



CFP2000 Result

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SGI
SGI Origin 3800 128X 400MHz R12k

SPECfp_rate2000 = 525
SPECfp_rate_base2000 = 489

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	128	541	439	128	445	534
171.swim	128	999	461	128	1002	459
172.mgrid	128	720	371	128	699	382
173.applu	128	788	395	128	734	425
177.mesa	128	484	429	128	456	455
178.galgel	128	293	1469	128	253	1702
179.art	128	257	1504	128	257	1504
183.equake	128	524	368	128	514	375
187.facerec	128	448	629	128	441	639
188.amp	128	564	579	128	566	577
189.lucas	128	721	412	128	724	410
191.fma3d	128	1062	293	128	886	352
200.sixtrack	128	680	240	128	674	242
301.apsi	128	949	407	128	710	544

Hardware

CPU: R12000
CPU MHz: 400
FPU: Integrated
CPU(s) enabled: 128 cores, 128 chips, 1 core/chip
CPU(s) orderable: 16-512
Parallel: No
Primary Cache: 32KBI + 32KBD on chip
Secondary Cache: 8MB(I+D) off chip
L3 Cache: N/A
Other Cache: N/A
Memory: 96GB
Disk Subsystem: 1 x 18 GB FC, 12 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/$(EXEBASE) -LNO:fusion=2 (FEEDBACK)
188.ammp: -Ofast=ip27 -OPT:goto=off -IPA:space=500:plimit=900 (FEEDBACK)
189.lucas: -Ofast=ip27 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -OPT:goto=off:unroll_size=160:unroll_times_max=4
.
  -CG:ld_latency=2 (FEEDBACK)
200.sixtrack:= -Ofast=ip27 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip27 -TENV:X=4 -LNO:prefetch=0:blocking=off -IPA:linear=on:use_intrinsic
  setenv PAGESIZE_DATA 4096 ; setenv PAGESIZE_TEXT 4096 ; setenv PAGESIZE_STACK 4096
  systune -i ; percent_totalmem_4m_pages = 40 ; percent_totalmem_1m_pages = 7
  systune -i ; percent_totalmem_256k_pages = 7 ; percent_totalmem_64k_pages = 7
  limit stacksize 500000
The following is done before building each benchmark that requires (FEEDBACK):
  rm -rf /tmp/SPEC2000/FBDIR_peak/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_peak/$baseexe

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