



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPECint®_rate2006 = 705

Sun Fire X4270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 630

CPU2006 license: 6

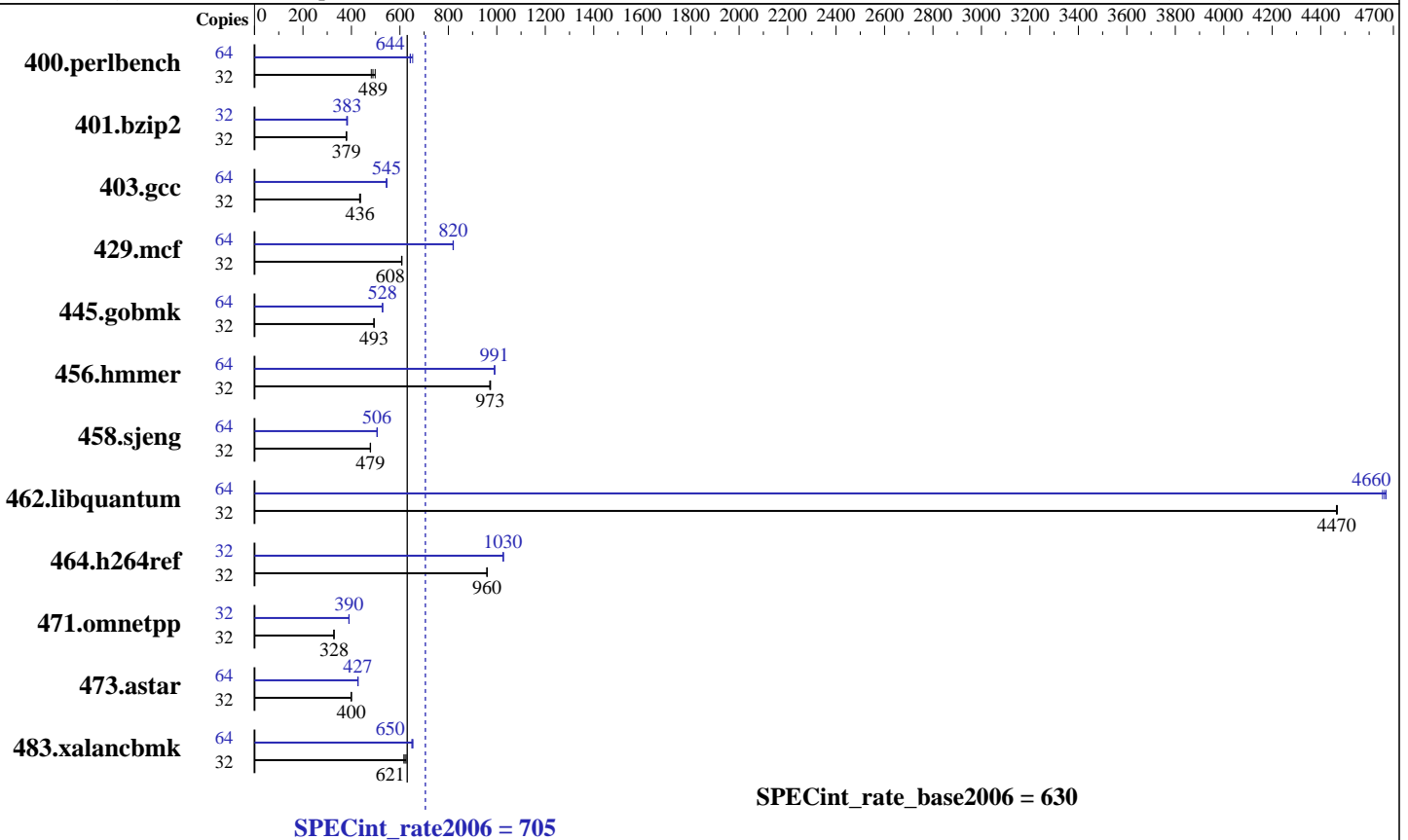
Test date: Apr-2012

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: 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: 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: 1 x 600 GB 10K RPM SAS
 Other Hardware: None

Software

Operating System: Oracle Solaris 11 11/11 (SRU 03)
 Compiler: C/C++: Version 12.3 of Oracle Solaris Studio (patch update 1, tested with nightly build 20120313)
 Auto Parallel: No
 File System: zfs
 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 = 705

Sun Fire X4270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 630

CPU2006 license: 6

Test date: Apr-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	649	482	628	498	640	489	64	973	642	958	653	972	644		
401.bzip2	32	815	379	812	380	816	379	32	807	383	805	383	812	380		
403.gcc	32	594	434	589	437	591	436	64	945	545	944	546	946	544		
429.mcf	32	480	609	480	608	481	607	64	711	820	712	819	711	821		
445.gobmk	32	680	493	680	493	681	493	64	1271	528	1272	528	1270	529		
456.hammer	32	306	974	308	971	307	973	64	602	991	603	991	603	990		
458.sjeng	32	808	479	809	479	811	478	64	1531	506	1530	506	1530	506		
462.libquantum	32	148	4470	148	4460	148	4470	64	285	4660	284	4670	284	4660		
464.h264ref	32	738	960	738	960	738	959	32	689	1030	690	1030	691	1030		
471.omnetpp	32	610	328	610	328	610	328	32	513	390	512	390	513	390		
473.astar	32	563	399	562	400	562	400	64	1053	427	1051	427	1052	427		
483.xalancbmk	32	358	616	353	626	355	621	64	675	654	679	650	679	650		

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 X4270 M3 is now known as the Sun Server X3-2L.

```

Sysinfo program /export/home/gnana/cpu2006v1.2/Docs/sysinfo
: 6775 2011-08-16 #f7622badcf24e01c368b1db4377c
running on bur398-107 Thu Apr 5 13:43:53 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 = 705

Sun Fire X4270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 630

CPU2006 license: 6

Test date: Apr-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 2900 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 bur398-107 5.11 11.0 i86pc i386 i86pc
```

```
disk: df -h
```

```
Filesystem          Size  Used  Available Capacity  Mounted on
rpool/export/home  547G  3.4G    94G         4%    /export/home
```

(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 = 705

Sun Fire X4270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 630

CPU2006 license: 6

Test date: Apr-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 = 705

Sun Fire X4270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 630

CPU2006 license: 6

Test date: Apr-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/home/gnana/cpu2006v1.2/SmartHeap_9/lib/ -R/export/home/gnana/cpu2006v1.2/SmartHeap_9/lib/ -lsm

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 = 705

Sun Fire X4270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 630

CPU2006 license: 6

Test sponsor: Oracle Corporation

Tested by: Oracle Corporation

Test date: Apr-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 04:13:15 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 April 2012.