



SPEC® CINT2006 Result

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Oracle Corporation

SPECint®_rate2006 = 353

Sun Fire X4170 M2 (Intel Xeon X5670 2.93GHz)

SPECint_rate_base2006 = 316

CPU2006 license: 6

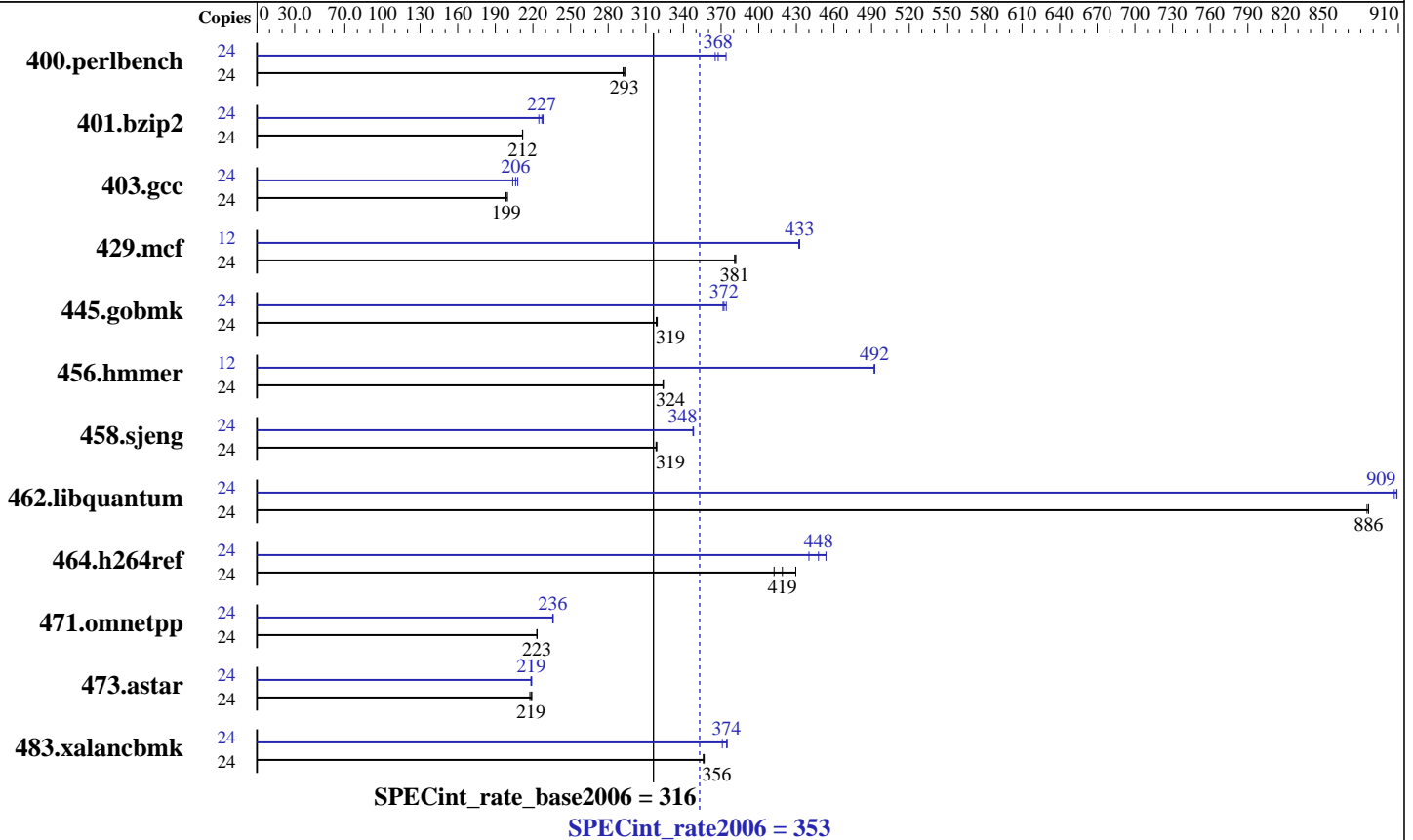
Test date: Mar-2010

Test sponsor: Oracle Corporation

Hardware Availability: Jun-2010

Tested by: Oracle Corporation

Software Availability: Jun-2010



Hardware

CPU Name: Intel Xeon X5670
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 CPU(s) orderable: 1 or 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 DDR3-1333 CL9, 2 Rank, ECC)
 Disk Subsystem: 1 x 300 GB, SAS, 10000 RPM
 Other Hardware: None

