# SPEC® CINT2006 Result



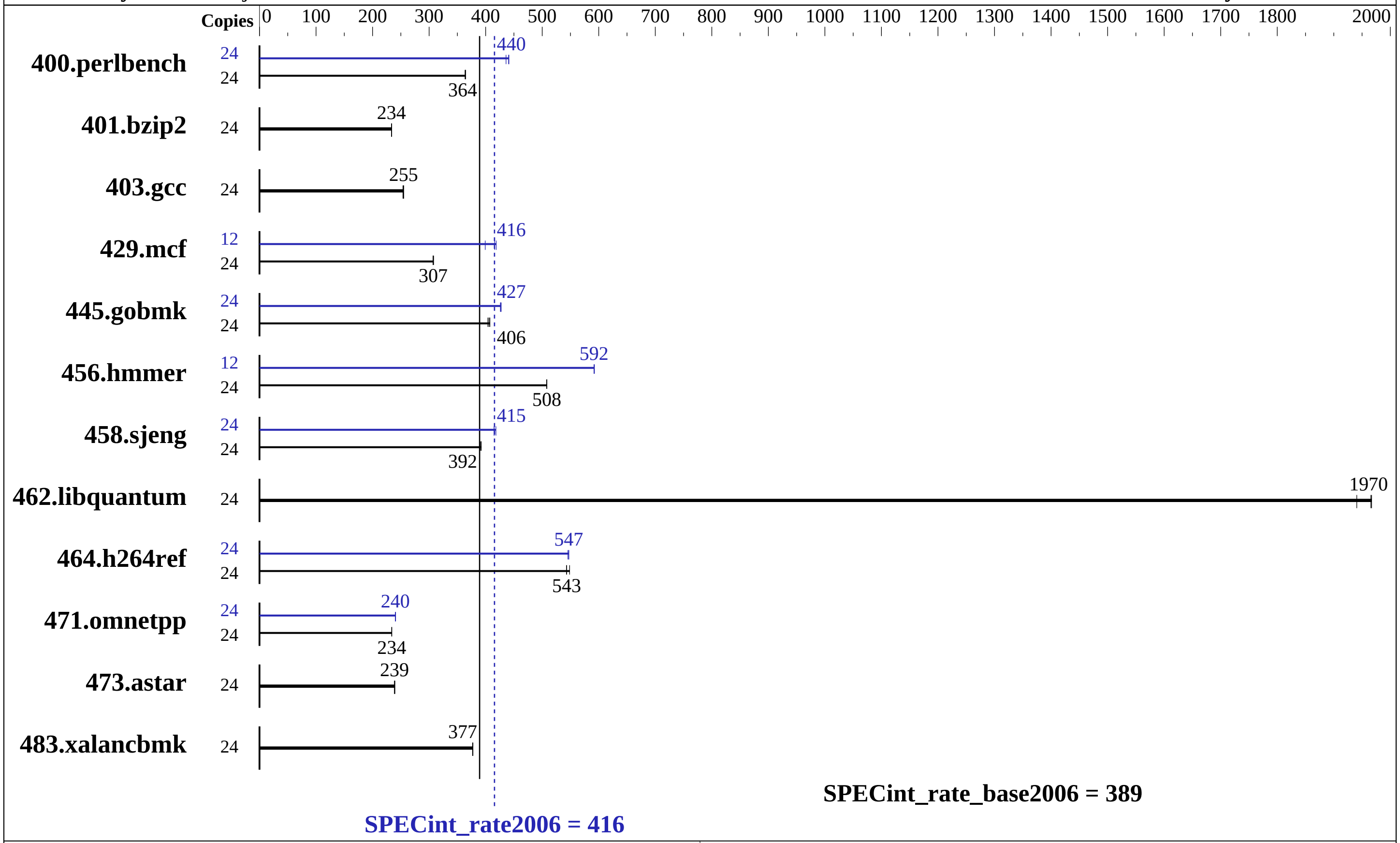
## Fujitsu

PRIMERGY TX300 S6, Intel Xeon X5690, 3.47 GHz

SPECint®_rate2006 = 416

SPECint_rate_base2006 = 389

| | | | |
|---|---|---|---|
| **CPU2006 license:** | 19 | **Test date:** | Dec-2010 |
| **Test sponsor:** | Fujitsu | **Hardware Availability:** | Feb-2011 |
| **Tested by:** | Fujitsu | **Software Availability:** | Nov-2010 |




