

**NAME**

Config - access Perl configuration information

**SYNOPSIS**

```
use Config;
if ($Config{usethreads}) {
    print "has thread support\n"
}

use Config qw(myconfig config_sh config_vars config_re);

print myconfig();

print config_sh();

print config_re();

config_vars(qw(osname archname));
```

**DESCRIPTION**

The Config module contains all the information that was available to the Configure program at Perl build time (over 900 values).

Shell variables from the *config.sh* file (written by Configure) are stored in the readonly-variable `%Config`, indexed by their names.

Values stored in *config.sh* as 'undef' are returned as undefined values. The perl `exists` function can be used to check if a named variable exists.

For a description of the variables, please have a look at the Glossary file, as written in the Porting folder, or use the url: <http://perl5.git.perl.org/perl.git/blob/HEAD:/Porting/Glossary>

*myconfig()*

Returns a textual summary of the major perl configuration values. See also `-V` in 'Command Switches' in `perlrun`.

*config\_sh()*

Returns the entire perl configuration information in the form of the original *config.sh* shell variable assignment script.

*config\_re(\$regex)*

Like *config\_sh()* but returns, as a list, only the config entries whose names match the `$regex`.

*config\_vars(@names)*

Prints to `STDOUT` the values of the named configuration variable. Each is printed on a separate line in the form:

```
name='value' ;
```

Names which are unknown are output as `name='UNKNOWN' ;`. See also `-V:name` in 'Command Switches' in `perlrun`.

*bincompat\_options()*

Returns a list of C pre-processor options used when compiling this *perl* binary, which affect its binary compatibility with extensions. `bincompat_options()` and `non_bincompat_options()` are shown together in the output of `perl -V` as *Compile-time options*.

*non\_bincompat\_options()*

Returns a list of C pre-processor options used when compiling this *perl* binary, which do not affect binary compatibility with extensions.

*compile\_date()*

Returns the compile date (as a string), equivalent to what is shown by `perl -V`

*local\_patches()*

Returns a list of the names of locally applied patches, equivalent to what is shown by `perl -V`.

*header\_files()*

Returns a list of the header files that should be used as dependencies for XS code, for this version of Perl on this platform.

**EXAMPLE**

Here's a more sophisticated example of using `%Config`:

```
use Config;
use strict;

my %sig_num;
my @sig_name;
unless($Config{sig_name} && $Config{sig_num}) {
    die "No sigs?";
} else {
    my @names = split ' ', $Config{sig_name};
    @sig_num{@names} = split ' ', $Config{sig_num};
    foreach (@names) {
        $sig_name[$sig_num{$_}] ||= $_;
    }
}

print "signal #17 = $sig_name[17]\n";
if ($sig_num{ALRM}) {
    print "SIGALRM is $sig_num{ALRM}\n";
}
```

**WARNING**

Because this information is not stored within the perl executable itself it is possible (but unlikely) that the information does not relate to the actual perl binary which is being used to access it.

The Config module is installed into the architecture and version specific library directory (`$Config{installarchlib}`) and it checks the perl version number when loaded.

The values stored in `config.sh` may be either single-quoted or double-quoted. Double-quoted strings are handy for those cases where you need to include escape sequences in the strings. To avoid runtime variable interpolation, any `$` and `@` characters are replaced by `\$` and `\@`, respectively. This isn't foolproof, of course, so don't embed `\$` or `\@` in double-quoted strings unless you're willing to deal with the consequences. (The slashes will end up escaped and the `$` or `@` will trigger variable interpolation)

**GLOSSARY**

Most Config variables are determined by the Configure script on platforms supported by it (which is most UNIX platforms). Some platforms have custom-made Config variables, and may thus not have some of the variables described below, or may have extraneous variables specific to that particular port. See the port specific documentation in such cases.

— `_a` From *Unix.U*:

This variable defines the extension used for ordinary library files. For unix, it is `.a`. The `.` is included. Other possible values include `.lib`.

`_exe`

From *Unix.U*:

This variable defines the extension used for executable files. DJGPP, Cygwin and OS/2 use *.exe*. Stratus VOS uses *.pm*. On operating systems which do not require a specific extension for executable files, this variable is empty.

`_o` From *Unix.U*:

This variable defines the extension used for object files. For unix, it is *.o*. The *.* is included. Other possible values include *.obj*.

## a

`afs`

From *afs.U*:

This variable is set to `true` if AFS (Andrew File System) is used on the system, `false` otherwise. It is possible to override this with a hint value or command line option, but you'd better know what you are doing.

`afsroot`

From *afs.U*:

This variable is by default set to */afs*. In the unlikely case this is not the correct root, it is possible to override this with a hint value or command line option. This will be used in subsequent tests for AFSness in the configure and test process.

`alignbytes`

From *alignbytes.U*:

This variable holds the number of bytes required to align a double— or a long double when applicable. Usual values are 2, 4 and 8. The default is eight, for safety.

`ansi2knr`

From *ansi2knr.U*:

This variable is set if the user needs to run `ansi2knr`. Currently, this is not supported, so we just abort.

`aphostname`

From *d\_ghname.U*:

This variable contains the command which can be used to compute the host name. The command is fully qualified by its absolute path, to make it safe when used by a process with super-user privileges.

