SPEC® CINT2006 Result

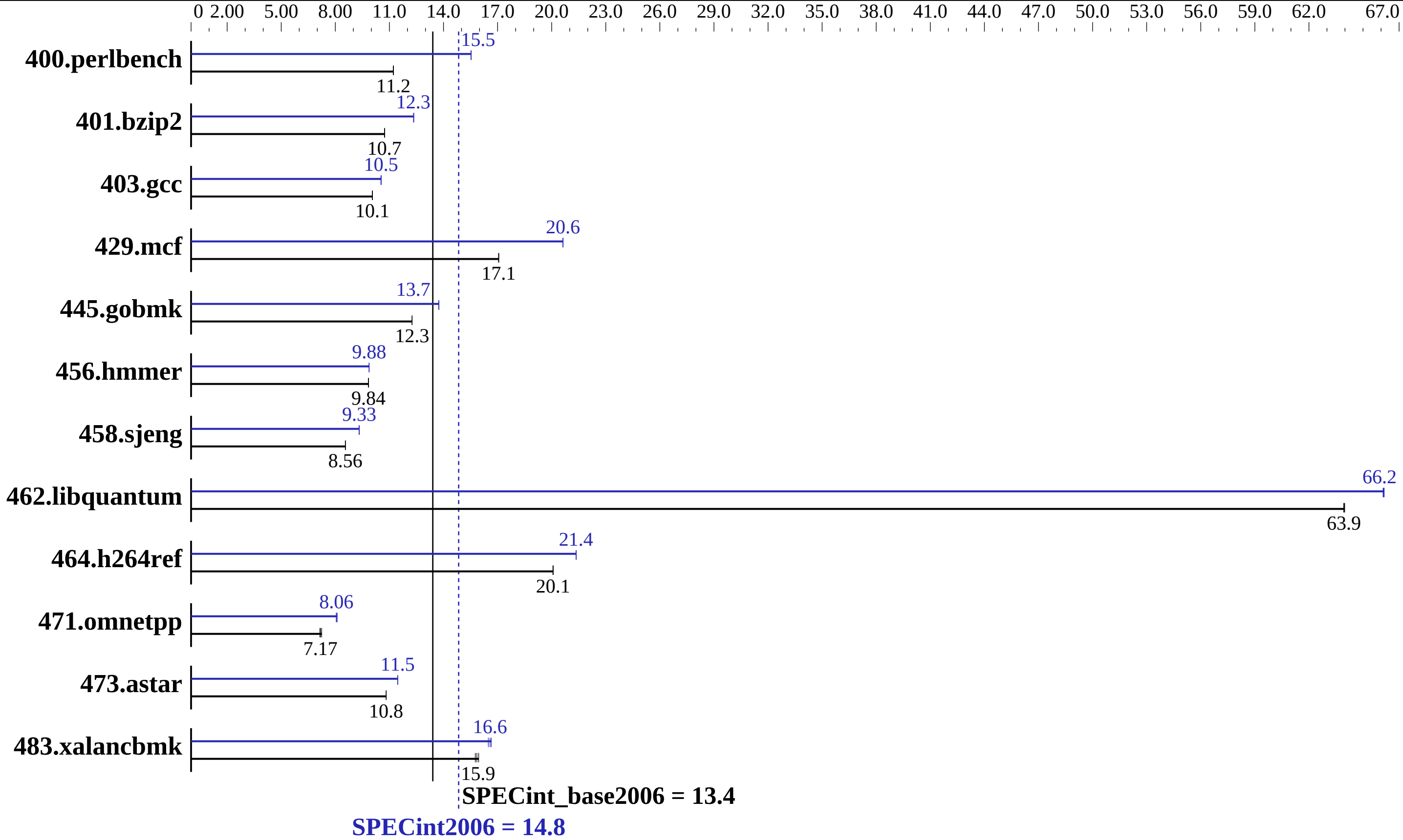
Oracle Corporation
SPARC Enterprise M4000

SPECint®2006 = 14.8

SPECint_base2006 = 13.4

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

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



Hardware

CPU Name:	SPARC64 VII+
CPU Characteristics:	
CPU MHz:	2660
FPU:	Integrated
CPU(s) enabled:	16 cores, 4 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 to 2 CPUMs; each CPUM contains 2 CPU chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	11 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	128 GB (32 x 4 GB, 8-way interleaved)
Disk Subsystem:	1 x 300 GB 10,000 RPM SAS
Other Hardware:	None

