NAME

perlirix - Perl version 5 on Irix systems

DESCRIPTION

This document describes various features of Irix that will affect how Perl version 5 (hereafter just Perl) is compiled and/or runs.

Building 32-bit Perl in Irix

Use

```
sh Configure -Dcc='cc -n32'
```

to compile Perl 32-bit. Don't bother with -n32 unless you have 7.1 or later compilers (use cc -version to check).

(Building 'cc -n32' is the default.)

Building 64-bit Perl in Irix

Use

```
sh Configure -Dcc='cc -64' -Duse64bitint
```

This requires require a 64-bit MIPS CPU (R8000, R10000, ...)

You can also use

```
sh Configure -Dcc='cc -64' -Duse64bitall
```

but that makes no difference compared with the -Duse64bitint because of the "cc -64".

You can also do

```
sh Configure -Dcc='cc -n32' -Duse64bitint
```

to use long longs for the 64-bit integer type, in case you don't have a 64-bit CPU.

If you are using gcc, just

```
sh Configure -Dcc=gcc -Duse64bitint
```

should be enough, the Configure should automatically probe for the correct 64-bit settings.

About Compiler Versions of Irix

Some Irix cc versions, e.g. 7.3.1.1m (try cc -version) have been known to have issues (coredumps) when compiling perl.c. If you've used -OPT:fast_io=ON and this happens, try removing it. If that fails, or you didn't use that, then try adjusting other optimization options (-LNO, -INLINE, -O3 to -O2, et cetera). The compiler bug has been reported to SGI. (Allen Smith <easmith@beatrice.rutgers.edu>)

Linker Problems in Irix

If you get complaints about so_locations then search in the file hints/irix_6.sh for "lddflags" and do the suggested adjustments. (David Billinghurst <David.Billinghurst@riotinto.com.au>)

Malloc in Irix

Do not try to use Perl's malloc, this will lead into very mysterious errors (especially with -Duse64bitall).

Building with threads in Irix

Run Configure with -Duseithreads which will configure Perl with the Perl 5.8.0 "interpreter threads", see threads.

For Irix 6.2 with perl threads, you have to have the following patches installed:

    1404 Irix 6.2 Posix 1003.1b man pages
    1645 Irix 6.2 & 6.3 POSIX header file updates
    2000 Irix 6.2 Posix 1003.1b support modules
    2254 Pthread library fixes
    2401 6.2 all platform kernel rollup

IMPORTANT: Without patch 2401, a kernel bug in Irix 6.2 will cause your machine to panic and crash when running threaded perl. Irix 6.3 and later are okay.

    Thanks to Hannu Napari <Hannu.Napari@hut.fi> for the IRIX
    pthreads patches information.

Irix 5.3

While running Configure and when building, you are likely to get quite a few of these warnings:

    ld:
    The shared object /usr/lib/libm.so did not resolve any symbols.
        You may want to remove it from your link line.

Ignore them: in IRIX 5.3 there is no way to quieten ld about this.

During compilation you will see this warning from toke.c:

```
uopt: Warning: Perl_yylex: this procedure not optimized because it
    exceeds size threshold; to optimize this procedure, use -Olimit
    option with value >= 4252.
```

Ignore the warning.

In IRIX 5.3 and with Perl 5.8.1 (Perl 5.8.0 didn't compile in IRIX 5.3) the following failures are known.

Failed Test	Stat	Wstat	Total	Fail	Failed	List of Failed
../ext/List/Util/t/shuffle.t	0	139	??	??	%	??
../lib/Math/Trig.t	255	65280	29	12	41.38%	24-29
../lib/sort.t	0	138	119	72	60.50%	48-119

56 tests and 474 subtests skipped.
Failed 3/811 test scripts, 99.63% okay. 78/75813 subtests failed,
  99.90% okay.

They are suspected to be compiler errors (at least the shuffle.t failure is known from some IRIX 6 setups) and math library errors (the Trig.t failure), but since IRIX 5 is long since end-of-lifed, further fixes for the IRIX are unlikely. If you can get gcc for 5.3, you could try that, too, since gcc in IRIX 6 is a known workaround for at least the shuffle.t and sort.t failures.

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Please report any errors, updates, or suggestions to <https://github.com/Perl/perl5/issues>.