



# SPEC<sup>®</sup> CINT2006 Result

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## Fujitsu

SPECint<sup>®</sup>\_rate2006 = 614

PRIMERGY RX350 S7, Intel Xeon E5-2665, 2.40 GHz

SPECint\_rate\_base2006 = 588

CPU2006 license: 19

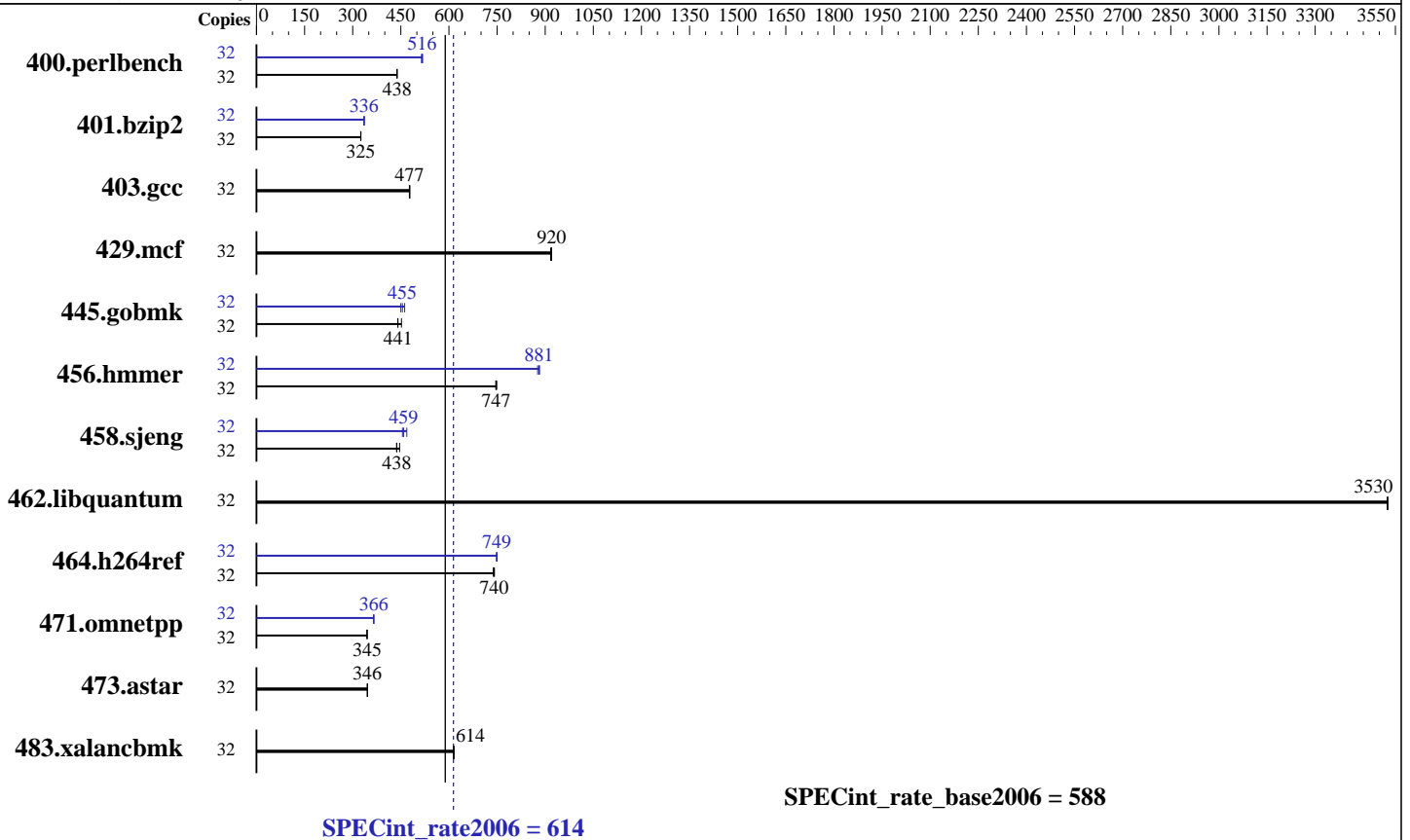
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E5-2665  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.10 GHz  
 CPU MHz: 2400  
 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 PC3L-12800R-11, ECC)  
 Disk Subsystem: 1 x SATA, 500 GB, 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



