# SPEC® CINT2006 Result



## Oracle Corporation

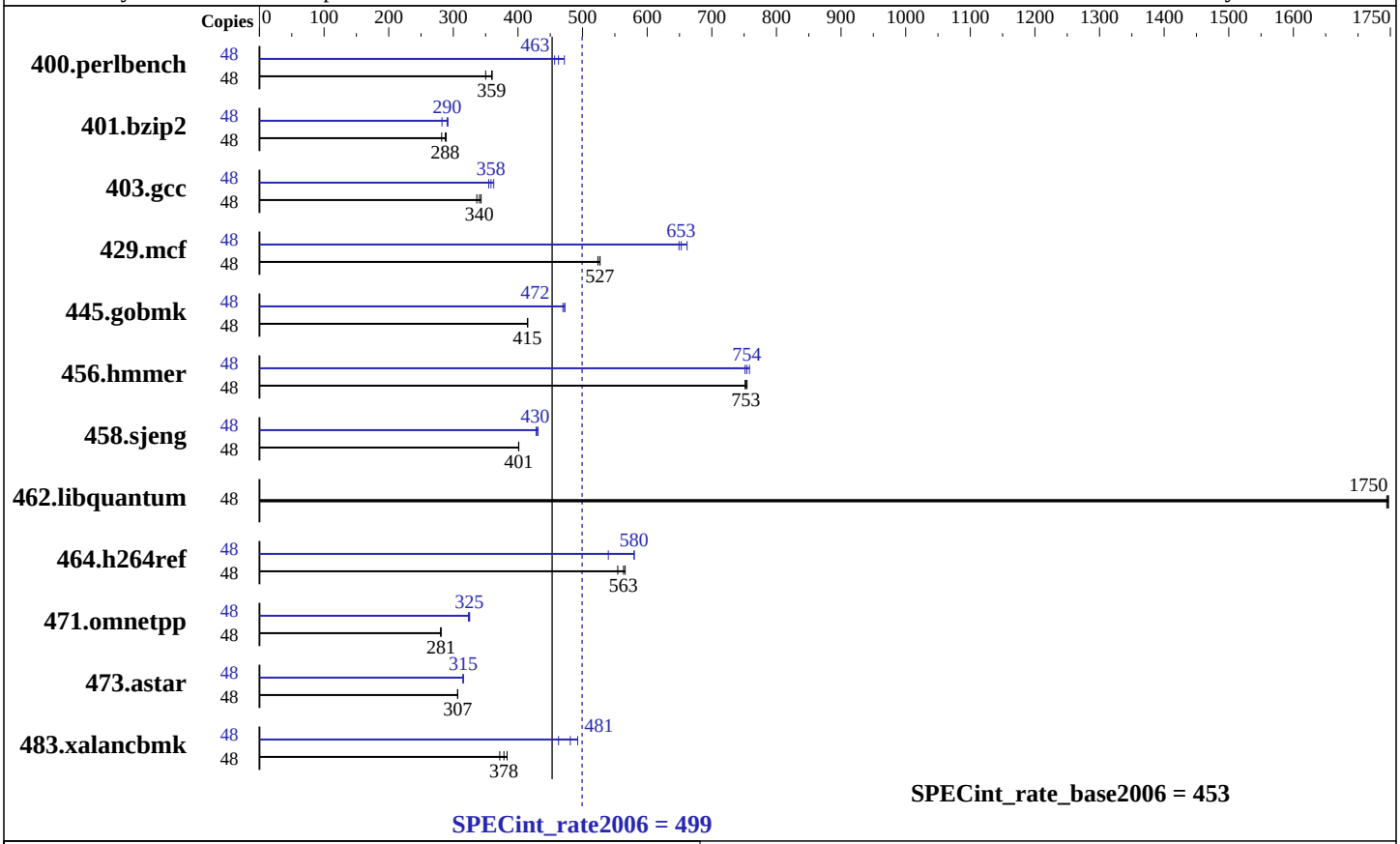
## Sun Fire X4470 (Intel Xeon E7530 1.87 GHz)

**SPECint®_rate2006 = 499**

**SPECint_rate_base2006 = 453**

**CPU2006 license:** 6
**Test sponsor:** Oracle Corporation
**Tested by:** Oracle Corporation

**Test date:** Nov-2010
**Hardware Availability:** Jun-2010
**Software Availability:** Jun-2010




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E7530 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.13 GHz |
| CPU MHz: | 1867 |
| FPU: | Integrated |
| CPU(s) enabled: | 24 cores, 4 chips, 6 cores/chip, 2 threads/core |
| CPU(s) orderable: | 1-4 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: | 256 GB (64 x 4 GB 2Rx4 PC3-10600R-9, ECC, see add'l detail in notes) |
| Disk Subsystem: | 1 x 500 GB, SATA, 7200 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Oracle Solaris 10 9/10 |
| Compiler: | Oracle Solaris Studio Express 6/10 |
| Auto Parallel: | No |
| File System: | ufs |
| System State: | Default |
| Base Pointers: | 32/64-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | MicroQuill SmartHeap Library 9.01 for x64 |

