



CFP2000 Result

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SGI
SGI Origin 300 4X 600MHz R14000A

SPECfp_rate2000 = 19.5
SPECfp_rate_base2000 = 18.4

SPEC license #: 4 | Tested by: SGI | Test date: Apr-2002 | Hardware Avail: May-2002 | Software Avail: Apr-2002

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	408	18.2	4	360	20.6
171.swim	4	991	14.5	4	975	14.7
172.mgrid	4	716	11.7	4	711	11.7
173.applu	4	688	14.2	4	623	15.6
177.mesa	4	338	19.2	4	308	21.1
178.galgel	4	228	58.9	4	202	66.8
179.art	4	218	55.4	4	216	56.0
183.equake	4	515	11.7	4	511	11.8
187.facerec	4	444	19.9	4	439	20.1
188.amp	4	401	25.5	4	398	25.6
189.lucas	4	722	12.8	4	712	13.0
191.fma3d	4	865	11.3	4	797	12.2
200.sixtrack	4	376	13.6	4	374	13.7
301.apsi	4	774	15.6	4	630	19.1

Hardware

CPU: R14000A
CPU MHz: 600
FPU: Integrated
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
CPU(s) orderable: 2-32
Parallel: No
Primary Cache: 32KBI + 32KBD on chip
Secondary Cache: 4MB(I+D) off chip
L3 Cache: N/A
Other Cache: N/A
Memory: 4 GB
Disk Subsystem: 1 x 18 GB FC
Other Hardware: None

Software

Operating System: IRIX 6.5.16m
Compiler: MIPSpro 7.3.1.3m C, Fortran90
SCSL 1.4 Math Library
File System: xfs
System State: Single-user

Notes/Tuning Information

Baseline optimization flags (for C benchmarks):
PASS1 : -Ofast=ip35 -fb_create /tmp/SPEC2000/FBDIR_base/\$(EXEBASE)
PASS2 : -Ofast=ip35 -fb_opt /tmp/SPEC2000/FBDIR_base/\$(EXEBASE)
Baseline optimization flags (for Fortran benchmarks): -Ofast=ip35 -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=ip35 -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=ip35 -CG:ld_latency=10
172.mgrid: -Ofast=ip35 -LNO:fusion=2
173.applu: -Ofast=ip35 -LNO:ou_max=5:ou_prod_max=10:prefetch=0:fusion=2 -CG:ld_latency=3
177.mesa: -Ofast=ip35 -OPT:goto=off -LNO:opt=0 -CG:ld_latency=6 (FEEDBACK)
178.galgel: -Ofast=ip35 -LNO:ou_max=7 -CG:ld_latency=3 -lscs (FEEDBACK)



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Notes/Tuning Information (Continued)

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RM_SOURCES = lapak.f90
179.art: -Ofast=ip35 -LNO:prefetch=0 -IPA:min_hot=15 -CG:ld_latency=3 (FEEDBACK)
183.quake: -Ofast=ip35 -LNO:prefetch=0 -TENV:X=4 -CG:ld_latency=7 -IPA:space=500 (FEEDBACK)
187.facerec: -Ofast=ip35 -LNO:fusion=2
188.ammp: -Ofast=ip35 -OPT:goto=off -IPA:space=500:plimit=900 -CG:ld_latency=7 (FEEDBACK)
189.lucas: -Ofast=ip35 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip35 -bigp_off -LNO:prefetch=0 -CG:ld_latency=2
-OPT:goto=off:unroll_size=160:unroll_times_max=4 (FEEDBACK)
200.sixtrack:= -Ofast=ip35 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip35 -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
systune -i ; r12k_bdiag = 0x4000000
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
Jobs are submitted using dplace. Contents of the placement file submit.pf:
memories 1 in topology physical near $NODE
threads 1
run thread 0 on memory 0 using cpu $CPU

```