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### Results Table

| Benchmark      | Base   |                   |                    |                   |                   |                   |                   | Peak   |                   |                    |                   |                   |                   |                   |
|----------------|--------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|--------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
|                | Copies | Seconds           | Ratio              | Seconds           | Ratio             | Seconds           | Ratio             | Copies | Seconds           | Ratio              | Seconds           | Ratio             | Seconds           | Ratio             |
| 400.perlbench  | 32     | <b><u>713</u></b> | <b><u>438</u></b>  | 714               | 438               | 713               | 438               | 32     | 608               | 514                | 604               | 518               | <b><u>606</u></b> | <b><u>516</u></b> |
| 401.bzip2      | 32     | <b><u>950</u></b> | <b><u>325</u></b>  | 948               | 326               | 950               | 325               | 32     | 921               | 335                | <b><u>920</u></b> | <b><u>336</u></b> | 919               | 336               |
| 403.gcc        | 32     | 541               | 477                | <b><u>540</u></b> | <b><u>477</u></b> | 539               | 478               | 32     | 541               | 477                | <b><u>540</u></b> | <b><u>477</u></b> | 539               | 478               |
| 429.mcf        | 32     | 318               | 917                | <b><u>317</u></b> | <b><u>920</u></b> | 317               | 920               | 32     | 318               | 917                | <b><u>317</u></b> | <b><u>920</u></b> | 317               | 920               |
| 445.gobmk      | 32     | 762               | 441                | 743               | 452               | <b><u>761</u></b> | <b><u>441</u></b> | 32     | <b><u>738</u></b> | <b><u>455</u></b>  | 746               | 450               | 727               | 462               |
| 456.hammer     | 32     | <b><u>400</u></b> | <b><u>747</u></b>  | 399               | 749               | 400               | 746               | 32     | 341               | 876                | 338               | 882               | <b><u>339</u></b> | <b><u>881</u></b> |
| 458.sjeng      | 32     | 887               | 437                | 868               | 446               | <b><u>885</u></b> | <b><u>438</u></b> | 32     | 851               | 455                | 826               | 469               | <b><u>844</u></b> | <b><u>459</u></b> |
| 462.libquantum | 32     | <b><u>188</u></b> | <b><u>3530</u></b> | 188               | 3530              | 188               | 3520              | 32     | <b><u>188</u></b> | <b><u>3530</u></b> | 188               | 3530              | 188               | 3520              |
| 464.h264ref    | 32     | 955               | 742                | 959               | 738               | <b><u>956</u></b> | <b><u>740</u></b> | 32     | 946               | 749                | 945               | 750               | <b><u>946</u></b> | <b><u>749</u></b> |
| 471.omnetpp    | 32     | <b><u>580</u></b> | <b><u>345</u></b>  | 580               | 345               | 581               | 344               | 32     | <b><u>547</u></b> | <b><u>366</u></b>  | 547               | 366               | 547               | 365               |
| 473.astar      | 32     | 650               | 346                | <b><u>650</u></b> | <b><u>346</u></b> | 650               | 346               | 32     | 650               | 346                | <b><u>650</u></b> | <b><u>346</u></b> | 650               | 346               |
| 483.xalancbmk  | 32     | 358               | 616                | 360               | 614               | <b><u>359</u></b> | <b><u>614</u></b> | 32     | 358               | 616                | 360               | 614               | <b><u>359</u></b> | <b><u>614</u></b> |

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"

### General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/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

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

This result was measured on the PRIMERGY RX350 S7. The PRIMERGY RX350 S7 and the PRIMERGY TX300 S7 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.com>



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**Test date:** Mar-2012  
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**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:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
  
C++ benchmarks:  
-xSSE4.2 -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



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## 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.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)  
 -auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
 -ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

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 -auto-ilp32

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

473.astar: basepeak = yes

Continued on next page



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## Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

## 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/Fujitsu-Platform.20120320.html>

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

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

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml>

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

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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