`api_revision`

From *patchlevel.U*:

The three variables, `api_revision`, `api_version`, and `api_subversion`, specify the version of the oldest perl binary compatible with the present perl. In a full version string such as *5.6.1*, `api_revision` is the 5. Prior to 5.5.640, the format was a floating point number, like 5.00563.

*perl.c:incpush()* and *lib/lib.pm* will automatically search in *\$(site)lib/.* for older directories back to the limit specified by these `api_` variables. This is only useful if you have a perl library directory tree structured like the default one. See `INSTALL` for how this works. The versioned `site_perl` directory was introduced in 5.005, so that is the lowest possible value. The version list appropriate for the current system is determined in *inc\_version\_list.U*.

XXX To do: Since compatibility can depend on compile time options (such as `bincompat`, `longlong`, etc.) it should (perhaps) be set by `Configure`, but currently it isn't. Currently, we read a hard-wired value from *patchlevel.h*. Perhaps what we ought to do is take the hard-wired value from *patchlevel.h* but then modify it if the current `Configure` options warrant. *patchlevel.h* then would use an `#ifdef` guard.

`api_subversion`

From *patchlevel.U*:

The three variables, `api_revision`, `api_version`, and `api_subversion`, specify the version of the oldest

perl binary compatible with the present perl. In a full version string such as *5.6.1*, `api_subversion` is the 1. See `api_revision` for full details.

#### `api_version`

From *patchlevel.U*:

The three variables, `api_revision`, `api_version`, and `api_subversion`, specify the version of the oldest perl binary compatible with the present perl. In a full version string such as *5.6.1*, `api_version` is the 6. See `api_revision` for full details. As a special case, *5.5.0* is rendered in the old-style as *5.005*. (In the *5.005\_0x* maintenance series, this was the only versioned directory in `$sitelib`.)

#### `api_versionstring`

From *patchlevel.U*:

This variable combines `api_revision`, `api_version`, and `api_subversion` in a format such as *5.6.1* (or *5\_6\_1*) suitable for use as a directory name. This is filesystem dependent.

#### `ar`

From *Loc.U*:

This variable is used internally by `Configure` to determine the full pathname (if any) of the `ar` program. After `Configure` runs, the value is reset to a plain `ar` and is not useful.

#### `archlib`

From *archlib.U*:

This variable holds the name of the directory in which the user wants to put architecture-dependent public library files for `$package`. It is most often a local directory such as *usr/local/lib*. Programs using this variable must be prepared to deal with filename expansion.

#### `archlibexp`

From *archlib.U*:

This variable is the same as the `archlib` variable, but is filename expanded at configuration time, for convenient use.

#### `archname`

From *archname.U*:

This variable is a short name to characterize the current architecture. It is used mainly to construct the default `archlib`.

#### `archname64`

From *use64bits.U*:

This variable is used for the 64-bitness part of `$archname`.

#### `archobjs`

From *Unix.U*:

This variable defines any additional objects that must be linked in with the program on this architecture. On unix, it is usually empty. It is typically used to include emulations of unix calls or other facilities. For perl on *OS/2*, for example, this would include *os2/os2.obj*.

#### `asctime_r_proto`

From *d\_asctime\_r.U*:

This variable encodes the prototype of `asctime_r`. It is zero if `d_asctime_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_asctime_r` is defined.

#### `awk`

From *Loc.U*:

This variable is used internally by `Configure` to determine the full pathname (if any) of the `awk` program. After `Configure` runs, the value is reset to a plain `awk` and is not useful.

**b****baserev**

From *baserev.U*:

The base revision level of this package, from the *.package* file.

**bash**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**bin**

From *bin.U*:

This variable holds the name of the directory in which the user wants to put publicly executable images for the package in question. It is most often a local directory such as */usr/local/bin*. Programs using this variable must be prepared to deal with *~name* substitution.

**bin\_ELF**

From *dlsrc.U*:

This variable saves the result from configure if generated binaries are in ELF format. Only set to defined when the test has actually been performed, and the result was positive.

**binexp**

From *bin.U*:

This is the same as the *bin* variable, but is filename expanded at configuration time, for use in your makefiles.

**bison**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the bison program. After Configure runs, the value is reset to a plain *bison* and is not useful.

**bootstrap\_charset**

From *ebcdic.U*:

This variable conditionally defines *BOOTSTRAP\_CHARSET* if this system uses non-ASCII encoding.

**byacc**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the *byacc* program. After Configure runs, the value is reset to a plain *byacc* and is not useful.

**byteorder**

From *byteorder.U*:

This variable holds the byte order in a UV. In the following, larger digits indicate more significance. The variable *byteorder* is either 4321 on a big-endian machine, or 1234 on a little-endian, or 87654321 on a Cray ... or 3412 with weird order !

**c****c** From *n.U*:

This variable contains the *\c* string if that is what causes the *echo* command to suppress newline. Otherwise it is null. Correct usage is *\$echo \$n "prompt for a question: \$c"*.

**castflags**

From *d\_castneg.U*:

This variable contains a flag that precise difficulties the compiler has casting odd floating values to unsigned long: 0 = ok 1 = couldn't cast < 0 2 = couldn't cast >= 0x80000000 4 = couldn't cast in argument expression list

`cat`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `cat` program. After Configure runs, the value is reset to a plain `cat` and is not useful.

