



CINT2000 Result

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SGI
SGI Origin 300 1X 600MHz R14000A

SPECint2000 = **483**
SPECint_base2000 = **471**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	430	325	444	315	
175.vpr	1400	258	542	247	566	
176.gcc	1100	253	434	255	431	
181.mcf	1800	275	655	275	655	
186.crafty	1000	198	504	204	490	
197.parser	1800	442	407	418	430	
252.eon	1300	257	506	235	552	
253.perlbnk	1800	489	368	491	366	
254.gap	1100	356	309	350	315	
255.vortex	1900	286	663	256	743	
256.bzip2	1500	317	473	300	500	
300.twolf	3000	470	638	470	638	

Hardware

CPU: R14000A
 CPU MHz: 600
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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: 1 GB
 Disk Subsystem: 1 x 18 GB FC
 Other Hardware: None

Software

Operating System: IRIX 6.5.17f
 Compiler: MIPSpro 7.3.1.3m C, C++
 SCSSL 1.4.0.1 Math Library
 File System: xfs
 System State: Single-user

Notes/Tuning Information

Baseline optimization flags (C and C++ use same flags):

PASS1 : -Ofast=ip35 -IPA:use_intrinsic -fb_create /tmp/SPEC2000/FBDIR/base/\${EXEBASE}
 PASS2 : -Ofast=ip35 -IPA:use_intrinsic -fb_opt /tmp/SPEC2000/FBDIR/base/\${EXEBASE}

Portability Flags:

176.gcc: -Dalloca=__builtin_alloca -DMIPS -DHOST_WORDS_BIG_ENDIAN
 186.crafty: -DSGI
 253.perlbnk: -DSPEC_CPU2000_SGI -DI_FCNTL
 252.eon: -lm
 254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_IOCTL_PROTO
 -DSYS_HAS_ANSI -DSYS_HAS_CALLOC_PROTO
 300.twolf: -DHAVE_SIGNED_CHAR

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}
 164.gzip: -Ofast=ip35 -IPA:space=500:plimit=500 -lmalloc (FEEDBACK)
 175.vpr: -Ofast=ip35 -IPA:space=300:plimit=10000:callee_limit=5000:linear=on
 . -LNO:prefetch Ahead=2 -INLINE:aggressive=on
 . -OPT:Olimit=0:alias=disjoint:alias=restrict -CG:ld_latency=10 -lmalloc (FEEDBACK)
 181.mcf: basepeak=yes



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Notes/Tuning Information (Continued)

```

176.gcc: -Ofast=ip35 -CG:ld_latency=4 (FEEDBACK)
186.crafty: -Ofast=ip35 -LNO:prefetch=0 -OPT:goto=off -CG:ld_latency=4 -lmalloc (FEEDBACK)
197.parser: -Ofast=ip35 -IPA:min_hot=14 (FEEDBACK)
252.eon: -Ofast=ip35 -LNO:prefetch=0 -LANG:exceptions=off -CG:ld_latency=4 -lmalloc -lm
. (FEEDBACK)
253.perlbnk: -Ofast=ip35 -IPA:use_intrinsic -Wl,-x (FEEDBACK)
254.gap: -Ofast=ip35 -IPA:use_intrinsic -OPT:unroll_analysis=off:unroll_size=0:unroll_times_max=4
. -OPT:alias=restrict:alias=disjoint -IPA:min_hot=7 -CG:ld_latency=8 -lmalloc (FEEDBACK)
255.vortex: -Ofast=ip35 -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=ip35 -IPA:min_hot=5:space=500:plimit=2900 -INLINE:aggressive=on (FEEDBACK)
300.twolf: basepeak=yes

```

The following O/S parameters were set:

```

setenv PAGESIZE_DATA 4096 ; setenv PAGESIZE_TEXT 4096 ; setenv PAGESIZE_STACK 4096
system -i ; percent_totalmem_4m_pages = 40 ; percent_totalmem_1m_pages = 7
system -i ; percent_totalmem_256k_pages = 7 ; percent_totalmem_64k_pages = 7
system -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
```