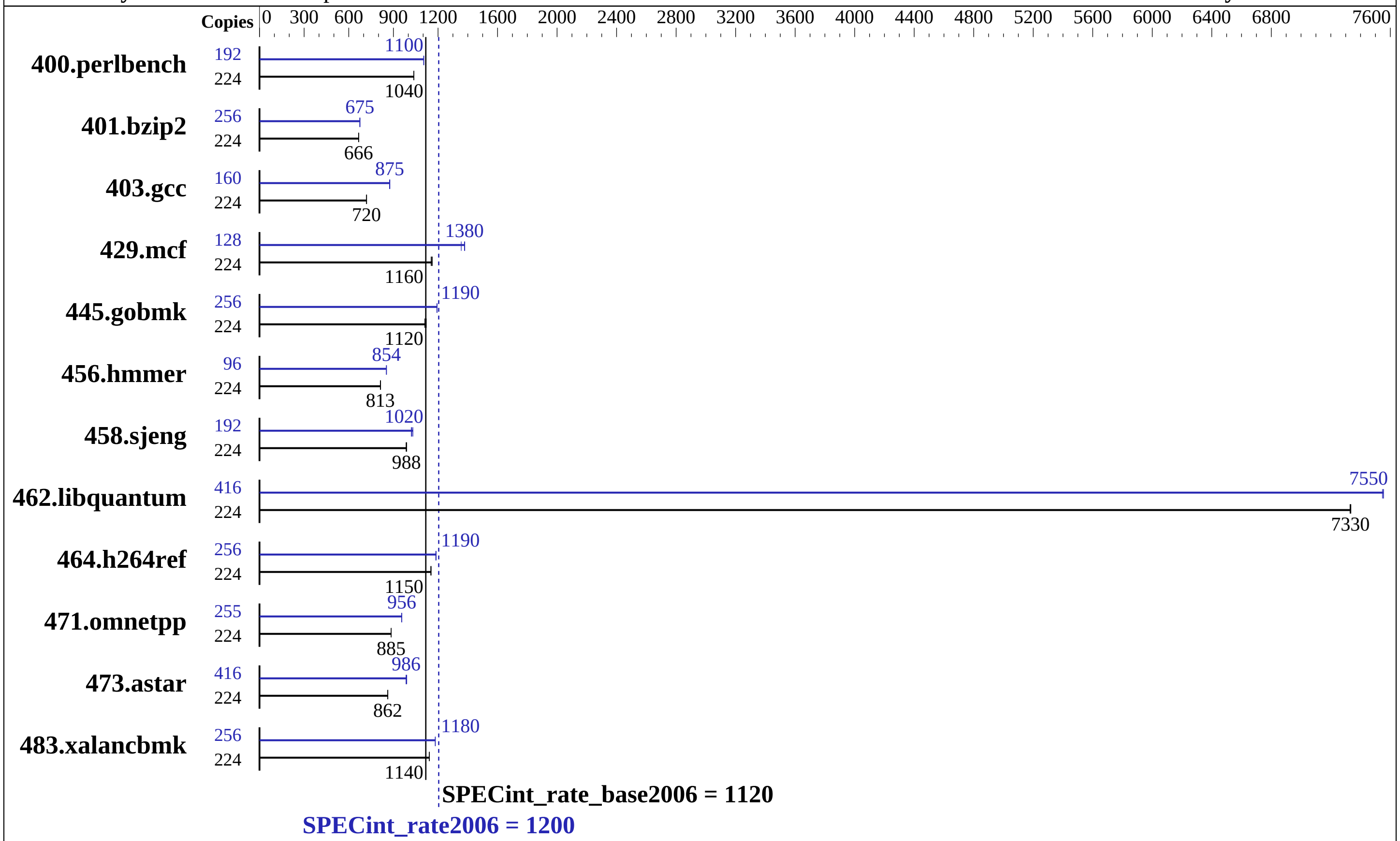
SPEC® CINT2006 Result

Oracle Corporation
SPARC T7-1

SPECint®_rate2006 = 1200

SPECint_rate_base2006 = 1120

CPU2006 license: 6		**Test date:**	Oct-2015
Test sponsor:	Oracle Corporation	**Hardware Availability:**	Oct-2015
Tested by:	Oracle Corporation	**Software Availability:**	Oct-2015



Hardware

CPU Name:	SPARC M7
CPU Characteristics:	
CPU MHz:	4133
FPU:	Integrated
CPU(s) enabled:	32 cores, 1 chip, 32 cores/chip, 8 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	2 MB I on chip per chip (256 KB / 4 cores); 4 MB D on chip per chip (256 KB / 2 cores)
L3 Cache:	64 MB I+D on chip per chip (8 MB / 4 cores)
Other Cache:	None
Memory:	512 GB (16 x 32 GB 4Rx4 PC4-2133P-L)
Disk Subsystem:	732 GB, 4 x 400 GB SAS SSD (mirrored)
Other Hardware:	None