`cc` From *cc.U*:

This variable holds the name of a command to execute a C compiler which can resolve multiple global references that happen to have the same name. Usual values are `cc` and `gcc`. Fervent ANSI compilers may be called `c89`. AIX has `xlc`.

`ccddlflags`

From *dlsrc.U*:

This variable contains any special flags that might need to be passed with `cc -c` to compile modules to be used to create a shared library that will be used for dynamic loading. For `hpux`, this should be `+z`. It is up to the makefile to use it.

`ccdlflags`

From *dlsrc.U*:

This variable contains any special flags that might need to be passed to `cc` to link with a shared library for dynamic loading. It is up to the makefile to use it. For `sunos 4.1`, it should be empty.

`ccflags`

From *ccflags.U*:

This variable contains any additional C compiler flags desired by the user. It is up to the Makefile to use this.

`ccflags_uselargefiles`

From *uselfs.U*:

This variable contains the compiler flags needed by large file builds and added to `ccflags` by hints files.

`ccname`

From *Checkcc.U*:

This can set either by hints files or by Configure. If using `gcc`, this is `gcc`, and if not, usually equal to `cc`, `unimpressive`, `no`? Some platforms, however, make good use of this by storing the flavor of the C compiler being used here. For example if using the Sun WorkShop suite, `ccname` will be `workshop`.

`ccsymbols`

From *Cppsym.U*:

The variable contains the symbols defined by the C compiler alone. The symbols defined by `cpp` or by `cc` when it calls `cpp` are not in this list, see `cppsymbols` and `cppccsymbols`. The list is a space-separated list of `symbol=value` tokens.

`ccversion`

From *Checkcc.U*:

This can set either by hints files or by Configure. If using a (non-`gcc`) vendor `cc`, this variable may contain a version for the compiler.

`cf_by`

From *cf\_who.U*:

Login name of the person who ran the Configure script and answered the questions. This is used to tag both *config.sh* and *config\_h.SH*.

`cf_email`

From *cf\_email.U*:

Electronic mail address of the person who ran Configure. This can be used by units that require the

user's e-mail, like *MailList.U*.

#### `cf_time`

From *cf\_who.U*:

Holds the output of the `date` command when the configuration file was produced. This is used to tag both *config.sh* and *config\_h.SH*.

#### `charbits`

From *charsize.U*:

This variable contains the value of the `CHARBITS` symbol, which indicates to the C program how many bits there are in a character.

#### `charsize`

From *charsize.U*:

This variable contains the value of the `CHARSIZE` symbol, which indicates to the C program how many bytes there are in a character.

#### `chgrp`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

#### `chmod`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `chmod` program. After Configure runs, the value is reset to a plain `chmod` and is not useful.

#### `chown`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

#### `clocktype`

From *d\_times.U*:

This variable holds the type returned by *times()*. It can be `long`, or `clock_t` on BSD sites (in which case `<sys/types.h>` should be included).

#### `comm`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `comm` program. After Configure runs, the value is reset to a plain `comm` and is not useful.

#### `compress`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

#### `config_arg0`

From *Options.U*:

This variable contains the string used to invoke the Configure command, as reported by the shell in the `$0` variable.

#### `config_argc`

From *Options.U*:

This variable contains the number of command-line arguments passed to Configure, as reported by the shell in the  `$#`  variable. The individual arguments are stored as variables `config_arg1`, `config_arg2`, etc.

`config_args`

From *Options.U*:

This variable contains a single string giving the command-line arguments passed to Configure. Spaces within arguments, quotes, and escaped characters are not correctly preserved. To reconstruct the command line, you must assemble the individual command line pieces, given in `config_arg[0-9]*`.

`contains`

From *contains.U*:

This variable holds the command to do a `grep` with a proper return status. On most sane systems it is simply `grep`. On insane systems it is a `grep` followed by a `cat` followed by a `test`. This variable is primarily for the use of other Configure units.

`cp` From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `cp` program. After Configure runs, the value is reset to a plain `cp` and is not useful.

`cpio`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`cpp`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `cpp` program. After Configure runs, the value is reset to a plain `cpp` and is not useful.

`cpp_stuff`

From *cpp\_stuff.U*:

This variable contains an identification of the concatenation mechanism used by the C preprocessor.

`cppccsymbols`

From *Cppsym.U*:

The variable contains the symbols defined by the C compiler when it calls `cpp`. The symbols defined by the `cc` alone or `cpp` alone are not in this list, see `ccsymbols` and `cppsymbols`. The list is a space-separated list of `symbol=value` tokens.

`cppflags`

From *ccflags.U*:

This variable holds the flags that will be passed to the C pre-processor. It is up to the Makefile to use it.

`cpplast`

From *cppstdin.U*:

This variable has the same functionality as `cppminus`, only it applies to `cpprun` and not `cppstdin`.

`cppminus`

From *cppstdin.U*:

This variable contains the second part of the string which will invoke the C preprocessor on the standard input and produce to standard output. This variable will have the value `-` if `cppstdin` needs a minus to specify standard input, otherwise the value is `""`.

