



CFP2000 Result

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SGI
SGI 2400 32X 400MHz R12k

SPECfp_rate2000 = 106
SPECfp_rate_base2000 = 97.2

SPEC license #: 4 | Tested by: SGI | Test date: May-2000 | Hardware Avail: Jun-2000 | Software Avail: Apr-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	663	89.6	32	574	103
171.swim	32	1798	64.0	32	1797	64.0
172.mgrid	32	1149	58.1	32	1093	61.1
173.applu	32	1108	70.4	32	1006	77.5
177.mesa	32	490	106	32	460	113
178.galgel	32	297	363	32	257	419
179.art	32	256	377	32	259	373
183.equake	32	790	61.1	32	776	62.2
187.facerec	32	548	129	32	535	132
188.amp	32	571	143	32	579	141
189.lucas	32	1206	61.6	32	1188	62.5
191.fma3d	32	1469	53.1	32	1202	64.9
200.sixtrack	32	579	70.5	32	570	71.6
301.apsi	32	1265	76.3	32	845	114

Hardware

CPU: R12000
CPU MHz: 400
FPU: Integrated
CPU(s) enabled: 32 cores, 32 chips, 1 core/chip
CPU(s) orderable: 2-64
Parallel: No
Primary Cache: 32KBI + 32KBD on chip
Secondary Cache: 8MB(I+D) off chip
L3 Cache: N/A
Other Cache: N/A
Memory: 32GB
Disk Subsystem: 1 x 18 GB SCSI, 10 x 18 GB FC (striped)
Other Hardware: None

Software

Operating System: IRIX 6.5.8f
Compiler: MIPSpro 7.3.1m C, C++, Fortran90
SCSL 1.2 Math Library
File System: xfs
System State: Single-user

Notes/Tuning Information

Baseline optimization flags (for C benchmarks):
PASS1 : -Ofast=ip27 -IPA:use_intrinsic -fb_create /tmp/SPEC2000/FBDIR_base/\$(EXEBASE)
PASS2 : -Ofast=ip27 -IPA:use_intrinsic -fb_opt /tmp/SPEC2000/FBDIR_base/\$(EXEBASE)
Baseline optimization flags (for Fortran benchmarks): -Ofast=ip27 -LNO:fusion=2
Portability Flags:
178.galgel: -fixedform
Peak optimization flags:
note: all occurrences of (FEEDBACK) below means compiled with a two-step process:
PASS1 = -fb_create /tmp/SPEC2000/FBDIR_peak/\$(EXEBASE)
PASS2 = -fb_opt /tmp/SPEC2000/FBDIR_peak/\$(EXEBASE)
168.wupwise: -Ofast=ip27 -IPA:space=1000:linear=on:plimit=10000:callee_limit=5000 -INLINE:aggressive=on
-OPT:Olimit=0 -LNO:fusion=2:prefetch Ahead=5
171.swim: -Ofast=ip27 -LNO:cs2=8m
172.mgrid: -Ofast=ip27 -LNO:cs2=8m:fission=2:ou=2
173.applu: -Ofast=ip27 -LNO:ou_max=5:ou_prod_max=10:prefetch=0:fusion=2
177.mesa: -Ofast=ip27 -OPT:goto=off -LNO:opt=0 (FEEDBACK)
178.galgel: -Ofast=ip27 -LNO:ou_max=7 -lscs (FEEDBACK)



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Notes/Tuning Information (Continued)

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.
  RM_SOURCES = lapak.f90
179.art: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -IPA:min_hot=15 (FEEDBACK)
183.quake: -Ofast=ip27 -LNO:prefetch=0 -TENV:X=4 -CG:ld_latency=7 -IPA:space=500 (FEEDBACK)
187.facerec: -Ofast=ip27 -fb_opt /tmp/SPEC2000/FBDIR_peak/$(EXEBASE) -LNO:fusion=2 (FEEDBACK)
188.ammp: -Ofast=ip27 -OPT:goto=off -IPA:space=500:plimit=900 (FEEDBACK)
189.lucas: -Ofast=ip27 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -OPT:goto=off:unroll_size=160:unroll_times_max=4
  -CG:ld_latency=2 (FEEDBACK)
200.sixtrack:= -Ofast=ip27 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip27 -TENV:X=4 -LNO:prefetch=0:blocking=off -IPA:linear=on:use_intrinsic
The following O/S parameters were set:
  setenv PAGESIZE_DATA 4096
  setenv PAGESIZE_TEXT 4096
  setenv PAGESIZE_STACK 4096
  systune -i ; percent_totalmem_4m_pages = 50 ; nlpages_4m = 128
  limit stacksize 500000
The following is done before building each benchmark that requires (FEEDBACK):
rm -rf /tmp/SPEC2000/FBDIR_peak/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_peak/$baseexe
or
rm -rf /tmp/SPEC2000/FBDIR_base/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_base/$baseexe
```