CFP2000 Result

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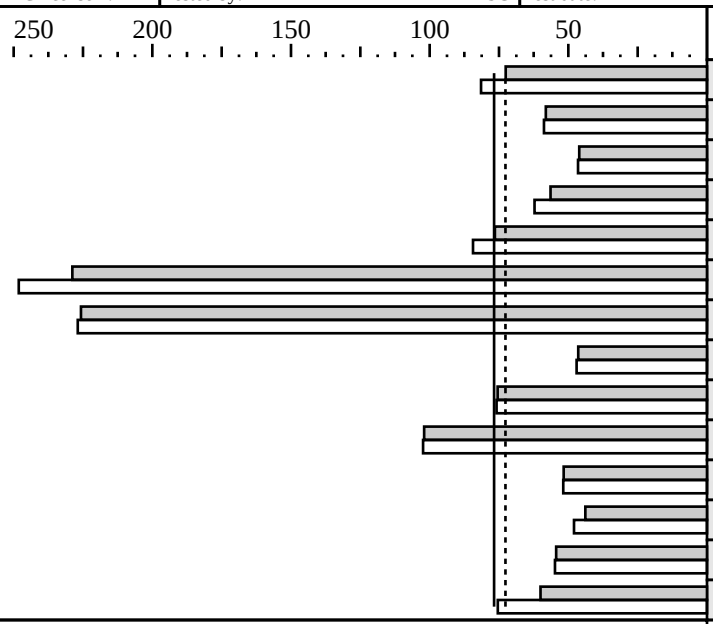
SGI
SGI Origin 300 16X 600MHz R14000A

SPECfp_rate2000 = 76.8

SPECfp_rate_base2000 = 72.7

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	409	72.6	16	364	81.5
171.swim	16	990	58.1	16	979	58.8
172.mgrid	16	725	46.1	16	718	46.5
173.applu	16	691	56.4	16	627	62.2
177.mesa	16	340	76.5	16	308	84.4
178.galgel	16	235	229	16	217	248
179.art	16	214	226	16	213	227
183.equake	16	520	46.4	16	513	47.0
187.facerec	16	467	75.5	16	465	75.9
188.ammp	16	400	102	16	399	102
189.lucas	16	718	51.7	16	716	51.8
191.fma3d	16	889	43.9	16	813	48.0
200.sixtrack	16	375	54.4	16	372	54.8
301.apsi	16	804	60.0	16	640	75.4

Hardware

CPU:	R14000
CPU MHz:	600
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 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:	16 GB
Disk Subsystem:	1 x 18 GB FC, 4 x 18 GB FC (striped)
Other Hardware:	None

Software

Operating System:	IRIX 6.5.16f
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 occurances 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)

```
.           RM_SOURCES = lapak.f90
 179.art: -Ofast=ip35 -LNO:prefetch=0 -IPA:min_hot=15 -CG:ld_latency=3 (FEEDBACK)
 183.equake: -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 ; gather_craylink_routerstats = 0
   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
 The first disk mentioned in the Disk Subsystem is the system disk. A striped
 XFS filesystem was created using the rest of the disks and the benchmark was
 run on this.
```