`cpprun`

From *cppstdin.U*:

This variable contains the command which will invoke a C preprocessor on standard input and put the output to `stdout`. It is guaranteed not to be a wrapper and may be a null string if no preprocessor can be made directly available. This preprocessor might be different from the one used by the C compiler.



Don't forget to append `cpplast` after the preprocessor options.

#### `cppstdin`

From *cppstdin.U*:

This variable contains the command which will invoke the C preprocessor on standard input and put the output to stdout. It is primarily used by other Configure units that ask about preprocessor symbols.

#### `cppsymbols`

From *Cppsym.U*:

The variable contains the symbols defined by the C preprocessor alone. The symbols defined by `cc` or by `cc` when it calls `cpp` are not in this list, see `ccsymbols` and `cppccsymbols`. The list is a space-separated list of `symbol=value` tokens.

#### `crypt_r_proto`

From *d\_crypt\_r.U*:

This variable encodes the prototype of `crypt_r`. It is zero if `d_crypt_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_crypt_r` is defined.

#### `cryptlib`

From *d\_crypt.U*:

This variable holds `-lcrypt` or the path to a *libcrypt.a* archive if the *crypt()* function is not defined in the standard C library. It is up to the Makefile to use this.

#### `csch`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `csch` program. After Configure runs, the value is reset to a plain `csch` and is not useful.

#### `ctermid_r_proto`

From *d\_ctermid\_r.U*:

This variable encodes the prototype of `ctermid_r`. It is zero if `d_ctermid_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_ctermid_r` is defined.

#### `ctime_r_proto`

From *d\_ctime\_r.U*:

This variable encodes the prototype of `ctime_r`. It is zero if `d_ctime_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_ctime_r` is defined.

## **d**

#### `d__fwalk`

From *d\_\_fwalk.U*:

This variable conditionally defines `HAS__FWALK` if *fwalk()* is available to apply a function to all the file handles.

#### `d_access`

From *d\_access.U*:

This variable conditionally defines `HAS_ACCESS` if the *access()* system call is available to check for access permissions using real IDs.

#### `d_accessx`

From *d\_accessx.U*:

This variable conditionally defines the `HAS_ACCESSX` symbol, which indicates to the C program that the *accessx()* routine is available.

`d_aintl`

From *d\_aintl.U*:

This variable conditionally defines the `HAS_AINTL` symbol, which indicates to the C program that the *aintl()* routine is available. If `copysignl` is also present we can emulate `modfl`.

`d_alarm`

From *d\_alarm.U*:

This variable conditionally defines the `HAS_ALARM` symbol, which indicates to the C program that the *alarm()* routine is available.

`d_archlib`

From *archlib.U*:

This variable conditionally defines `ARCHLIB` to hold the pathname of architecture-dependent library files for `$package`. If `$archlib` is the same as `$privlib`, then this is set to `undef`.

`d_asctime64`

From *d\_timefuncs64.U*:

This variable conditionally defines the `HAS_ASCTIME64` symbol, which indicates to the C program that the *asctime64()* routine is available.

`d_asctime_r`

From *d\_asctime\_r.U*:

This variable conditionally defines the `HAS_ASCTIME_R` symbol, which indicates to the C program that the *asctime\_r()* routine is available.

`d_atofl`

From *atofl.U*:

This variable conditionally defines the `HAS_ATOFL` symbol, which indicates to the C program that the *atofl()* routine is available.

`d_atoll`

From *atoll.U*:

This variable conditionally defines the `HAS_ATOLL` symbol, which indicates to the C program that the *atoll()* routine is available.

`d_attribute_deprecated`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_DEPRECATED`, which indicates that GCC can handle the attribute for marking deprecated APIs

`d_attribute_format`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_FORMAT`, which indicates the C compiler can check for `printf`-like formats.

`d_attribute_malloc`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_MALLOC`, which indicates the C compiler can understand functions as having `malloc`-like semantics.

`d_attribute_nonnull`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_NONNULL`, which indicates that the C compiler can know that certain arguments must not be `NULL`, and will check accordingly at compile time.

`d_attribute_noreturn`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_NORETURN`, which indicates that the C compiler can know that certain functions are guaranteed never to return.

`d_attribute_pure`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_PURE`, which indicates that the C compiler can know that certain functions are `pure` functions, meaning that they have no side effects, and only rely on function input *and/or* global data for their results.

`d_attribute_unused`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_UNUSED`, which indicates that the C compiler can know that certain variables and arguments may not always be used, and to not throw warnings if they don't get used.

`d_attribute_warn_unused_result`

From *d\_attribut.U*:

This variable conditionally defines `HASATTRIBUTE_WARN_UNUSED_RESULT`, which indicates that the C compiler can know that certain functions have a return values that must not be ignored, such as *malloc()* or *open()*.

`d_bcmp`

From *d\_bcmp.U*:

This variable conditionally defines the `HAS_BCMP` symbol if the *bcmp()* routine is available to compare strings.

`d_bcopy`

From *d\_bcopy.U*:

This variable conditionally defines the `HAS_BCOPY` symbol if the *bcopy()* routine is available to copy strings.

`d_bsd`

From *Guess.U*:

This symbol conditionally defines the symbol `BSD` when running on a BSD system.