Software

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

Oracle Corporation
SPARC Enterprise M4000

SPECint2006 = 14.8
SPECint_base2006 = 13.4

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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	871	11.2	**871**	**11.2**	870	11.2	**629**	**15.5**	629	15.5	629	15.5
401.bzip2	**899**	**10.7**	899	10.7	899	10.7	781	12.4	**782**	**12.3**	782	12.3
403.gcc	**800**	**10.1**	800	10.1	800	10.1	**764**	**10.5**	765	10.5	764	10.5
429.mcf	534	17.1	**534**	**17.1**	535	17.1	**442**	**20.6**	442	20.6	442	20.6
445.gobmk	**856**	**12.3**	856	12.3	856	12.3	763	13.7	**763**	**13.7**	763	13.7
456.hmmer	**948**	**9.84**	948	9.84	948	9.84	945	9.88	**945**	**9.88**	945	9.88
458.sjeng	1415	8.55	**1414**	**8.56**	1413	8.56	**1297**	**9.33**	1298	9.32	1297	9.33
462.libquantum	324	64.0	324	63.9	**324**	**63.9**	313	66.1	313	66.2	**313**	**66.2**
464.h264ref	**1102**	**20.1**	1102	20.1	1103	20.1	**1036**	**21.4**	1036	21.4	1036	21.4
471.omnetpp	874	7.15	863	7.24	**871**	**7.17**	**775**	**8.06**	776	8.05	771	8.10
473.astar	**649**	**10.8**	649	10.8	648	10.8	613	11.5	613	11.5	**613**	**11.5**
483.xalancbmk	**435**	**15.9**	438	15.8	433	16.0	**416**	**16.6**	414	16.7	419	16.5

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 assigned to specific processors using 'pbind'
commands.  The config file option 'submit' was used, along
with a list of processors in the 'BIND' variable, to generate
the pbind commands.  (For details, please see the config file.)
```

Operating System Notes

```
Shell Environments:

    ulimit -s 131072 was used to limit the space consumed
    by the stack.(making more space available for the heap)

System Tunables:
(/etc/system parameters)

    tune_t_fsflushr=10
       Controls how many seconds elapse between runs of the
```

Continued on next page

Operating System Notes (Continued)

```
        page flush daemon, fsflush.
     autoup=600
        Causes pages older than the listed number of seconds to
        be written by fsflush.

 Other System Settings:

     The webconsole service was turned off using svcadm disable webconsole.
```

Platform Notes

```
 Memory is 8-way interleaved by filling all slots with
 the same capacity DIMMs.

 This result is measured on a SPARC Enterprise M4000 server from
 Fujitsu.  The SPARC Enterprise M4000 server from Oracle and from
 Fujitsu are electrically equivalent.
```

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:
-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2
-xalias_level=std -M /usr/lib/ld/map.bssalign -ll2amm

C++ benchmarks:
-xdepend -library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=2 -xalias_level=compatible -M /usr/lib/ld/map.bssalign
-lfast

Oracle Corporation
SPARC Enterprise M4000

SPECint2006 = 14.8
SPECint_base2006 = 13.4

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

Base Other Flags

C benchmarks:
`-xjobs=2 -V -#`

C++ benchmarks:
`-xjobs=2 -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: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -M /usr/lib/ld/map.bssalign -xipo=2
-xalias_level=std -xrestrict -Xc -xprefetch=no%auto
-xarch=generic -lfast

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

403.gcc: -xprofile=tcov:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=2 -xalias_level=std -xO4
-xchip=generic -xunroll=7 -ll2amm

429.mcf: -fast -fma=fused -xpagesize=4M -xipo=2
-xprefetch=latx:0.5 -xprefetch_level=3
-xprefetch_auto_type=indirect_array_access -xchip=generic
-xlinkopt -xunroll=7 -W2,-Apf:llist=3
-W2,-Apf:noinnerllist -Wc,-Qlp-prt=1 -Wc,-Qlp-prwt=3

Continued on next page

Peak Optimization Flags (Continued)

429.mcf (continued):
-lfast

445.gobmk: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=std -xrestrict -xprefetch=latx:0.5 -ll2amm

456.hmmer: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xipo=2

458.sjeng: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xipo=2 -xO4 -xlinkopt -xunroll=2 -ll2amm

462.libquantum: -fast -fma=fused -xpagesize=4M -xalias_level=std -xipo=2 -xprefetch=no%auto -xO4 -xarch=generic -xcache=generic -xlinkopt=2 -xunroll=8

464.h264ref: -xprofile=tcov:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xipo=2 -xalias_level=std -xlinkopt=2 -ll2amm

C++ benchmarks:

471.omnetpp: -xdepend -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch_level=2 -Qoption cg -Qlp-av=0 -lfast

473.astar: -xdepend -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=compatible -M /usr/lib/ld/map.bssalign -xipo=2 -xprefetch=no%auto -xarch=v8plusb -lfast -lbsdmalloc

483.xalancbmk: -xdepend -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch=no -lfast

Peak Other Flags

C benchmarks:
`-xjobs=2 -V -#`

C++ benchmarks:
`-xjobs=2 -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.20101221.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.20101221.xml

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 13:39:56 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 21 December 2010.