



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint®_rate2006 = 702

Sun Fire X4170 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 628

CPU2006 license: 6

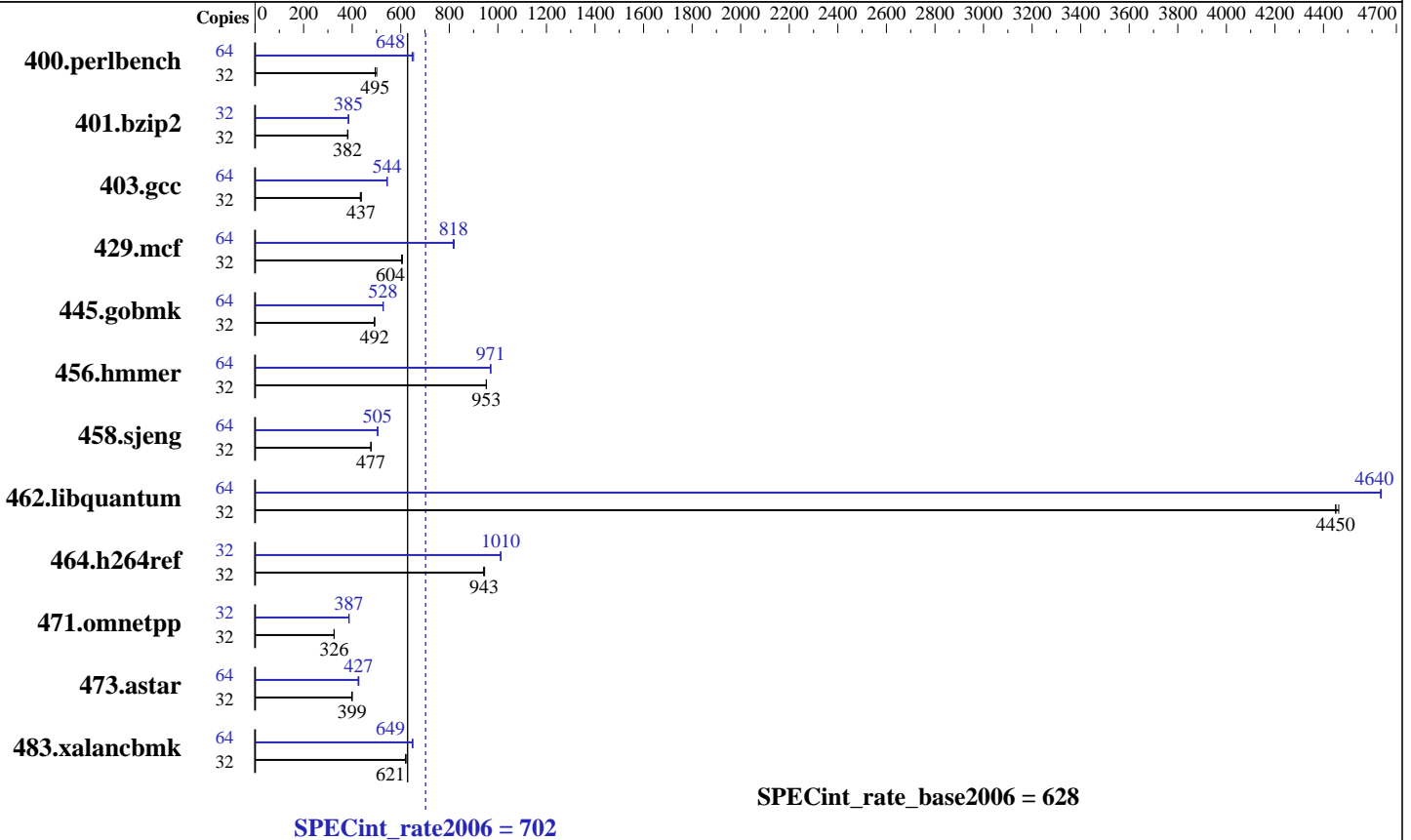
Test date: Mar-2012

Test sponsor: Oracle Corporation

Hardware Availability: Apr-2012

Tested by: Oracle Corporation

Software Availability: Jun-2012



Hardware

CPU Name: Intel Xeon E5-2690
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2900
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 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 PC3-12800R-11, ECC)
 Disk Subsystem: 3 x 300 GB 10K RPM SAS
 Other Hardware: None

Software

Operating System: Oracle Solaris 11 11/11 (SRU 02)
 Compiler: C/C++: Version 12.3 of Oracle Solaris Studio (patch update 1, tested with nightly build 20120313)
 Auto Parallel: No
 File System: zfs (with raidz)
 System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint_rate2006 = 702

Sun Fire X4170 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 628

CPU2006 license: 6

Test date: Mar-2012

Test sponsor: Oracle Corporation

Hardware Availability: Apr-2012

Tested by: Oracle Corporation

Software Availability: Jun-2012

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	624	501	632	495	632	495	64	958	653	966	647	965	648
401.bzip2	32	807	383	810	381	809	382	32	802	385	801	385	804	384
403.gcc	32	589	437	589	437	594	433	64	949	543	947	544	946	544
429.mcf	32	483	604	481	607	483	604	64	714	818	715	816	712	820
445.gobmk	32	682	492	682	492	683	492	64	1272	528	1273	527	1273	528
456.hammer	32	314	952	313	953	313	953	64	615	971	616	969	615	971
458.sjeng	32	811	477	810	478	811	477	64	1535	504	1534	505	1532	505
462.libquantum	32	149	4450	149	4460	149	4450	64	286	4640	286	4640	286	4640
464.h264ref	32	749	945	751	943	752	942	32	701	1010	699	1010	700	1010
471.omnetpp	32	614	326	614	326	614	326	32	517	387	517	387	517	387
473.astar	32	563	399	562	399	563	399	64	1059	424	1052	427	1053	427
483.xalancbmk	32	356	620	356	621	356	621	64	680	649	682	648	680	649