`d_bsdgetpgrp`

From *d\_getpgrp.U*:

This variable conditionally defines `USE_BSD_GETPGRP` if *getpgrp* needs one arguments whereas `USG` one needs none.

`d_bsdsetpgrp`

From *d\_setpgrp.U*:

This variable conditionally defines `USE_BSD_SETPGRP` if *setpgrp* needs two arguments whereas `USG` one needs none. See also `d_setpgid` for a POSIX interface.

`d_builtin_choose_expr`

From *d\_builtin.U*:

This conditionally defines `HAS_BUILTIN_CHOOSE_EXPR`, which indicates that the compiler supports `__builtin_choose_expr(x,y,z)`. This built-in function is analogous to the `x?y:z` operator in C, except that the expression returned has its type unaltered by promotion rules. Also, the built-in function does not evaluate the expression that was not chosen.

`d_builtin_expect`

From *d\_builtin.U*:

This conditionally defines `HAS_BUILTIN_EXPECT`, which indicates that the compiler supports `__builtin_expect(exp,c)`. You may use `__builtin_expect` to provide the compiler with branch prediction information.

`d_bzero`

From *d\_bzero.U*:

This variable conditionally defines the `HAS_BZERO` symbol if the *bzero()* routine is available to set memory to 0.

`d_c99_variadic_macros`

From *d\_c99\_variadic.U*:

This variable conditionally defines the `HAS_C99_VARIADIC_MACROS` symbol, which indicates to the C program that C99 variadic macros are available.

`d_casti32`

From *d\_casti32.U*:

This variable conditionally defines `CASTI32`, which indicates whether the C compiler can cast large floats to 32-bit ints.

`d_castneg`

From *d\_castneg.U*:

This variable conditionally defines `CASTNEG`, which indicates whether the C compiler can cast negative float to unsigned.

`d_charvspr`

From *d\_vprintf.U*:

This variable conditionally defines `CHARVSPRINTF` if this system has `vsprintf` returning type `(char*)`. The trend seems to be to declare it as `“int vsprintf()”`.

`d_chown`

From *d\_chown.U*:

This variable conditionally defines the `HAS_CHOWN` symbol, which indicates to the C program that the *chown()* routine is available.

`d_chroot`

From *d\_chroot.U*:

This variable conditionally defines the `HAS_CHROOT` symbol, which indicates to the C program that the *chroot()* routine is available.

`d_chsize`

From *d\_chsize.U*:

This variable conditionally defines the `CHSIZE` symbol, which indicates to the C program that the *chsize()* routine is available to truncate files. You might need a `-lx` to get this routine.

`d_class`

From *d\_class.U*:

This variable conditionally defines the `HAS_CLASS` symbol, which indicates to the C program that the *class()* routine is available.

`d_clearenv`

From *d\_clearenv.U*:

This variable conditionally defines the `HAS_CLEARENV` symbol, which indicates to the C program that the *clearenv()* routine is available.

`d_closedir`

From *d\_closedir.U*:

This variable conditionally defines `HAS_CLOSEDIR` if *closedir()* is available.

`d_cmsg_hdr_s`

From *d\_cmsg\_hdr\_s.U*:

This variable conditionally defines the `HAS_STRUCT_CMSGHDR` symbol, which indicates that the struct `cmsg_hdr` is supported.

`d_const`

From *d\_const.U*:

This variable conditionally defines the `HASCONST` symbol, which indicates to the C program that this C compiler knows about the `const` type.

`d_copysignl`

From *d\_copysignl.U*:

This variable conditionally defines the `HAS_COPYSIGNL` symbol, which indicates to the C program that the *copysignl()* routine is available. If `aintl` is also present we can emulate `modfl`.

`d_cplusplus`

From *d\_cplusplus.U*:

This variable conditionally defines the `USE_CPLUSPLUS` symbol, which indicates that a C++ compiler was used to compile Perl and will be used to compile extensions.

`d_crypt`

From *d\_crypt.U*:

This variable conditionally defines the `CRYPT` symbol, which indicates to the C program that the *crypt()* routine is available to encrypt passwords and the like.

`d_crypt_r`

From *d\_crypt\_r.U*:

This variable conditionally defines the `HAS_CRYPT_R` symbol, which indicates to the C program that the *crypt\_r()* routine is available.

`d_csh`

From *d\_csh.U*:

This variable conditionally defines the `CSH` symbol, which indicates to the C program that the C-shell exists.

`d_ctermid`

From *d\_ctermid.U*:

This variable conditionally defines `CTERMID` if *ctermid()* is available to generate filename for terminal.

`d_ctermid_r`

From *d\_ctermid\_r.U*:

This variable conditionally defines the `HAS_CTERMID_R` symbol, which indicates to the C program that the *ctermid\_r()* routine is available.

`d_ctime64`

From *d\_timefuncs64.U*:

This variable conditionally defines the `HAS_CTIME64` symbol, which indicates to the C program that the *ctime64()* routine is available.

`d_ctime_r`

From *d\_ctime\_r.U*:

This variable conditionally defines the `HAS_CTIME_R` symbol, which indicates to the C program that the *ctime\_r()* routine is available.

