



SPEC® CINT2006 Result

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Sun Microsystems Sun Fire V890

SPECint®_rate2006 = 154
SPECint_rate_base2006 = 141

CPU2006 license: 6

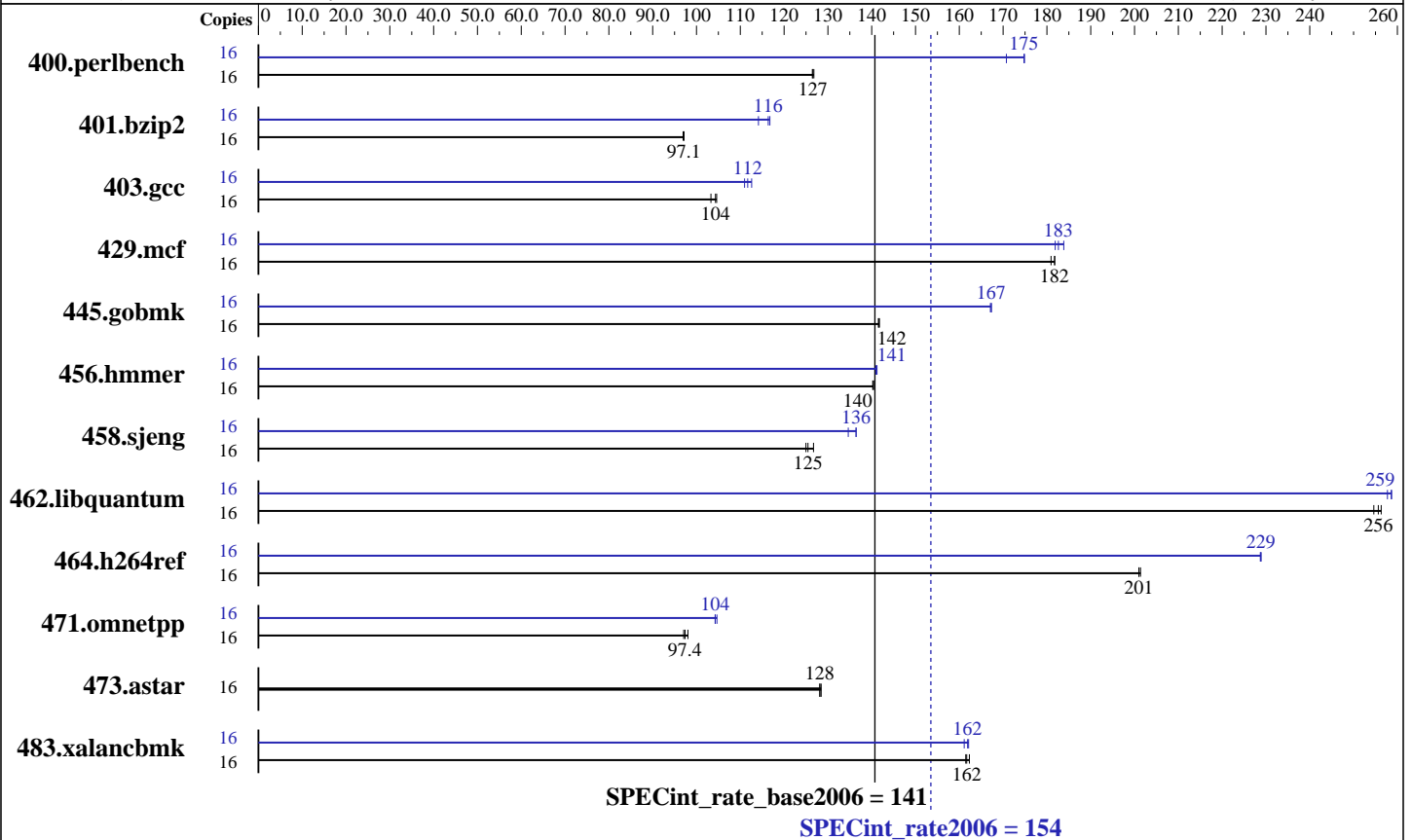
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Feb-2007

Hardware Availability: Apr-2007

Software Availability: May-2007



Hardware

CPU Name: UltraSPARC IV+
 CPU Characteristics:
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 16 cores, 8 chips, 2 cores/chip
 CPU(s) orderable: 2, 4, 6, or 8 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 2 MB I+D on chip per chip
 L3 Cache: 32 MB I+D off chip per chip
 Other Cache: None
 Memory: 64 GB, 8-way interleaved (64 x 1 GB)
 Disk Subsystem: 2xSCSI 72GB 10k RPM DK32EJ72FSUN72G
 Other Hardware: None

