u>267</u>	941	267	966	261	24	893	282	<u>906</u>	<u>278</u>	908	277
456.hammer	24	<u>523</u>	<u>428</u>	523	428	520	431	24	418	536	<u>418</u>	<u>535</u>	418	535
458.sjeng	24	<u>1085</u>	<u>268</u>	1081	269	1096	265	24	<u>1027</u>	<u>283</u>	1031	282	1024	283
462.libquantum	24	<u>220</u>	<u>2260</u>	220	2260	221	2250	24	<u>220</u>	<u>2260</u>	220	2260	221	2250
464.h264ref	24	<u>1166</u>	<u>455</u>	1147	463	1175	452	24	1158	458	<u>1143</u>	<u>465</u>	1137	467
471.omnetpp	24	633	237	<u>634</u>	<u>237</u>	636	236	24	589	255	<u>591</u>	<u>254</u>	591	254
473.astar	24	732	230	<u>731</u>	<u>231</u>	728	231	24	732	230	<u>731</u>	<u>231</u>	728	231
483.xalancbmk	24	395	419	<u>394</u>	<u>420</u>	391	424	24	395	419	<u>394</u>	<u>420</u>	391	424

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## 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 Fri Jun 14 22:45:46 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 E5-2620 0 @ 2.00GHz
 2 "physical id"s (chips)
 24 "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 : 6
siblings  : 12
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

**SPECint\_rate2006 = 393**

ASUS RS700-E7(Z9PP-D24) Server System  
(Intel Xeon E5-2620)

**SPECint\_rate\_base2006 = 374**

**CPU2006 license:** 9016

**Test date:** Jun-2013

**Test sponsor:** ASUSTeK Computer Inc.

**Hardware Availability:** May-2012

**Tested by:** ASUSTeK Computer Inc.

**Software Availability:** Dec-2011

## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5
physical 1: cores 0 1 2 3 4 5
cache size : 15360 KB
```

```
From /proc/meminfo
MemTotal:      132243976 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 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 14 22:12
```

```
SPEC is set to: /cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal       ext4      688G  12G  642G   2% /
```

Additional information from dmidecode:

```
Memory:
16x Kingston 9965516-051.A00 8 GB 1600 MHz 1 rank
```

(End of data from sysinfo program)

The inconsistent information of memory rank observed in Hardware and Platform Notes is due to BIOS posting issue in DMI table. However, the benchmark exactly perform at 2 Rank which consists to the spec of memory module.

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/cpu2006/libs/32:/cpu2006/libs/64"

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  
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

**ASUSTeK Computer Inc.**

**SPECint\_rate2006 = 393**

ASUS RS700-E7(Z9PP-D24) Server System  
(Intel Xeon E5-2620)

**SPECint\_rate\_base2006 = 374**

**CPU2006 license:** 9016

**Test date:** Jun-2013

**Test sponsor:** ASUSTeK Computer Inc.

**Hardware Availability:** May-2012

**Tested by:** ASUSTeK Computer Inc.

**Software Availability:** Dec-2011

## Base Compiler Invocation

C benchmarks:

`icc -m32`

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:

`-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3`

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/smartheap -lsmartheap`

## Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

## Peak Compiler Invocation

C benchmarks (except as noted below):

`icc -m32`

400.perlbench: `icc -m64`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:

`icpc -m32`



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

**SPECint\_rate2006 = 393**

ASUS RS700-E7(Z9PP-D24) Server System  
(Intel Xeon E5-2620)

**SPECint\_rate\_base2006 = 374**

**CPU2006 license:** 9016

**Test date:** Jun-2013

**Test sponsor:** ASUSTeK Computer Inc.

**Hardware Availability:** May-2012

**Tested by:** ASUSTeK Computer Inc.

**Software Availability:** Dec-2011

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
 401.bzip2: -DSPEC\_CPU\_LP64  
 456.hmmer: -DSPEC\_CPU\_LP64  
 458.sjeng: -DSPEC\_CPU\_LP64  
 462.libquantum: -DSPEC\_CPU\_LINUX  
 483.xalanbmk: -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) -auto-ilp32

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

403.gcc: -xAVX -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
 -ansi-alias -opt-mem-layout-trans=3

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

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  
 -auto-ilp32

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) -ansi-alias  
 -opt-ra-region-strategy=block -Wl,-z,muldefs  
 -L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalanbmk: basepeak = yes



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

**SPECint\_rate2006 = 393**

ASUS RS700-E7(Z9PP-D24) Server System  
(Intel Xeon E5-2620)

**SPECint\_rate\_base2006 = 374**

**CPU2006 license:** 9016

**Test date:** Jun-2013

**Test sponsor:** ASUSTeK Computer Inc.

**Hardware Availability:** May-2012

**Tested by:** ASUSTeK Computer Inc.

**Software Availability:** Dec-2011

## 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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 16:36:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 8 July 2013.