`d_cuserid`

From *d\_cuserid.U*:

This variable conditionally defines the `HAS_CUSERID` symbol, which indicates to the C program that the *cuserid()* routine is available to get character login names.

`d_dbl_dig`

From *d\_dbl\_dig.U*:

This variable conditionally defines `d_dbl_dig` if this system's header files provide `DBL_DIG`, which is the number of significant digits in a double precision number.

`d_dbminiproto`

From *d\_dbminiproto.U*:

This variable conditionally defines the `HAS_DBMINIT_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *dbminit()* function. Otherwise, it is up to the program to supply one.

`d_difftime`

From *d\_difftime.U*:

This variable conditionally defines the `HAS_DIFFTIME` symbol, which indicates to the C program that the *difftime()* routine is available.

`d_difftime64`

From *d\_timefuncs64.U*:

This variable conditionally defines the `HAS_DIFFTIME64` symbol, which indicates to the C program that the *difftime64 ()* routine is available.

`d_dir_dd_fd`

From *d\_dir\_dd\_fd.U*:

This variable conditionally defines the `HAS_DIR_DD_FD` symbol, which indicates that the `DIR` directory stream type contains a member variable called `dd_fd`.

`d_dirfd`

From *d\_dirfd.U*:

This variable conditionally defines the `HAS_DIRFD` constant, which indicates to the C program that *dirfd()* is available to return the file descriptor of a directory stream.

`d_dirnamlen`

From *i\_dirent.U*:

This variable conditionally defines `DIRNAMLEN`, which indicates to the C program that the length of directory entry names is provided by a `d_namelen` field.

`d_dlerror`

From *d\_dlerror.U*:

This variable conditionally defines the `HAS_DLERROR` symbol, which indicates to the C program that the *dlerror()* routine is available.

`d_dlopen`

From *d\_dlopen.U*:

This variable conditionally defines the `HAS_DLOPEN` symbol, which indicates to the C program that the *dlopen()* routine is available.

**d\_dlsymun**

From *d\_dlsymun.U*:

This variable conditionally defines `DLSYM_NEEDS_UNDERSCORE`, which indicates that we need to prepend an underscore to the symbol name before calling *dlsym()*.

**d\_dosuid**

From *d\_dosuid.U*:

This variable conditionally defines the symbol `DOSUID`, which tells the C program that it should insert `setuid` emulation code on hosts which have `setuid #!` scripts disabled.

**d\_drand48\_r**

From *d\_drand48\_r.U*:

This variable conditionally defines the `HAS_DRAND48_R` symbol, which indicates to the C program that the *drand48\_r()* routine is available.

**d\_drand48proto**

From *d\_drand48proto.U*:

This variable conditionally defines the `HAS_DRAND48_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *drand48()* function. Otherwise, it is up to the program to supply one.

**d\_dup2**

From *d\_dup2.U*:

This variable conditionally defines `HAS_DUP2` if *dup2()* is available to duplicate file descriptors.

**d\_eaccess**

From *d\_eaccess.U*:

This variable conditionally defines the `HAS_EACCESS` symbol, which indicates to the C program that the *eaccess()* routine is available.

**d\_endgrent**

From *d\_endgrent.U*:

This variable conditionally defines the `HAS_ENDGRENT` symbol, which indicates to the C program that the *endgrent()* routine is available for sequential access of the group database.

**d\_endgrent\_r**

From *d\_endgrent\_r.U*:

This variable conditionally defines the `HAS_ENDGRENT_R` symbol, which indicates to the C program that the *endgrent\_r()* routine is available.

**d\_endhent**

From *d\_endhent.U*:

This variable conditionally defines `HAS_ENDHOSTENT` if *endhostent()* is available to close whatever was being used for host queries.

**d\_endhostent\_r**

From *d\_endhostent\_r.U*:

This variable conditionally defines the `HAS_ENDHOSTENT_R` symbol, which indicates to the C program that the *endhostent\_r()* routine is available.

**d\_endnetent**

From *d\_endnetent.U*:

This variable conditionally defines `HAS_ENDNETENT` if *endnetent()* is available to close whatever was being used for network queries.

**d\_endnetent\_r**

From *d\_endnetent\_r.U*:

This variable conditionally defines the `HAS_ENDNETENT_R` symbol, which indicates to the C program that the *endnetent\_r()* routine is available.

**d\_endpent**

From *d\_endpent.U*:

This variable conditionally defines `HAS_ENDPROTOENT` if *endprotoent()* is available to close whatever was being used for protocol queries.

**d\_endprotoent\_r**

From *d\_endprotoent\_r.U*:

This variable conditionally defines the `HAS_ENDPROTOENT_R` symbol, which indicates to the C program that the *endprotoent\_r()* routine is available.

**d\_endpwent**

From *d\_endpwent.U*:

This variable conditionally defines the `HAS_ENDPWENT` symbol, which indicates to the C program that the *endpwent()* routine is available for sequential access of the passwd database.

**d\_endpwent\_r**

From *d\_endpwent\_r.U*:

This variable conditionally defines the `HAS_ENDPWENT_R` symbol, which indicates to the C program that the *endpwent\_r()* routine is available.

**d\_endsent**

From *d\_endsent.U*:

This variable conditionally defines `HAS_ENDSERVENT` if *endservent()* is available to close whatever was being used for service queries.

