CINT2000 Result

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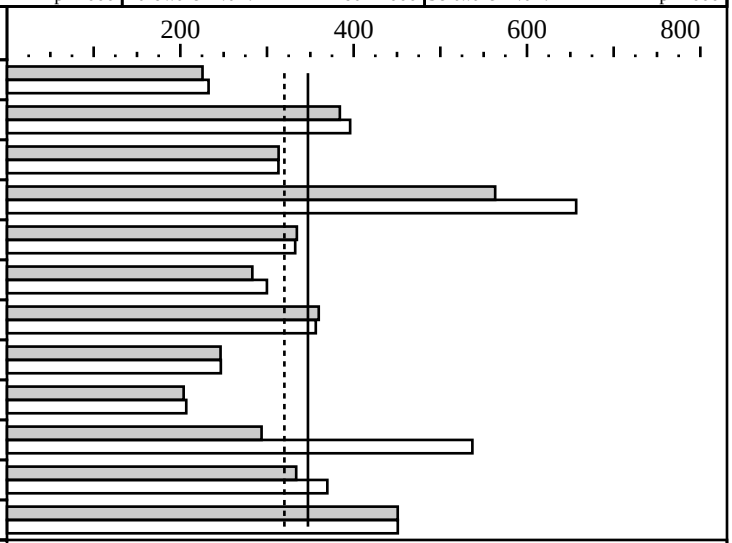
SGI
SGI 2200 2X 400MHz R12k

SPECint2000 = 347

SPECint_base2000 = 320

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	621	226	602	233
175.vpr	1400	365	384	354	396
176.gcc	1100	351	313	351	313
181.mcf	1800	320	563	274	657
186.crafty	1000	299	334	301	333
197.parser	1800	636	283	600	300
252.eon	1300	361	360	365	356
253.perlbmk	1800	731	246	730	247
254.gap	1100	540	204	532	207
255.vortex	1900	647	294	354	537
256.bzip2	1500	450	334	406	370
300.twolf	3000	665	451	665	451



Hardware

CPU:	R12000
CPU MHz:	400
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	2, 4, 6, 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:	2048MB
Disk Subsystem:	2 x 18 GB SCSI (striped)
Other Hardware:	None

Software

Operating System:	IRIX 6.5.8f
Compiler:	MIPSpro 7.3.1.1m C, C++, Fortran90
File System:	xfs
System State:	Single-user

Notes/Tuning Information

```
Baseline optimization flags (C and C++ use same flags):
   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)
Portability Flags:
   176.gcc: -DUSG  -Dalloca=__builtin_alloca -DMIPS -DHOST_WORDS_BIG_ENDIAN
   186.crafty: -DSGI
   253.perlbmk: -DSPEC_CPU2000_SGI -DI_FCNTL
   254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_IOCTL_PROTO
   300.twolf: -DHAVE_SIGNED_CHAR
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)
 164.gzip: -Ofast=ip27 -IPA:space=500:plimit=500 -lmalloc (FEEDBACK)
 175.vpr: -Ofast=ip27 -IPA:space=300:plimit=10000:callee_limit=5000:linear=on -LNO:prefetch_ahead=2
 .        -INLINE:aggressive=on -OPT:Olimit=0:alias=disjoint:alias=restrict -lmalloc (FEEDBACK)
 181.mcf: -Ofast=ip27 -IPA:min_hot=14 -lmalloc (FEEDBACK)
 176.gcc: -Ofast=ip27 (FEEDBACK)
 186.crafty: -Ofast=ip27 -LNO:prefetch=0 -OPT:goto=off -lmalloc (FEEDBACK)
 197.parser: -Ofast=ip27 -IPA:min_hot=14 (FEEDBACK)
```

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Notes/Tuning Information (Continued)

252.eon: -Ofast=ip27 -LNO:prefetch=0 -LANG:exceptions=off -lmalloc (FEEDBACK)
253.perlbmk: -Ofast=ip27 -IPA:use_intrinsic -Wl,-x (FEEDBACK)
254.gap: -Ofast=ip27 -IPA:use_intrinsic -OPT:unroll_analysis=off:unroll_size=0:unroll_times_max=4
. -OPT:alias=restrict:alias=disjoint -IPA:min_hot=7 -lmalloc (FEEDBACK)
255.vortex: -Ofast=ip27 -IPA:use_intrinsic -OPT:unroll_analysis=off:unroll_size=0:unroll_times_max=4 -LNO:opt=0
. -CG:ld_latency=5 -IPA:min_hot=14 -TENV:X=4 -IPA:space=500:plimit=3600 -OPT:goto=off (FEEDBACK)
256.bzip2: -Ofast=ip27 -IPA:min_hot=5:space=500:plimit=2900 -INLINE:aggressive=on (FEEDBACK)
300.twolf: -Ofast=ip27 -IPA:use_intrinsic (FEEDBACK)

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 ; mkdir /tmp/SPEC2000 ; cd /tmp/SPEC2000 ; mkdir FBDIR_base ; mkdir FBDIR_peak
```