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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 | 48 | 1340 | 350 | **1305** | **359** | 1302 | 360 | 48 | 1027 | 457 | **1013** | **463** | 994 | 472 |
| 401.bzip2 | 48 | 1643 | 282 | 1602 | 289 | **1611** | **288** | 48 | 1640 | 282 | **1595** | **290** | 1588 | 292 |
| 403.gcc | 48 | **1135** | **340** | 1126 | 343 | 1149 | 336 | 48 | 1066 | 363 | **1078** | **358** | 1089 | 355 |
| 429.mcf | 48 | 836 | 524 | 831 | 527 | **831** | **527** | 48 | **671** | **653** | 674 | 649 | 662 | 662 |
| 445.gobmk | 48 | 1214 | 415 | **1214** | **415** | 1213 | 415 | 48 | 1066 | 473 | 1072 | 470 | **1066** | **472** |
| 456.hmmer | 48 | 596 | 751 | 594 | 755 | **595** | **753** | 48 | **594** | **754** | 591 | 758 | 596 | 751 |
| 458.sjeng | 48 | 1449 | 401 | 1447 | 401 | **1448** | **401** | 48 | **1350** | **430** | 1357 | 428 | 1348 | 431 |
| 462.libquantum | 48 | **570** | **1750** | 570 | 1740 | 569 | 1750 | 48 | **570** | **1750** | 570 | 1740 | 569 | 1750 |
| 464.h264ref | 48 | 1877 | 566 | **1886** | **563** | 1916 | 554 | 48 | **1832** | **580** | 1832 | 580 | 1968 | 540 |
| 471.omnetpp | 48 | 1070 | 280 | 1068 | 281 | **1068** | **281** | 48 | 928 | 323 | **924** | **325** | 922 | 325 |
| 473.astar | 48 | 1099 | 307 | 1098 | 307 | **1098** | **307** | 48 | **1069** | **315** | 1068 | 315 | 1070 | 315 |
| 483.xalancbmk | 48 | 891 | 372 | **876** | **378** | 864 | 383 | 48 | 716 | 463 | 673 | 492 | **689** | **481** |

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.
```

## Operating System Notes

```
ulimit -s unlimited  (shell)

/etc/system parameters
   tune_t_fsflushr=10
   autoup=900
   lpg_alloc_prefer=1
```

## Platform Notes

```
The system automatically configures the memory to run at 978 MHz.
Default BIOS settings used.
```

## Base Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

## Base Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_X64 -DSPEC_CPU_LP64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_SOLARIS -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_SOLARIS -DSPEC_CPU_LP64
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_SOLARIS

## Base Optimization Flags

C benchmarks:
-fast -xipo=2 -m64 -xaddr32=yes -xpagesize=2M

C++ benchmarks:
-fast -xipo=2 -xpagesize=2M -xalias_level=compatible
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap
-library=stlport4

## Base Other Flags

C benchmarks:
-V -# -xjobs=64

C++ benchmarks:
-verbose=diags,version -xjobs=64

## Peak Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

## Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_X64 -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64 -DSPEC_CPU_SOLARIS

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## Peak Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_SOLARIS -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_SOLARIS

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=1 -m64
-xalias_level=std -lbsdmalloc

401.bzip2: -fast -xipo=2 -m64 -xpagesize=2M -xalias_level=std
-lumem

403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -W2,-Rujam -W2,-Rtile -m64
-xalias_level=std

429.mcf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m32
-xpagesize=2M -xalias_level=strong -xprefetch=no%auto
-lbsdmalloc

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -m64 -xpagesize=2M
-xrestrict -xalias_level=strong

456.hmmer: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64

458.sjeng: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=strong

462.libquantum: basepeak = yes

464.h264ref: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xalias_level=strong -xrestrict

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -library=stlport4
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap

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## Peak Optimization Flags (Continued)

473.astar: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=compatible -library=stlport4
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap64

483.xalancbmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -xunroll=2
-xpagesize=2M -xalias_level=compatible -library=stlport4
-m32
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap

## Peak Other Flags

C benchmarks:
-V -# -xjobs=64

C++ benchmarks:
-verbose=diags,version -xjobs=64

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio-x86_64.20100901.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio-x86_64.20100901.xml



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

Tested with SPEC CPU2006 v1.1.
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