CFP2000 Result

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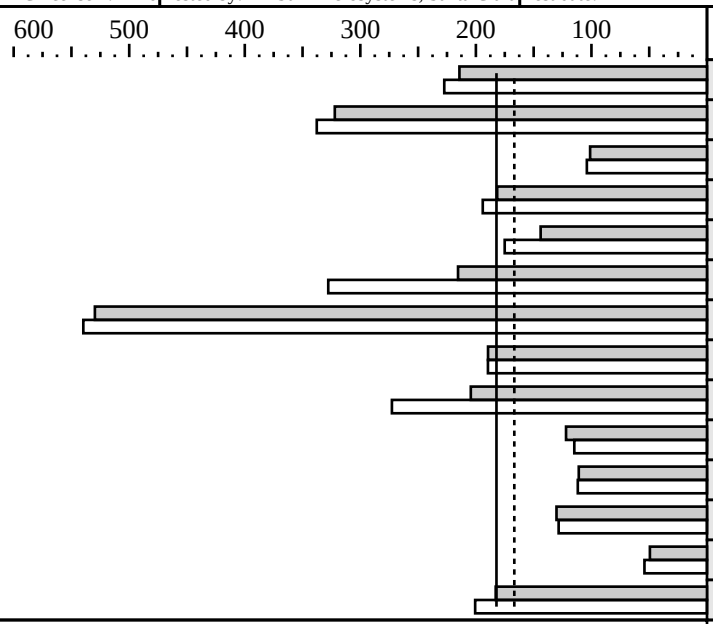
Sun Microsystems
Sun Blade X8400

SPECfp_rate2000 = 182

SPECfp_rate_base2000 = 167

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Jun-2006 | Hardware Avail: Jul-2006 | Software Avail: Jul-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	69.3	214	8	65.3	227
171.swim	8	89.3	322	8	85.2	338
172.mgrid	8	165	101	8	161	104
173.applu	8	107	182	8	100	194
177.mesa	8	90.2	144	8	74.2	175
178.galgel	8	125	215	8	82.1	328
179.art	8	45.5	530	8	44.7	540
183.equake	8	63.7	189	8	63.6	190
187.facerec	8	86.3	204	8	64.7	273
188.ammp	8	167	122	8	178	115
189.lucas	8	167	111	8	166	112
191.fma3d	8	150	130	8	152	128
200.sixtrack	8	207	49.4	8	189	54.1
301.apsi	8	132	183	8	120	201

Hardware

CPU:	AMD Opteron (TM) 885
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	4 (order by # of chips)
Parallel:	No
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	32GB (16x2GB, PC3200 CL3 DDR ECC Regd. SDRAM)
Disk Subsystem:	SAS,73GB,10KRPM
Other Hardware:	None

Software

Operating System:	Solaris 10 1/06
Compiler:	Sun Studio 11 with Patches
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

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Compiler invocation:
  C: cc
  F90: f90
  F77: f90

FDO:  PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback
      fdo_pre0:  rm -rf ./feedback.profile


Floating point base flags:
  F90:   -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 ONESTEP=yes
    C:   -fast -xipo=2 -xalias_level=std -xpagesize=2m ONESTEP=yes

Floating point peak flags:
 ONESTEP=yes for all benchmarks

 168.wupwise:   -fast -xautopar -xpad=common:3969 -xipo=2 -xarch=amd64 -xprefetch_level=3  -xpagesize_heap=2m
```

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Notes/Tuning Information (Continued)

171.swim: -fast -xpad=common:3969 -xipo=2 -xvector=simd -xprefetch_level=3 -Qoption iropt -Atile:skewp,-Ainline:cs=700 -xarch=amd64 -Qoption ube_ipa -inl_alt -xpagesize_stack=2m

172.mgrid: -fast -xautopar -stackvar -xpad=common:900 -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector -xpagesize=2m -Qoption ld -M,/usr/lib/ld/map.bssalign

173.applu: -fast -xautopar -unroll=5 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a -qoption iropt -Rloop_dist -xpagesize_heap=2m

177.mesa: -fast -xautopar -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO

178.galgel: -fast -xcache=64/32/4:1024/64/4 -xipo=2 -xpagesize_heap=2m -xprefetch_level=3 -xvector=simd -xarch=amd64
RM_SOURCES=lapak.f90
EXTRALIBS=-xlic_lib=sunperf

179.art: -fast -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m

183.equake: -fast -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m -lmopt -lm +FDO

187.facerec: -fast -xO4 -xipo=2 -xprefetch_level=3 -xpagesize=2m
RM_SOURCES=cfftb.f90 cffti.f90 cfftf.f90
EXTRALIBS=-xlic_lib=sunperf

188.ammp: -fast -xcache=64/32/4:1024/64/4 -xO4 -xipo=2 -xarch=amd64a -xalias_level=std -xpagesize_heap=2m -lmopt -lm

189.lucas: -fast -Qoption ube_ipa -inl_alt -xipo=2 -xarch=amd64 -xprefetch_level=3

191.fma3d: -fast -xcache=64/32/4:1024/64/4 -unroll=5 -fsimple=1 -xipo=2 -xprefetch_level=3 -xarch=amd64 -xpagesize_heap=2m +FDO

200.sixtrack: -fast -xipo=2 -O -xprefetch_level=3 -xarch=amd64 -xpagesize_heap=2m -Qoption ld -M,/usr/lib/ld/map.bssalign +FDO

301.apsi: -fast -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a -xpagesize=2m

Portability:
178.galgel: -fixed

Shell Environments:
Stack size set to unlimited via "ulimit -s unlimited"

Kernel Parameters (/etc/system):
autoup=900
tune_t_fsflushr=1

The following patches are applied to Sun Studio 11 compiler:
120759-07 : x86/x64
121016-03 : x86 C
121020-03 : x86 F90
121018-03 : x86 C++

Processes were bound to CPUs using submit=pbind
Default BIOS setting was used