Software

Operating System: Solaris 10 6/06
 Compiler: Sun Studio 12 (pre-release build 40)
 Auto Parallel: No
 File System: ufs
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32-bit
 Other Software: None



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	1236	126	<u>1235</u>	<u>127</u>	1233	127	16	916	171	<u>895</u>	<u>175</u>	894	175
401.bzip2	16	1593	96.9	1590	97.1	<u>1590</u>	<u>97.1</u>	16	1353	114	1322	117	<u>1327</u>	<u>116</u>
403.gcc	16	1231	105	1247	103	<u>1234</u>	<u>104</u>	16	1144	113	<u>1153</u>	<u>112</u>	1161	111
429.mcf	16	803	182	<u>803</u>	<u>182</u>	806	181	16	794	184	802	182	<u>799</u>	<u>183</u>
445.gobmk	16	1186	142	1184	142	<u>1185</u>	<u>142</u>	16	<u>1003</u>	<u>167</u>	1003	167	1004	167
456.hammer	16	1065	140	1063	140	<u>1063</u>	<u>140</u>	16	1059	141	<u>1058</u>	<u>141</u>	1057	141
458.sjeng	16	1549	125	<u>1543</u>	<u>125</u>	1528	127	16	1438	135	1419	136	<u>1419</u>	<u>136</u>
462.libquantum	16	<u>1297</u>	<u>256</u>	1302	255	1293	256	16	1286	258	<u>1282</u>	<u>259</u>	1282	259
464.h264ref	16	1758	201	1762	201	<u>1762</u>	<u>201</u>	16	1548	229	1547	229	<u>1547</u>	<u>229</u>
471.omnetpp	16	1030	97.1	<u>1027</u>	<u>97.4</u>	1020	98.0	16	959	104	<u>959</u>	<u>104</u>	955	105
473.astar	16	877	128	874	128	<u>876</u>	<u>128</u>	16	877	128	874	128	<u>876</u>	<u>128</u>
483.xalancbmk	16	680	162	684	161	<u>683</u>	<u>162</u>	16	<u>682</u>	<u>162</u>	685	161	681	162

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

Operating System Notes

Processes were bound to cores using "submit" and "pbind".

"ulimit -s 131072" was set
Allows 131072K for the stack, remainder for heap

```
/etc/system parameters
tune_t_fsflushr=1
Controls how many seconds elapse between runs of the
page flush daemon, fsflush.
autoup=900
Causes pages older than the listed number of seconds to
be written by fsflush.
```

Base Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC



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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 -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std
C++ benchmarks:
-g0 -library=stlport4 -xdepend -fast -xipo=2 -xpagesize=4M
-xprefetch_level=1 -xalias_level=compatible -lfast

Base Other Flags

C benchmarks:
-xjobs=8 -V -#
C++ benchmarks:
-xjobs=8 -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



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Peak Optimization Flags

C benchmarks:

```

400.perlbench: -g -xprofile=collect:./feedback(pass 1)
               -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
               -xalias_level=std -Xc -xipo=2 -xrestrict -lfast

401.bzp2: -g -xprofile=collect:./feedback(pass 1)
           -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
           -xalias_level=strong

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

429.mcf: -g -fast -xpagesize=4M -xprefetch_level=2 -xipo=2
         -xrestrict -xalias_level=std -lfast

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

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

458.sjeng: -g -xprofile=collect:./feedback(pass 1)
            -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
            -xipo=2

462.libquantum: -g -xprofile=collect:./feedback(pass 1)
                 -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
                 -xprefetch_level=2 -xipo=2

464.h264ref: -g -xprofile=collect:./feedback(pass 1)
              -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
              -xipo=2 -xalias_level=std -l12amm

```

C++ benchmarks:

```

471.omnetpp: -g0 -library=stlport4 -xdepend
              -xprofile=collect:./feedback(pass 1)
              -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
              -xipo=2 -Qoption cg -Qlp-av=0 -lfast

473.astar: basepeak = yes

483.xalancbmk: -g0 -library=stlport4 -xdepend -fast -xpagesize=4M
                -xprefetch_level=1 -xipo=2 -xalias_level=compatible -lfast

```



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Peak Other Flags

C benchmarks:
-xjobs=8 -V -#

C++ benchmarks:
-xjobs=8 -verbose=diags,version

The flags file that was used to format this result can be browsed at
<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.20090714.01.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.20090714.01.xml>

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For other inquiries, please contact webmaster@spec.org.

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