**d\_endservent\_r**

From *d\_endservent\_r.U*:

This variable conditionally defines the `HAS_ENDSERVENT_R` symbol, which indicates to the C program that the *endservent\_r()* routine is available.

**d\_eofnblk**

From *nblock\_io.U*:

This variable conditionally defines `EOF_NONBLOCK` if EOF can be seen when reading from a non-blocking I/O source.

**d\_eunice**

From *Guess.U*:

This variable conditionally defines the symbols `EUNICE` and `VAX`, which alerts the C program that it must deal with idiosyncrasies of VMS.

**d\_faststdio**

From *d\_faststdio.U*:

This variable conditionally defines the `HAS_FAST_STDIO` symbol, which indicates to the C program that the “fast stdio” is available to manipulate the stdio buffers directly.

**d\_fchdir**

From *d\_fchdir.U*:

This variable conditionally defines the `HAS_FCHDIR` symbol, which indicates to the C program that the *fchdir()* routine is available.



`d_fchmod`

From *d\_fchmod.U*:

This variable conditionally defines the `HAS_FCHMOD` symbol, which indicates to the C program that the *fchmod()* routine is available to change mode of opened files.

`d_fchown`

From *d\_fchown.U*:

This variable conditionally defines the `HAS_FCHOWN` symbol, which indicates to the C program that the *fchown()* routine is available to change ownership of opened files.

`d_fcntl`

From *d\_fcntl.U*:

This variable conditionally defines the `HAS_FCNTL` symbol, and indicates whether the *fcntl()* function exists

`d_fcntl_can_lock`

From *d\_fcntl\_can\_lock.U*:

This variable conditionally defines the `FCNTL_CAN_LOCK` symbol and indicates whether file locking with *fcntl()* works.

`d_fd_macros`

From *d\_fd\_set.U*:

This variable contains the eventual value of the `HAS_FD_MACROS` symbol, which indicates if your C compiler knows about the macros which manipulate an `fd_set`.

`d_fd_set`

From *d\_fd\_set.U*:

This variable contains the eventual value of the `HAS_FD_SET` symbol, which indicates if your C compiler knows about the `fd_set` typedef.

`d_fds_bits`

From *d\_fd\_set.U*:

This variable contains the eventual value of the `HAS_FDS_BITS` symbol, which indicates if your `fd_set` typedef contains the `fds_bits` member. If you have an `fd_set` typedef, but the dweebs who installed it did a half-fast job and neglected to provide the macros to manipulate an `fd_set`, `HAS_FDS_BITS` will let us know how to fix the gaffe.

`d_fgetpos`

From *d\_fgetpos.U*:

This variable conditionally defines `HAS_FGETPOS` if *fgetpos()* is available to get the file position indicator.

`d_finite`

From *d\_finite.U*:

This variable conditionally defines the `HAS_FINITE` symbol, which indicates to the C program that the *finite()* routine is available.

`d_finitel`

From *d\_finitel.U*:

This variable conditionally defines the `HAS_FINITEL` symbol, which indicates to the C program that the *finitel()* routine is available.

`d_flexfnam`

From *d\_flexfnam.U*:

This variable conditionally defines the `FLEXFILENAMES` symbol, which indicates that the system

supports filenames longer than 14 characters.

#### `d_flock`

From *d\_flock.U*:

This variable conditionally defines `HAS_FLOCK` if *flock()* is available to do file locking.

#### `d_flockproto`

From *d\_flockproto.U*:

This variable conditionally defines the `HAS_FLOCK_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *flock()* function. Otherwise, it is up to the program to supply one.

#### `d_fork`

From *d\_fork.U*:

This variable conditionally defines the `HAS_FORK` symbol, which indicates to the C program that the *fork()* routine is available.

#### `d_fp_class`

From *d\_fp\_class.U*:

This variable conditionally defines the `HAS_FP_CLASS` symbol, which indicates to the C program that the *fp\_class()* routine is available.

#### `d_fpathconf`

From *d\_pathconf.U*:

This variable conditionally defines the `HAS_FPATHCONF` symbol, which indicates to the C program that the *pathconf()* routine is available to determine file-system related limits and options associated with a given open file descriptor.

#### `d_fpclass`

From *d\_fpclass.U*:

This variable conditionally defines the `HAS_FPCLASS` symbol, which indicates to the C program that the *fpclass()* routine is available.

#### `d_fpclassify`

From *d\_fpclassify.U*:

This variable conditionally defines the `HAS_FPCLASSIFY` symbol, which indicates to the C program that the *fpclassify()* routine is available.

#### `d_fpclassl`

From *d\_fpclassl.U*:

This variable conditionally defines the `HAS_FPCLASSL` symbol, which indicates to the C program that the *fpclassl()* routine is available.

#### `d_fpos64_t`

From *d\_fpos64\_t.U*:

This symbol will be defined if the C compiler supports `fpos64_t`.

#### `d_frexp1`

From *d\_frexp1.U*:

This variable conditionally defines the `HAS_FREXP1` symbol, which indicates to the C program that the *frexp1()* routine is available.

