



SPEC[®] CINT2006 Result

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Fujitsu

SPECint[®]_rate2006 = 753

Fujitsu SPARC Enterprise M8000

SPECint_rate_base2006 = 706

CPU2006 license: 19

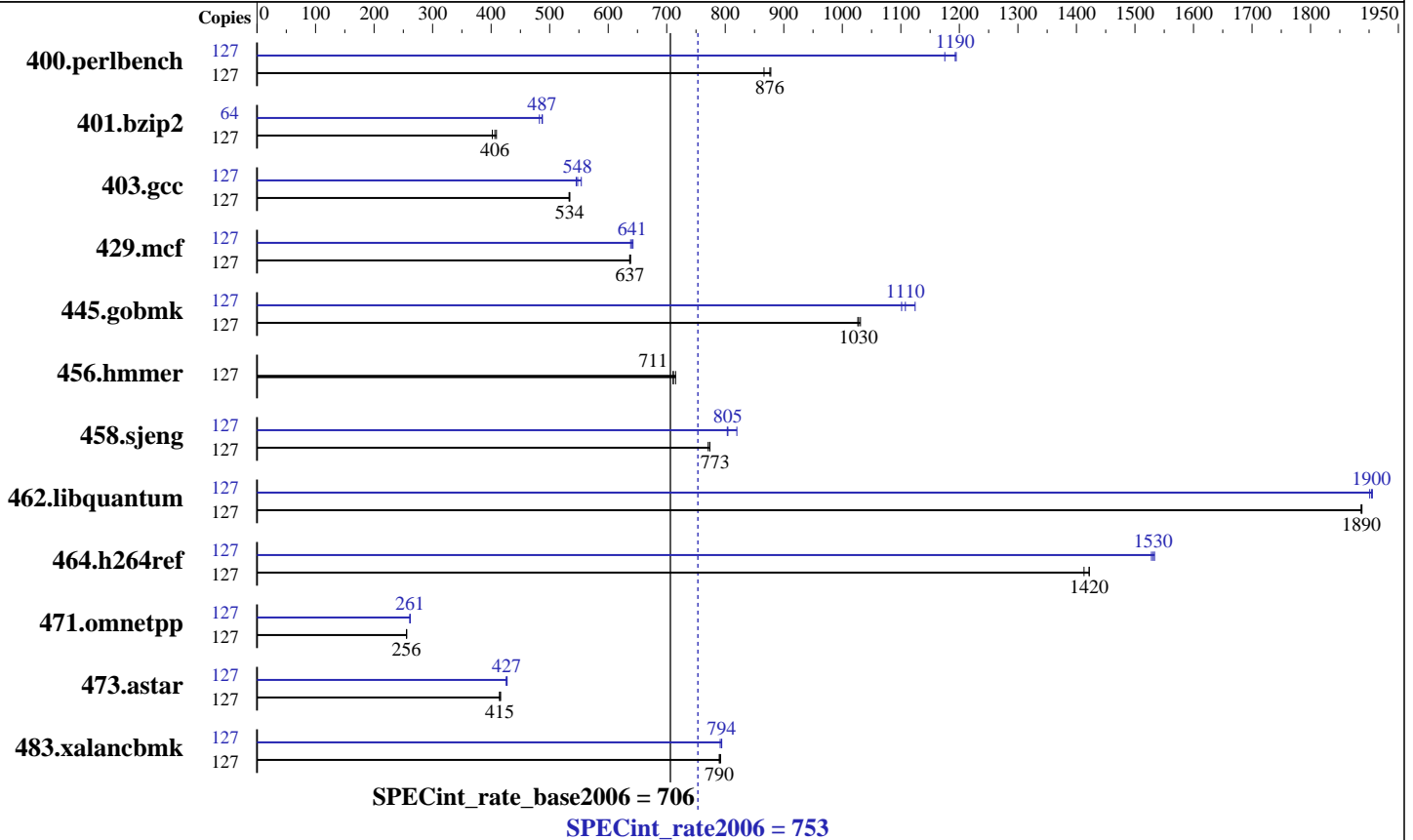
Test sponsor: Fujitsu

Tested by: Sun Microsystems

Test date: Oct-2009

Hardware Availability: Nov-2009

Software Availability: Oct-2009



Hardware

CPU Name: SPARC64 VII
 CPU Characteristics: 2880
 CPU MHz: Integrated
 FPU: Integrated
 CPU(s) enabled: 64 cores, 16 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 to 4 CMUs; each CMU contains 2 or 4 CPU 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 (128 x 4 GB), 8-way interleaved
 Disk Subsystem: 886 GB mirrored partition on 12 x 146GB 15000 RPM SAS disks in each of 2 Sun StorageTek 2530 Array (24 total disk, 12 in each array)
 Other Hardware: None

