SPEC® CINT2006 Result

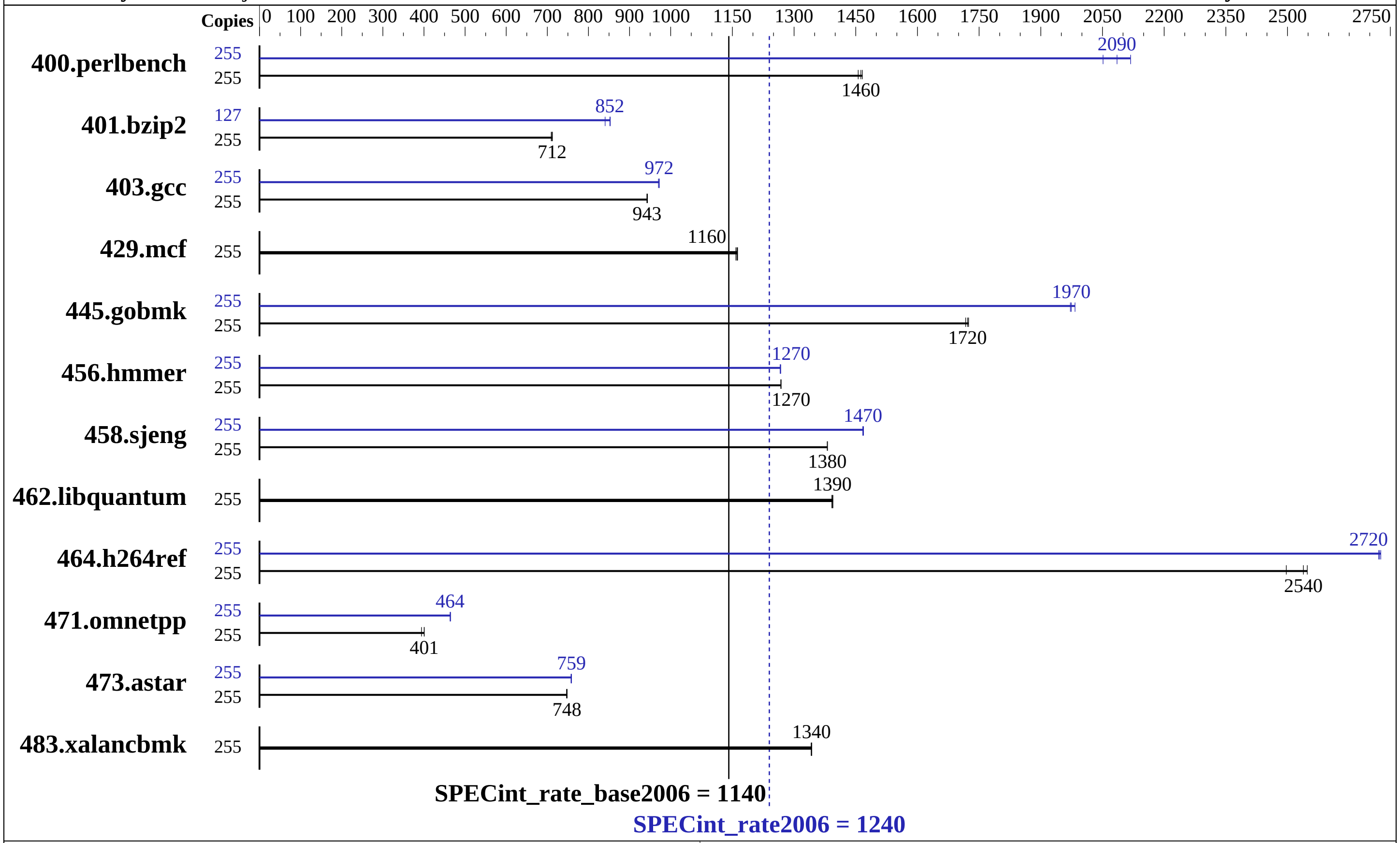
Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun SPARC Enterprise M9000

SPECint®_rate2006 = 1240

SPECint_rate_base2006 = 1140

CPU2006 license: 6		**Test date:**	Jul-2008
Test sponsor:	Sun Microsystems	**Hardware Availability:**	Jul-2008
Tested by:	Fujitsu Limited	**Software Availability:**	Jul-2008



