SPEC® CINT2006 Result

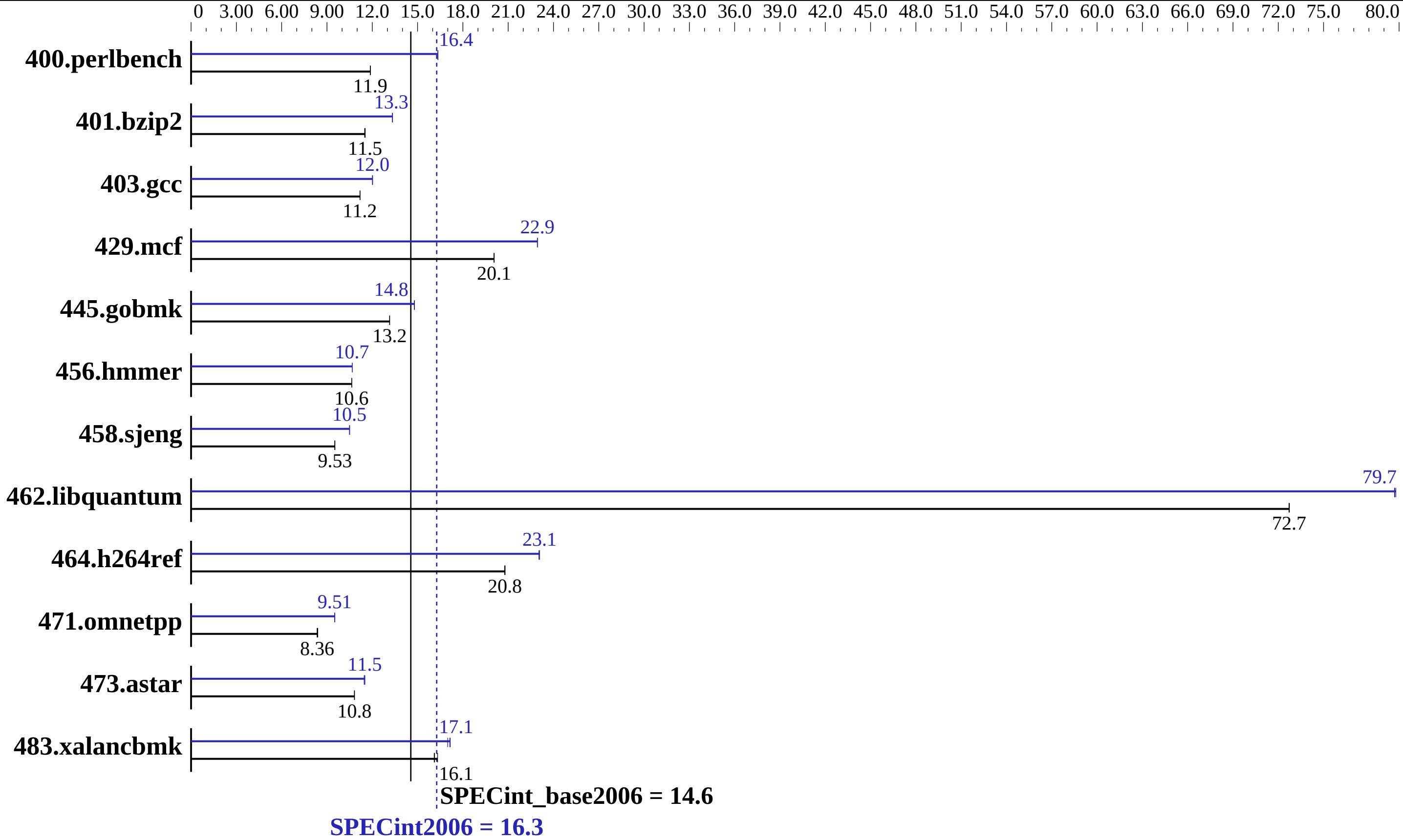
Oracle Corporation
SPARC Enterprise M3000