Software

Operating System: Solaris 10 10/09 (s10s_u8wos_06)
 Compiler: Sun Studio 12 Update 1 plus patches (see notes)
 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	127	1432	866	1416	876	1413	878	127	1056	1180	1040	1190	1039	1190
401.bzip2	127	3015	406	2995	409	3048	402	64	1280	483	1268	487	1267	488
403.gcc	127	1914	534	1918	533	1913	534	127	1867	548	1875	545	1845	554
429.mcf	127	1819	637	1817	637	1815	638	127	1814	638	1803	642	1807	641
445.gobmk	127	1292	1030	1296	1030	1298	1030	127	1185	1120	1210	1100	1203	1110
456.hammer	127	1666	711	1657	715	1666	711	127	1666	711	1657	715	1666	711
458.sjeng	127	1986	774	1987	773	1994	771	127	1913	803	1910	805	1874	820
462.libquantum	127	1395	1890	1394	1890	1394	1890	127	1384	1900	1382	1900	1381	1910
464.h264ref	127	1989	1410	1977	1420	1977	1420	127	1833	1530	1839	1530	1835	1530
471.omnetpp	127	3107	256	3105	256	3107	255	127	3035	262	3036	261	3037	261
473.astar	127	2148	415	2152	414	2142	416	127	2089	427	2094	426	2086	427
483.xalancbmk	127	1109	790	1106	792	1109	790	127	1104	794	1107	791	1104	794

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

Compiler Invocation Notes

Sun Studio 12 Update 1 was used, plus patch 119963-17

Sun Studio compiler patches are available at
http://developers.sun.com/sunstudio/downloads/patches/ss12u1_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

Other System Settings:

The webconsole service was turned off using
svcadm disable webconsole



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Platform Notes

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

This result is measured on a Sun SPARC Enterprise M8000 Server. The Sun SPARC Enterprise M8000 and the Fujitsu SPARC Enterprise M8000 are electrically equivalent.

General Notes

Environment variables set by runspec before the start of the run:

OMP_NUM_THREADS = "128"

SUNW_MP_PROCBIND = "true"

SUNW_MP_THR_IDLE = "SPIN"

(Although these variables were set prior to the run they did not affect performance, since the benchmarks were compiled in serial mode.)

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 -xarch=sparcfmaf

-xalias_level=std -ll2amm

C++ benchmarks:

-xdepend -fast -fma=fused -xipo=2 -xpagesize=4M -xarch=sparcfmaf

-xalias_level=compatible -library=stlport4 -lfast



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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: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-M /usr/lib/ld/map.bssalign -fma=fused -xipo=2
-xalias_level=std -xrestrict -xprefetch=no%auto -Xc
-lfast
401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-fma=fused -xalias_level=strong
403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xipo=2 -xalias_level=std -xprefetch=no -xarch=sparcfmaf
-fma=fused -ll2amm
429.mcf: -fast -xpagesize=4M -xipo=2 -xalias_level=std -xrestrict
-xprefetch=no -lfast

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Peak Optimization Flags (Continued)

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-fma=fused -xarch=sparcfmaf -xalias_level=std -xrestrict
-l12amm

456.hmmer: basepeak = yes

458.sjeng: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-fma=fused -xipo=2 -l12amm

462.libquantum: -fast -xpagesize=4M -xipo=2 -xprefetch=no -fma=fused
-lbsdmalloc

464.h264ref: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xipo=2 -xarch=sparcfmaf -xalias_level=std -xprefetch=no
-l12amm

C++ benchmarks:

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

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

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

Peak Other Flags

C benchmarks:
-xjobs=32 -V -#

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



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-12u1-and-gccfss4.2.r4.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-12u1-and-gccfss4.2.r4.xml>

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

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