Hardware

CPU Name:	SPARC64 VII
CPU Characteristics:	
CPU MHz:	2520
FPU:	Integrated
CPU(s) enabled:	128 cores, 32 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 to 16 CMUs; each CMU contains 2 or 4 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	512 GB (256 x 2 GB)
Disk Subsystem:	OS disk: 1 x 72 GB 10000 RPM disk Seagate Savvio EX.disk: 864 GB RAID 0 Solaris Volume 12 x 72 GB 10000 RPM disk Stripe interlace size 786 blocks
Other Hardware:	None

Software

Operating System:	Solaris 10 5/08 with Patch 137111-03
Compiler:	Sun Studio 12 with patches 124867-06, 124861-07, 124863-05 (see patch information below)
Auto Parallel:	No
File System:	ufs
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	255	1711	1460	**1704**	**1460**	1699	1470	255	1215	2050	**1195**	**2090**	1176	2120
401.bzip2	255	3468	710	**3458**	**712**	3454	712	127	1458	841	**1438**	**852**	1437	853
403.gcc	255	2179	942	2175	944	**2178**	**943**	255	2116	970	2111	972	**2112**	**972**
429.mcf	255	2007	1160	2000	1160	**2003**	**1160**	255	2007	1160	2000	1160	**2003**	**1160**
445.gobmk	255	1558	1720	**1553**	**1720**	1551	1720	255	1356	1970	1349	1980	**1355**	**1970**
456.hmmer	255	**1876**	**1270**	1875	1270	1877	1270	255	1877	1270	**1878**	**1270**	1879	1270
458.sjeng	255	**2234**	**1380**	2234	1380	2235	1380	255	2100	1470	2103	1470	**2102**	**1470**
462.libquantum	255	3789	1390	3796	1390	**3793**	**1390**	255	3789	1390	3796	1390	**3793**	**1390**
464.h264ref	255	2215	2550	**2223**	**2540**	2260	2500	255	2074	2720	**2072**	**2720**	2070	2730
471.omnetpp	255	4045	394	**3979**	**401**	3978	401	255	3429	465	3438	464	**3436**	**464**
473.astar	255	2393	748	2398	747	**2394**	**748**	255	2363	758	2359	759	**2360**	**759**
483.xalancbmk	255	1310	1340	1312	1340	**1310**	**1340**	255	1310	1340	1312	1340	**1310**	**1340**

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

Compiler Invocation Notes

```
Sun Studio compiler patches are available at
    http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp
```

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

```
Environment Variable Settings:
export LD_PRELOAD=mpss.so.1:madv.so.1
export MPSSHEAP=4MB
export MPSSSTACK=4MB
    Requests system to use 4 MB pages when possible.
export MADV access_lwp
    access_lwp requests that the next light weight process to touch
    the specified address range will access it most heavily.
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):
```

Continued on next page

Operating System Notes (Continued)

```
tune_t_fsflushr=4
    Controls how many seconds elapse between runs of the
    page flush daemon, fsflush.
autoup=1920
    Causes pages older than the listed number of seconds to
    be written by fsflush.
lpg_alloc_prefer=1
    Set lgroup page allocation to strongly prefer local pages.
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 Fujitsu SPARC Enterprise M9000 Server.
Note that the Sun SPARC Enterprise M9000 and Fujitsu SPARC Enterprise
M9000 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 -xipo=2 -xpagesize=4M -xprefetch_level=1 -xalias_level=std
    -fma=fused -ll2amm

C++ benchmarks:
    -library=stlport4 -fast -xipo=2 -xpagesize=4M -xprefetch_level=2
    -xalias_level=compatible -fma=fused -ll2amm -lfast

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 -xipo=2 -xpagesize=4M -fma=fused -xalias_level=std -xrestrict -lfast -ll2amm

401.bzip2: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=2 -xpagesize=4M -fma=fused -xalias_level=strong -xprefetch=latx:5 -ll2amm

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

429.mcf: basepeak = yes

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

456.hmmer: Same as 403.gcc

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

462.libquantum: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

464.h264ref: `Same as 403.gcc`

C++ benchmarks:

471.omnetpp: `-library=stlport4 -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -xipo=2 -xpagesize=4M -xalias_level=compatible -fma=fused -ll2amm`

473.astar: `-library=stlport4 -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -xipo=2 -xpagesize=4M -xalias_level=compatible -fma=fused -xprefetch=latx:3 -lfast -ll2amm`

483.xalancbmk: `basepeak = yes`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.20090713.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.20090713.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 Tue Jul 22 18:45:50 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 5 August 2008.