



CINT2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

SGI

SGI Origin 3800 128X 400MHz R12k

SPECint_rate2000 = 511

SPECint_rate_base2000 = 479

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
164.gzip	128	619	336	128	598	348
175.vpr	128	357	582	128	348	597
176.gcc	128	355	460	128	354	462
181.mcf	128	296	903	128	295	905
186.crafty	128	302	491	128	308	482
197.parser	128	642	417	128	602	444
252.eon	128	366	527	128	369	523
253.perlbnk	128	733	364	128	731	365
254.gap	128	514	318	128	508	321
255.vortex	128	639	441	128	351	805
256.bzip2	128	452	493	128	406	549
300.twolf	128	680	655	128	706	631

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 (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.perlbnk: -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 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=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)

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org



CINT2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

SGI

SGI Origin 3800 128X 400MHz R12k

SPECint_rate2000 = 511

SPECint_rate_base2000 = 479

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

Notes/Tuning Information (Continued)

```

252.eon: -Ofast=ip27 -LNO:prefetch=0 -LANG:exceptions=off -lmalloc (FEEDBACK)
253.perlbnk: -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 = 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 ; mkdir /tmp/SPEC2000 ; cd /tmp/SPEC2000 ; mkdir FBDIR_base ; mkdir FBDIR_peak

```