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon X5690 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.73 GHz |
| CPU MHz: | 3467 |
| 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: | 12 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC) |
| Disk Subsystem: | 1 x SAS, 300 GB, 10000 RPM |
| Other Hardware: | -- |

### Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 11 (x86_64) with SP1, Kernel 2.6.32.12-0.7-default |
| Compiler: | Intel C++ Compiler XE for applications running on IA-32 Version 12.0.0.082 Build 20101006 |
| Auto Parallel: | No |
| File System: | ext3 |
| 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

| | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Benchmark** | **Copies** | **Seconds** | **Ratio** | **Seconds** | **Ratio** | **Seconds** | **Ratio** | **Copies** | **Seconds** | **Ratio** | **Seconds** | **Ratio** | **Seconds** | **Ratio** |
| 400.perlbench | 24 | 643 | 365 | 645 | 364 | **644** | **364** | 24 | 538 | 436 | **532** | **440** | 532 | 441 |
| 401.bzip2 | 24 | 992 | 233 | **992** | **234** | 991 | 234 | 24 | 992 | 233 | **992** | **234** | 991 | 234 |
| 403.gcc | 24 | 761 | 254 | 758 | 255 | **758** | **255** | 24 | 761 | 254 | 758 | 255 | **758** | **255** |
| 429.mcf | 24 | 713 | 307 | 711 | 308 | **713** | **307** | 12 | 261 | 419 | 274 | 399 | **263** | **416** |
| 445.gobmk | 24 | 623 | 404 | 618 | 408 | **620** | **406** | 24 | 589 | 427 | **590** | **427** | 591 | 426 |
| 456.hmmer | 24 | 441 | 508 | 441 | 508 | **441** | **508** | 12 | 189 | 592 | 189 | 592 | **189** | **592** |
| 458.sjeng | 24 | 740 | 392 | 743 | 391 | **741** | **392** | 24 | 700 | 415 | **700** | **415** | 694 | 418 |
| 462.libquantum | 24 | **253** | **1970** | 253 | 1970 | 256 | 1940 | 24 | **253** | **1970** | 253 | 1970 | 256 | 1940 |
| 464.h264ref | 24 | 968 | 549 | 978 | 543 | **978** | **543** | 24 | 974 | 545 | 971 | 547 | **971** | **547** |
| 471.omnetpp | 24 | 641 | 234 | **641** | **234** | 641 | 234 | 24 | 624 | 240 | **624** | **240** | 623 | 241 |
| 473.astar | 24 | 706 | 239 | **705** | **239** | 703 | 240 | 24 | 706 | 239 | **705** | **239** | 703 | 240 |
| 483.xalancbmk | 24 | 439 | 378 | **439** | **377** | 439 | 377 | 24 | 439 | 378 | **439** | **377** | 439 | 377 |

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

## Submit Notes

```
The config file option 'submit' was used.
 numactl was used to bind copies to the cores
```

## Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
Large pages were not enabled for this run
```

## Platform Notes

```
BIOS configuration:
Data Reuse Optimization = Disable
```

## General Notes

```
This result was measured on the PRIMERGY TX300 S6. The PRIMERGY TX300 S6
and the PRIMERGY TX300 S6 are electronically equivalent.

For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on SLES 10 SP1 with Binutils 2.18.50.0.7.20080502
```

# 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
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/smartheap -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

# Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

# Peak Compiler Invocation

C benchmarks (except as noted below):
`icc  -m32`

400.perlbench: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:
`icpc -m32`

## Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
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)

401.bzip2: basepeak = yes

403.gcc: basepeak = yes

429.mcf: -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 -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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

483.xalancbmk: basepeak = yes

## 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-ic12.0-linux64-revA.20110222.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.xml



For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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