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 to bind processes to CPU threads with pbind(1)

Operating System Notes

ulimit -s 10000 (shell): increases stack

```

/etc/system parameters
  autoup=1000
  zfs:zfs_arc_max=0x400000000
  zfs:zfs_arc_min=0x400000000
  ncsiz=0x10000
  lpg_alloc_prefer=1

```

gzip compression set using "zfs set compression=gzip <zfs-filesystem>"

Platform Notes

Default BIOS Settings were used, except:
Energy Performance set to Performance

Oracle's Sun Fire X4170 M3 is now known as the Sun Server X3-2.

```

Sysinfo program /benchpool/data1/cpu2006v1.2/Docs/sysinfo
: 6775 2011-08-16 #f7622badcf24e01c368b1db4377c
running on bur407-122 Fri Mar 30 15:47:43 2012

```

This section contains SUT (System Under Test) info as seen by
Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint_rate2006 = 702

Sun Fire X4170 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 628

CPU2006 license: 6

Test date: Mar-2012

Test sponsor: Oracle Corporation

Hardware Availability: Apr-2012

Tested by: Oracle Corporation

Software Availability: Jun-2012

Platform Notes (Continued)

some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```
From /usr/sbin/psrinfo -pv
Intel(r) Xeon(r) CPU E5-2690 0 @ 2.90GHz
x86 (GenuineIntel 206D7 family 6 model 45 step 7 clock 2893 MHz)
```

```
/usr/sbin/psrinfo -p: 2 chips
/usr/sbin/psrinfo -pv | grep "core has" | wc -l: 16 cores
/usr/sbin/psrinfo | wc -l: 32 threads
```

```
/usr/sbin/prtconf | grep "Memory size:": 131062 Megabytes
```

```
/etc/release:
```

```
Oracle Solaris 11 11/11 X86
```

```
uname -a:
SunOS bur407-122 5.11 11.0 i86pc i386 i86pc
```

```
disk: df -h
```

Filesystem	Size	Used	Available	Capacity	Mounted on
benchpool/data1	545G	12G	533G	3%	/benchpool/data1

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
OMP_NUM_THREADS = "1"

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
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint_rate2006 = 702

Sun Fire X4170 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 628

CPU2006 license: 6

Test date: Mar-2012

Test sponsor: Oracle Corporation

Hardware Availability: Apr-2012

Tested by: Oracle Corporation

Software Availability: Jun-2012

Base Portability Flags (Continued)

456.hmmcr: -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:
-g -fast -xipo=2 -m64 -xaddr32 -xpagesize=2M -xalias_level=std

C++ benchmarks:
-fast -xipo=2 -m32 -xpagesize=2M -xalias_level=compatible
-library=stlport4 -lfast

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

Peak Optimization Flags

C benchmarks:

400.perlbench: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xprefetch=no%auto
-xtarget=nehalem -xipo=1 -m64 -xpagesize=2M
-xalias_level=std -lbsdmalloc

401.bzip2: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=strong

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint_rate2006 = 702

Sun Fire X4170 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 628

CPU2006 license: 6

Test date: Mar-2012

Test sponsor: Oracle Corporation

Hardware Availability: Apr-2012

Tested by: Oracle Corporation

Software Availability: Jun-2012

Peak Optimization Flags (Continued)

403.gcc: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m32
-xpagesize=2M -xalias_level=std
-W2,-Abuiltin_opt:calloc_no_support=on

429.mcf: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m32
-xpagesize_heap=2M -xpagesize_stack=4k -xalias_level=std

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

456.hmmr: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=4k -xalias_level=strong

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

462.libquantum: -g -fast -xtarget=nehalem -xipo=2 -m64 -xpagesize=2M
-xalias_level=std -xunroll=8

464.h264ref: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m32
-xpagesize=2M -xalias_level=strong

C++ benchmarks:

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

-L/export_compress/home/gnana/cpu2006v1.2/SmartHeap_9/lib/ -R/export_compress/home/gnana/cpu2006v1.2/SmartHeap_9/lib/ -lsmar

473.astar: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=compatible -xrestrict
-library=stlport4 -lfast

483.xalancbmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -xunroll=8 -library=stlport4 -lfast

The flags files that were used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.3-x86_64.html

http://www.spec.org/cpu2006/flags/Oracle-platform-x86_64.CPUv1.2-RevA.20120425.html



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint_rate2006 = 702

Sun Fire X4170 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 628

CPU2006 license: 6

Test sponsor: Oracle Corporation

Tested by: Oracle Corporation

Test date: Mar-2012

Hardware Availability: Apr-2012

Software Availability: Jun-2012

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

http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.3-x86_64.xml

http://www.spec.org/cpu2006/flags/Oracle-platform-x86_64.CPUv1.2-RevA.20120425.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.

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 04:18:33 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 April 2012.