Software

Operating System:	Oracle Solaris 11.3
Compiler:	C/C++/Fortran: Version 12.4 of Oracle Solaris Studio, 4/15 Patch Set
Auto Parallel:	No
File System:	zfs
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	224	2109	1040	2108	1040	**2109**	**1040**	192	1700	1100	1699	1100	**1699**	**1100**
401.bzip2	224	3240	667	3246	666	**3245**	**666**	256	3667	674	**3661**	**675**	3655	676
403.gcc	224	2509	719	2503	720	**2505**	**720**	160	1474	874	**1472**	**875**	1469	877
429.mcf	224	1759	1160	1771	1150	**1764**	**1160**	128	**848**	**1380**	846	1380	861	1360
445.gobmk	224	2096	1120	**2105**	**1120**	2115	1110	256	**2251**	**1190**	2252	1190	2250	1190
456.hmmer	224	2574	812	2566	814	**2571**	**813**	96	1050	853	1049	854	**1049**	**854**
458.sjeng	224	**2743**	**988**	2740	989	2751	985	192	2277	1020	**2268**	**1020**	2253	1030
462.libquantum	224	633	7330	633	7340	**633**	**7330**	416	**1141**	**7550**	1142	7550	1141	7550
464.h264ref	224	4297	1150	**4301**	**1150**	4307	1150	256	4771	1190	4782	1180	**4778**	**1190**
471.omnetpp	224	**1581**	**885**	1581	885	1581	885	255	1668	956	1667	956	**1667**	**956**
473.astar	224	1822	863	**1824**	**862**	1825	862	416	2964	985	**2962**	**986**	2951	990
483.xalancbmk	224	1353	1140	**1354**	**1140**	1354	1140	256	1495	1180	1495	1180	**1495**	**1180**

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

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

/etc/system parameters
   set user_reserve_hint_pct=85
      Informs the system about how much memory is expected
      to be used by applications (as a percentage)

poweradm set administrative-authority=none
    Disables Solaris power management

600 GB of swap space was configured
```

Platform Notes

```
Power policy set to 'disabled' at ILOM Power Managment menu
Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ 5569a0425e2ad530534e4c79a46e4d28
running on t7-1-003.us.oracle.com Thu Oct 15 14:31:09 2015

This section contains SUT (System Under Test) info as seen by
```

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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
   SPARC-M7 (chipid 0, clock 4133 MHz)
   1 chips
   256 threads
   4133 MHz

From kstat:        32 cores

From prtconf: 489728 Megabytes

/etc/release:
     Oracle Solaris 11.3 SPARC
uname -a:
   SunOS t7-1-003.us.oracle.com 5.11 11.3 sun4v sparc sun4v

disk: df -h  $SPEC
Filesystem             Size   Used  Available Capacity  Mounted on
spec/nogz/cpu2006      732G   1.9G       730G     1%    /cpu2006

(End of data from sysinfo program)
```

General Notes

SPEC CPU2006 benchmark was updated with runspec --update

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 -xsegment_align=64K -fast -xipo=2 -xpagesize_heap=256M
-xprefetch=no%auto -lfast -xalias_level=std -xthroughput

C++ benchmarks:
-g -xsegment_align=64K -fast -xipo=2 -xpagesize_heap=256M
-xprefetch=no%auto -lfast -xalias_level=compatible -library=stlport4
-xthroughput

Base Other Flags

C benchmarks:
-xjobs=32 -V

C++ benchmarks:
-xjobs=32 -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 -xipo=2
-xalias_level=std -xrestrict -lfast -xthroughput
-xpagesize=256M

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Peak Optimization Flags (Continued)

401.bzip2: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=256M -xalias_level=strong

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

429.mcf: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=2 -xpagesize=256M -W2,-Asac

445.gobmk: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=256M -xrestrict -xalias_level=std -xprefetch=no%auto -xipo=2

456.hmmer: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M -xipo=2 -xthroughput -Wc,-Qpeep-Ex:minmax_use_cmov=2 -Wc,-Qms_pipe+ulmscc=1

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

462.libquantum: -g -fast -xipo=2 -xpagesize=256M -xalias_level=std -lfast -xprefetch_level=2 -Wc,-Qlu-en=1-t=4 -xthroughput

464.h264ref: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=2 -xpagesize=4M -xalias_level=strong -xthroughput

C++ benchmarks:

471.omnetpp: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=2 -xpagesize=256M -xalias_level=compatible -library=stdcxx4 -template=extdef -lmmheap

473.astar: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=256M -xalias_level=compatible -xprefetch=no%auto -library=stdcxx4 -template=extdef -lfast

483.xalancbmk: -g -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=2 -xpagesize=256M -xalias_level=compatible -xprefetch=no%auto -library=stlport4 -lfast

Peak Other Flags

C benchmarks:
`-xjobs=32 -V`

C++ benchmarks:
`-xjobs=32 -verbose=diags,version`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.4.20151118.html
http://www.spec.org/cpu2006/flags/Oracle-Tseries-RevB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.4.20151118.xml
http://www.spec.org/cpu2006/flags/Oracle-Tseries-RevB.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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