



SPEC® CINT2006 Result

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Oracle Corporation

SPECint®_rate2006 = 705

Sun Blade X6270 M3 (Intel Xeon E5-2690 2.9GHz)

SPECint_rate_base2006 = 632

CPU2006 license: 6

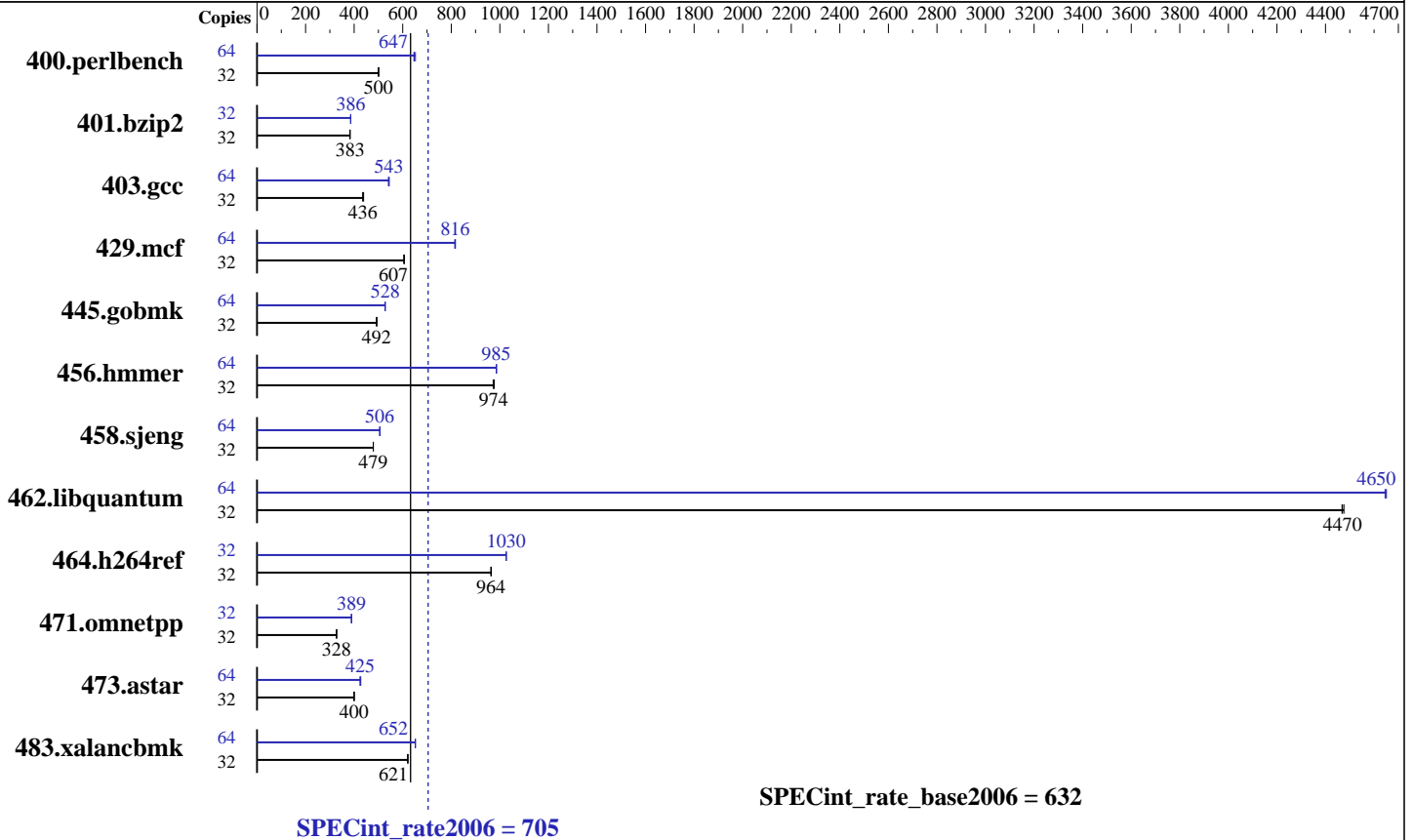
Test date: Mar-2012

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: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01



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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	32	623	502	626	499	<u>625</u>	<u>500</u>	64	958	652	968	646	<u>966</u>	<u>647</u>
401.bzip2	32	806	383	807	383	<u>806</u>	<u>383</u>	32	799	386	<u>800</u>	<u>386</u>	802	385
403.gcc	32	<u>590</u>	<u>436</u>	587	439	592	435	64	<u>948</u>	<u>543</u>	952	541	947	544
429.mcf	32	<u>481</u>	<u>607</u>	483	604	481	607	64	<u>715</u>	<u>816</u>	717	814	714	817
445.gobmk	32	682	492	680	494	<u>682</u>	<u>492</u>	64	1272	528	<u>1272</u>	<u>528</u>	1272	528
456.hammer	32	307	973	306	977	<u>307</u>	<u>974</u>	64	606	985	605	987	<u>606</u>	<u>985</u>
458.sjeng	32	<u>809</u>	<u>479</u>	809	479	808	479	64	<u>1531</u>	<u>506</u>	1532	505	1530	506
462.libquantum	32	148	4480	148	4470	<u>148</u>	<u>4470</u>	64	285	4650	285	4650	<u>285</u>	<u>4650</u>
464.h264ref	32	734	965	735	963	<u>735</u>	<u>964</u>	32	690	1030	<u>690</u>	<u>1030</u>	691	1030
471.omnetpp	32	<u>610</u>	<u>328</u>	611	328	610	328	32	<u>514</u>	<u>389</u>	514	389	514	389
473.astar	32	562	399	561	400	<u>561</u>	<u>400</u>	64	1059	424	1051	427	<u>1057</u>	<u>425</u>
483.xalancbmk	32	356	621	355	622	<u>356</u>	<u>621</u>	64	678	652	677	652	<u>677</u>	<u>652</u>

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 Blade X6270 M3 is now known as the Sun Blade X3-2B.

```

Sysinfo program /benchpool/data1/cpu2006v1.2/Docs/sysinfo
: 6775 2011-08-16 #f7622badcf24e01c368b1db4377c
running on bur398-85 Fri Mar 30 15:33:02 2012

```

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



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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:": 131038 Megabytes
```

```
/etc/release:
```

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

```
uname -a:
SunOS bur398-85 5.11 11.0 i86pc i386 i86pc
```

```
disk: df -h
```

Filesystem	Size	Used	Available	Capacity	Mounted on
benchpool/data1	545G	25G	521G	5%	/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



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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.perlbenc: -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.perlbenc: -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

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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/benchpool/data1/cpu2006v1.2/SmartHeap_9/lib/ -R/benchpool/data1/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



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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

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