SPEC® CINT2006 Result

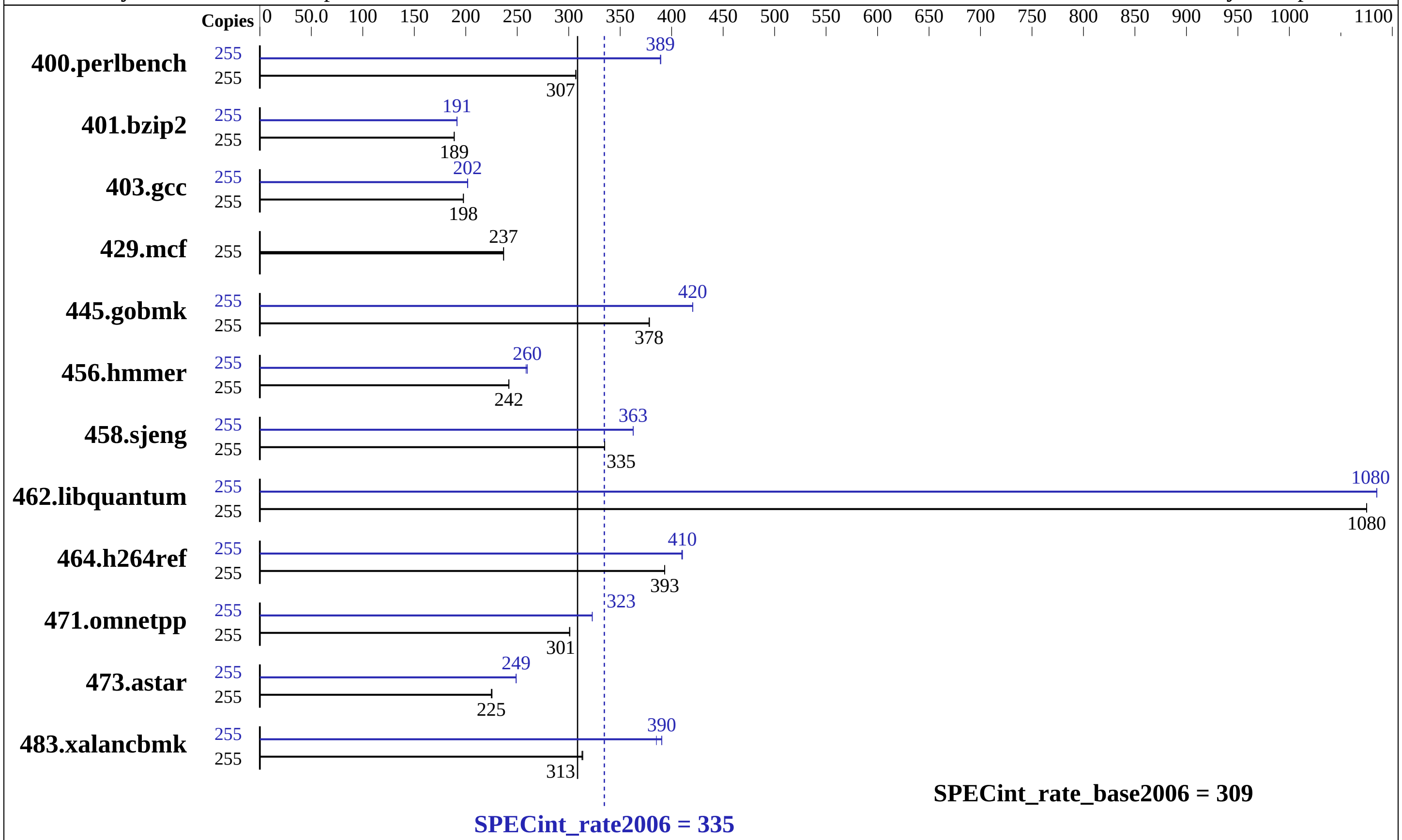
Oracle Corporation
SPARC T3-2

SPECint®_rate2006 = 335

SPECint_rate_base2006 = 309

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

Test date: Oct-2010
Hardware Availability: Nov-2010
Software Availability: Sep-2010



Hardware

CPU Name:	SPARC T3
CPU Characteristics:	
CPU MHz:	1649
FPU:	Integrated
CPU(s) enabled:	32 cores, 2 chips, 16 cores/chip, 8 threads/core
CPU(s) orderable:	1 or 2 chips
Primary Cache:	16 KB I + 8 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	256 GB (32 x 8 GB)
Disk Subsystem:	673 GB (zfs 3 x 2-way mirrors on 6x SAS 300G 10000 RPM)
Other Hardware:	None

Software

Operating System:	Oracle Solaris 10 9/10
Compiler:	Oracle Solaris Studio 12.2
Auto Parallel:	No
File System:	zfs with gzip compression
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None

Oracle Corporation
SPARC T3-2

SPECint_rate2006 = 335
SPECint_rate_base2006 = 309

CPU2006 license: 6
Test sponsor: Oracle Corporation
Tested by: Oracle Corporation
Test date: Oct-2010
Hardware Availability: Nov-2010
Software Availability: Sep-2010

Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	255	8111	307	8121	307	**8121**	**307**	255	6396	389	6403	389	**6403**	**389**
401.bzip2	255	13048	189	13023	189	**13026**	**189**	255	12842	192	12859	191	**12851**	**191**
403.gcc	255	**10386**	**198**	10389	198	10372	198	255	10161	202	10181	202	**10172**	**202**
429.mcf	255	9815	237	9829	237	**9823**	**237**	255	9815	237	9829	237	**9823**	**237**
445.gobmk	255	7067	379	**7075**	**378**	7077	378	255	6362	420	**6362**	**420**	6364	420
456.hmmer	255	9828	242	**9834**	**242**	9845	242	255	9201	259	**9157**	**260**	9157	260
458.sjeng	255	9213	335	**9210**	**335**	9210	335	255	**8510**	**363**	8509	363	8510	363
462.libquantum	255	4914	1080	4915	1070	**4915**	**1080**	255	**4870**	**1080**	4871	1080	4870	1090
464.h264ref	255	14357	393	14348	393	**14348**	**393**	255	13745	411	**13753**	**410**	13772	410
471.omnetpp	255	5301	301	5291	301	**5293**	**301**	255	4936	323	**4935**	**323**	4935	323
473.astar	255	7935	226	**7960**	**225**	7961	225	255	7187	249	**7191**	**249**	7194	249
483.xalancbmk	255	**5613**	**313**	5608	314	5625	313	255	4506	390	4568	385	**4508**	**390**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Invocation Notes

```
Oracle Solaris Studio 12.2 is distributed with mandatory OS patches
 118683-05  119963-20  120753-08
Oracle Solaris Studio 12.2 and patches are available at
 http://oracle.com/goto/solarisstudio
```

Submit Notes

```
Processes were bound to cores using "submit" and "pbind".  The config
file option 'submit' was used in order to accomplish this.
```

Operating System Notes

```
ulimit -s 131072 was used to limit the space
consumed by the stack (and therefore make more
space available to the heap).

 /etc/system parameters
    autoup=600
       Causes pages older than the listed number of seconds to
       be written by fsflush.
    tune_t_fsflushr=10
       Controls how many seconds elapse between runs of the
       page flush daemon, fsflush.
    lpg_alloc_prefer=1
        Indicates that extra effort should be taken to ensure
        that pages are created in the nearby lgroup (NUMA location).
```

Continued on next page

Operating System Notes (Continued)

```
    tsb_rss_factor=128
        Suggests that the the size of the TSB (Translation
        Storage Buffer) may be increased if it is more than
        25% (128/512) full.  Doing so may reduce TSB traps,
        at the cost of additional kernel memory.
    zfs:zfs_arc_max=0x10000000
    zfs:zfs_arc_min=0x10000000
        Limits the consumption of memory by the zfs file system
        cache to 256 MB.  (The arc_max sets the maximum cache
        size; arc_min sets the minimum.)
    zfs:zfs_prefetch_disable = 1
        Indicates that prefetching is not desired.  This setting
        may be desirable when the file system cache is small.
 USB devices were turned off with ILOM command
    set /SYS/MB/USB component_state=disabled
 The "webconsole" service was turned off using
     svcadm disable webconsole
 The system had 271 GB of swap space.
```

Base Compiler Invocation

C benchmarks:
`cc`

C++ benchmarks:
`CC`

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
```
-g -fast -fma=fused -xipo=2 -xprefetch=no%auto -xpagesize=4M
-xalias_level=std -M /usr/lib/ld/map.bssalign
```

C++ benchmarks:
```
-g0 -library=stlport4 -fast -fma=fused -xipo=2 -xprefetch=no%auto
-xpagesize=4M -xdepend -xalias_level=compatible
-M /usr/lib/ld/map.bssalign
```

Base Other Flags

C benchmarks:
-xjobs=64 -V -#

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

Peak Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_SPARC
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 -fma=fused -xpagesize=4M -M /usr/lib/ld/map.bssalign -xalias_level=std -xipo=2 -Xc -xrestrict -lfast

401.bzip2: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=strong

403.gcc: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=std -xprefetch_level=1

429.mcf: basepeak = yes

445.gobmk: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -M /usr/lib/ld/map.bssalign -xalias_level=std -xrestrict -xprefetch=no%auto

Continued on next page

Oracle Corporation
SPARC T3-2

SPECint_rate2006 = 335
SPECint_rate_base2006 = 309

CPU2006 license: 6
Test sponsor: Oracle Corporation
Tested by: Oracle Corporation
Test date: Oct-2010
Hardware Availability: Nov-2010
Software Availability: Sep-2010

Peak Optimization Flags (Continued)

456.hmmer: `-g -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -fma=fused -xipo=2 -xpagesize=4M -xunroll=14 -xalias_level=std`

458.sjeng: `-g -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -fma=fused -xpagesize=4M -xipo=2 -xprefetch=no%auto`

462.libquantum: `-g -fast -fma=fused -xpagesize=4M -M /usr/lib/ld/map.bssalign -xipo=2 -xprefetch_level=3 -xalias_level=std`

464.h264ref: `-g -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -fma=fused -xpagesize=4M -xipo=2 -xalias_level=std`

C++ benchmarks:

471.omnetpp: `-g0 -library=stlport4 -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -fma=fused -xipo=2 -xprefetch=no%auto -xpagesize=4M -xdepend -xalias_level=compatible -M /usr/lib/ld/map.bssalign`

473.astar: `-g0 -library=stlport4 -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -fma=fused -xpagesize=4M -xdepend -xalias_level=compatible -xipo=2 -xprefetch=no%auto -lfast`

483.xalancbmk: `-g0 -library=stlport4 -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -fma=fused -xpagesize=4M -xdepend -xalias_level=compatible -M /usr/lib/ld/map.bssalign -xipo=2 -xprefetch=no%auto -lfast`

Peak Other Flags

C benchmarks:
`-xjobs=64 -V -#`

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

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.2-SPARC.20110110.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.2-SPARC.20110110.xml

Oracle Corporation
SPARC T3-2

SPECint_rate2006 = 335

SPECint_rate_base2006 = 309

CPU2006 license: 6 | **Test date:** Oct-2010
Test sponsor: Oracle Corporation | **Hardware Availability:** Nov-2010
Tested by: Oracle Corporation | **Software Availability:** Sep-2010

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 15:13:56 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 1 February 2011.