Software

Operating System: Oracle Solaris 10 10/09
 Compiler: Oracle Solaris Studio Express 6/10
 Auto Parallel: No
 File System: zfs
 System State: Default
 Base Pointers: 32-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	24	803	292	800	293	800	293	24	638	368	627	374	642	365
401.bzip2	24	1093	212	1094	212	1094	212	24	1020	227	1031	225	1016	228
403.gcc	24	973	198	967	200	972	199	24	937	206	948	204	929	208
429.mcf	24	575	381	575	381	573	382	12	253	433	253	433	253	432
445.gobmk	24	790	319	789	319	791	318	24	678	372	673	374	676	372
456.hammer	24	691	324	692	324	692	324	12	227	492	227	492	228	492
458.sjeng	24	911	319	913	318	912	319	24	836	348	834	348	835	348
462.libquantum	24	561	886	562	885	561	886	24	547	909	548	907	547	909
464.h264ref	24	1236	430	1268	419	1288	412	24	1171	454	1186	448	1207	440
471.omnetpp	24	672	223	672	223	672	223	24	636	236	635	236	636	236
473.astar	24	769	219	771	219	774	218	24	770	219	771	218	769	219
483.xalancbmk	24	465	356	464	357	465	356	24	446	371	442	374	442	375

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
zfs:zfs_arc_max = 0x10000000
lpg_alloc_prefer=1
```

Platform Notes

Default BIOS settings used except:

C-State : Disabled

Data Reuse Optimization : Disabled

Base Compiler Invocation

C benchmarks:

cc

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Base Compiler Invocation (Continued)

C++ benchmarks:
CC

Base Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_IA32
403.gcc: -DSPEC_CPU_SOLARIS
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Base Optimization Flags

C benchmarks:
-fast -xtarget=nehalem -xipo=2 -xpagesize=2M
-M /usr/lib/ld/map.bssalign

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

Base Other Flags

C benchmarks:
-V -# -xjobs=24

C++ benchmarks:
-verbose=diags,version -xjobs=24

Peak Compiler Invocation

C benchmarks:
CC

C++ benchmarks:
CC



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Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_X64 -DSPEC_CPU_LP64
 403.gcc: -DSPEC_CPU_SOLARIS
 462.libquantum: -DSPEC_CPU_SOLARIS
 483.xalancbmk: -DSPEC_CPU_SOLARIS

Peak Optimization Flags

C benchmarks:

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

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

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

429.mcf: -xprofile=collect:./feedback(pass 1)
 -xprofile=use:./feedback(pass 2) -fast -xtarget=nehalem
 -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 -xtarget=nehalem
 -m64 -xpagesize=2M -xrestrict -xalias_level=strong
 -xdepend

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

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

462.libquantum: -fast -xtarget=nehalem -xipo=2 -m64 -xalias_level=std

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

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
 -xprofile=use:./feedback(pass 2) -fast -xtarget=nehalem
 -xipo=2 -xpagesize=2M -library=stlport4

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Peak Optimization Flags (Continued)

471.omnetpp (continued):

-L/datal/SmartHeap_9/lib -R/datal/SmartHeap_9/lib -lsmartheap

473.astar: -xprofile=collect:./feedback(pass 1)

-xprofile=use:./feedback(pass 2) -fast -xtarget=nehalem

-xipo=2 -m64 -xpagesize=2M -xalias_level=compatible

-library=stlport4

-L/datal/SmartHeap_9/lib -R/datal/SmartHeap_9/lib -lsmartheap64

483.xalancbmk: -xprofile=collect:./feedback(pass 1)

-xprofile=use:./feedback(pass 2) -fast -xtarget=nehalem

-xipo=2 -xunroll=2 -xpagesize=2M -xalias_level=compatible

-L/datal/SmartHeap_9/lib -R/datal/SmartHeap_9/lib -lsmartheap

-library=stlport4

Peak Other Flags

C benchmarks:

-V -# -xjobs=24

C++ benchmarks:

-verbose=diags,version -xjobs=24

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.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.xml

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

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 13:26:37 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 8 July 2010.