SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC T3-2

SPECint®_rate2006 =　　335
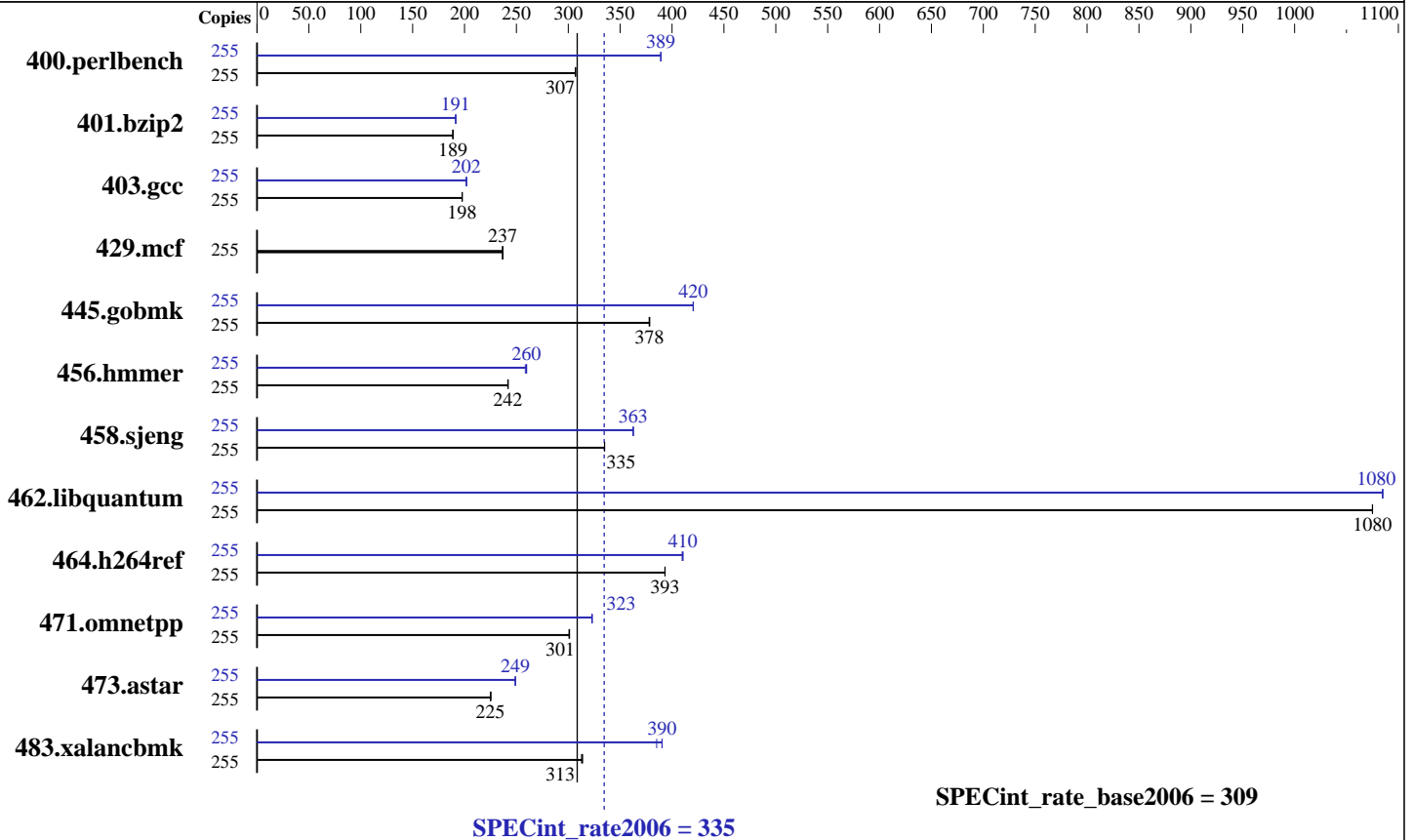
SPECint_rate_base2006 =　309

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

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

SPECint_rate_base2006 = 309

SPECint_rate2006 = 335

Benchmark	Copies	peak	base
400.perlbench	255 / 255	389	307
401.bzip2	255 / 255	191	189
403.gcc	255 / 255	202	198
429.mcf	255		237
445.gobmk	255 / 255	420	378
456.hmmer	255 / 255	260	242
458.sjeng	255 / 255	363	335
462.libquantum	255 / 255	1080	1080
464.h264ref	255 / 255	410	393
471.omnetpp	255 / 255	323	301
473.astar	255 / 255	249	225
483.xalancbmk	255 / 255	390	313

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

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

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

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak 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).
```

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

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
```

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation

SPARC T3-2

SPECint_rate2006 = 335

SPECint_rate_base2006 = 309

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

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

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

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 15:13:55 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 1 February 2011.