SPECint®2006 = 16.3

SPECint_base2006 = 14.6

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

Test date: Jan-2011
Hardware Availability: Apr-2011
Software Availability: Sep-2010



Hardware

CPU Name:	SPARC64 VII+
CPU Characteristics:	
CPU MHz:	2860
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	5632 KB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	32 GB (8 x 4 GB, 2-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

Results Table

	Base						Peak					
Benchmark	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	823	11.9	**823**	**11.9**	824	11.9	597	16.4	598	16.3	**597**	**16.4**
401.bzip2	839	11.5	837	11.5	**837**	**11.5**	**724**	**13.3**	724	13.3	723	13.3
403.gcc	**720**	**11.2**	720	11.2	720	11.2	**670**	**12.0**	670	12.0	669	12.0
429.mcf	454	20.1	455	20.1	**454**	**20.1**	398	22.9	398	22.9	**398**	**22.9**
445.gobmk	**798**	**13.2**	798	13.2	797	13.2	709	14.8	**709**	**14.8**	709	14.8
456.hmmer	**877**	**10.6**	877	10.6	877	10.6	875	10.7	**875**	**10.7**	874	10.7
458.sjeng	**1270**	**9.53**	1270	9.53	1271	9.52	**1153**	**10.5**	1153	10.5	1152	10.5
462.libquantum	285	72.7	**285**	**72.7**	285	72.7	260	79.8	**260**	**79.7**	260	79.7
464.h264ref	**1065**	**20.8**	1066	20.8	1064	20.8	**959**	**23.1**	961	23.0	959	23.1
471.omnetpp	**748**	**8.36**	749	8.35	745	8.39	657	9.52	**657**	**9.51**	658	9.50
473.astar	649	10.8	**649**	**10.8**	648	10.8	610	11.5	**610**	**11.5**	612	11.5
483.xalancbmk	**428**	**16.1**	423	16.3	429	16.1	**403**	**17.1**	406	17.0	402	17.2

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

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

System Tunables:
(/etc/system parameters)

    tune_t_fsflushr=10
       Controls how many seconds elapse between runs of the
       page flush daemon, fsflush.
```

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Operating System Notes (Continued)

```
    autoup=600
       Causes pages older than the listed number of seconds to
       be written by fsflush.
    bufhwm=3000
       Memory byte limit for caching I/O buffers.
    segmap_percent=1
       Set maximum percent memory for file system cache.

Other System Settings:

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

Platform Notes

```
  Memory is 2-way interleaved by filling all slots with
  the same capacity DIMMs.

 This result is measured on a SPARC Enterprise M3000 server from
 Fujitsu.  The SPARC Enterprise M3000 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_auto_type=indirect_array_access -xO4 -xalias_level=std
-xprefetch_level=2 -ll2amm

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Base Optimization Flags (Continued)

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

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
-xchip=generic -xvector -xalias_level=std -xrestrict -Xc
-xprefetch=no%auto -lfast

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

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Peak Optimization Flags (Continued)

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

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

456.hmmer: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=std -ll2amm

458.sjeng: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -M /usr/lib/ld/map.bssalign -xipo=2 -xO4 -xlinkopt -xunroll=2 -xprefetch_auto_type=indirect_array_access

462.libquantum: -fast -fma=fused -xpagesize=4M -xalias_level=std -xipo=2 -xO4 -xlinkopt -xunroll=8 -xprefetch=latx:0.5 -lmopt

464.h264ref: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xipo=2 -xarch=sparcvis2 -xlinkopt -xalias_level=std -xprefetch=latx:3 -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 -Qoption cg -Qlp-av=0 -xunroll=2 -xprefetch=latx:6 -lfast -lbsdmalloc

473.astar: -xdepend -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=compatible -xunroll=6 -xprefetch_auto_type=indirect_array_access -lfast -lbsdmalloc

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Peak Optimization Flags (Continued)

483.xalancbmk: -xdepend -library=stlport4
-xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xalias_level=compatible -xipo=1 -xvector
-xunroll=8 -xprefetch=no%auto -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.20110413.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.20110413.xml

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

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