



CFP2000 Result

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SGI
SGI Origin 3200 8X 400MHz R12k

SPECfp_rate2000 = 33.8
SPECfp_rate_base2000 = 31.4

SPEC license #: 4 Tested by: SGI Test date: Sep-2000 Hardware Avail: Sep-2000 Software Avail: Sep-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	536	27.7	8	437	34.0
171.swim	8	984	29.2	8	994	28.9
172.mgrid	8	717	23.3	8	691	24.2
173.applu	8	787	24.8	8	726	26.8
177.mesa	8	481	27.0	8	453	28.7
178.galgel	8	291	92.4	8	251	107
179.art	8	241	100	8	240	100
183.equake	8	520	23.2	8	511	23.6
187.facerec	8	441	39.9	8	434	40.6
188.amp	8	560	36.4	8	561	36.4
189.lucas	8	717	25.9	8	718	25.9
191.fma3d	8	1010	19.3	8	858	22.7
200.sixtrack	8	557	18.3	8	550	18.6
301.apsi	8	948	25.4	8	707	34.1

Hardware

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

Software

Operating System: IRIX 6.5.9m
 Compiler: MIPSpro 7.3.1.1m 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:blocking=off

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/$(EXEBASE) -LNO:fusion=2 (FEEDBACK)
188.ammp: -Ofast=ip27 -OPT:goto=off -IPA:space=500:plimit=900 (FEEDBACK)
189.lucas: -Ofast=ip27 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -OPT:goto=off:unroll_size=160:unroll_times_max=4
  -CG:ld_latency=2 (FEEDBACK)
200.sixtrack:= -Ofast=ip27 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip27 -TENV:X=4 -LNO:prefetch=0:blocking=off -IPA:linear=on:use_intrinsic
The following O/S parameters were set:
  setenv PAGESIZE_DATA 4096 ; setenv PAGESIZE_TEXT 4096 ; setenv PAGESIZE_STACK 4096
  systune -i ; percent_totalmem_4m_pages = 40 ; percent_totalmem_1m_pages = 7
  systune -i ; percent_totalmem_256k_pages = 7 ; percent_totalmem_64k_pages = 7
  limit stacksize 500000
The following is done before building each benchmark that requires (FEEDBACK):
  rm -rf /tmp/SPEC2000/FBDIR_peak/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_peak/$baseexe
```