#### `d_fs_data_s`

From *d\_fs\_data\_s.U*:

This variable conditionally defines the `HAS_STRUCT_FS_DATA` symbol, which indicates that the struct `fs_data` is supported.

**d\_fseeko**

From *d\_fseeko.U*:

This variable conditionally defines the `HAS_FSEEKO` symbol, which indicates to the C program that the *fseeko()* routine is available.

**d\_fsetpos**

From *d\_fsetpos.U*:

This variable conditionally defines `HAS_FSETPOS` if *fsetpos()* is available to set the file position indicator.

**d\_fstatfs**

From *d\_fstatfs.U*:

This variable conditionally defines the `HAS_FSTATFS` symbol, which indicates to the C program that the *fstatfs()* routine is available.

**d\_fstatvfs**

From *d\_statvfs.U*:

This variable conditionally defines the `HAS_FSTATVFS` symbol, which indicates to the C program that the *fstatvfs()* routine is available.

**d\_fsync**

From *d\_fsync.U*:

This variable conditionally defines the `HAS_FSYNC` symbol, which indicates to the C program that the *fsync()* routine is available.

**d\_ftello**

From *d\_ftello.U*:

This variable conditionally defines the `HAS_FTELLO` symbol, which indicates to the C program that the *ftello()* routine is available.

**dftime**

From *dftime.U*:

This variable conditionally defines the `HAS_FTIME` symbol, which indicates that the *ftime()* routine exists. The *ftime()* routine is basically a sub-second accuracy clock.

**d\_futimes**

From *d\_futimes.U*:

This variable conditionally defines the `HAS_FUTIMES` symbol, which indicates to the C program that the *futimes()* routine is available.

**d\_Gconvert**

From *d\_gconvert.U*:

This variable holds what `Gconvert` is defined as to convert floating point numbers into strings. By default, `Configure` sets `this` macro to use the first of `gconvert`, `gcvt`, or `sprintf` that pass `sprintf-%g`-like behavior tests. If `perl` is using long doubles, the macro uses the first of the following functions that pass `Configure`'s tests: `qgcvt`, `sprintf` (if `Configure` knows how to make `sprintf` format long doubles—see `sPRlgdbl`), `gconvert`, `gcvt`, and `sprintf` (casting to double). The `gconvert_preference` and `gconvert_ld_preference` variables can be used to alter `Configure`'s preferences, for doubles and long doubles, respectively. If present, they contain a space-separated list of one or more of the above function names in the order they should be tried.

`d_Gconvert` may be set to override `Configure` with a platform-specific function. If this function expects a double, a different value may need to be set by the *uselongdouble.cbu* call-back unit so that long doubles can be formatted without loss of precision.

`d_gdbm_ndbm_h_uses_prototypes`

From *i\_ndbm.U*:

This variable conditionally defines the `NDBM_H_USES_PROTOTYPES` symbol, which indicates that the *gdbm-ndbm.h* include file uses real ANSI C prototypes instead of K&R style function declarations. K&R style declarations are unsupported in C++, so the include file requires special handling when using a C++ compiler and this variable is undefined. Consult the different `d_*ndbm_h_uses_prototypes` variables to get the same information for alternative *ndbm.h* include files.

`d_gdbmndbm_h_uses_prototypes`

From *i\_ndbm.U*:

This variable conditionally defines the `NDBM_H_USES_PROTOTYPES` symbol, which indicates that the *gdbm/ndbm.h* include file uses real ANSI C prototypes instead of K&R style function declarations. K&R style declarations are unsupported in C++, so the include file requires special handling when using a C++ compiler and this variable is undefined. Consult the different `d_*ndbm_h_uses_prototypes` variables to get the same information for alternative *ndbm.h* include files.

`d_getaddrinfo`

From *d\_getaddrinfo.U*:

This variable conditionally defines the `HAS_GETADDRINFO` symbol, which indicates to the C program that the *getaddrinfo()* function is available.

`d_getcwd`

From *d\_getcwd.U*:

This variable conditionally defines the `HAS_GETCWD` symbol, which indicates to the C program that the *getcwd()* routine is available to get the current working directory.

`d_getespwnam`

From *d\_getespwnam.U*:

This variable conditionally defines `HAS_GETESPWNAM` if *getespwnam()* is available to retrieve enhanced (shadow) password entries by name.

`d_getfsstat`

From *d\_getfsstat.U*:

This variable conditionally defines the `HAS_GETFSSTAT` symbol, which indicates to the C program that the *getfsstat()* routine is available.

`d_getgrent`

From *d\_getgrent.U*:

This variable conditionally defines the `HAS_GETGRENT` symbol, which indicates to the C program that the *getgrent()* routine is available for sequential access of the group database.

`d_getgrent_r`

From *d\_getgrent\_r.U*:

This variable conditionally defines the `HAS_GETGRENT_R` symbol, which indicates to the C program that the *getgrent\_r()* routine is available.

`d_getgrgid_r`

From *d\_getgrgid\_r.U*:

This variable conditionally defines the `HAS_GETGRGID_R` symbol, which indicates to the C program that the *getgrgid\_r()* routine is available.

`d_getgrnam_r`

From *d\_getgrnam\_r.U*:

This variable conditionally defines the `HAS_GETGRNAM_R` symbol, which indicates to the C program that the *getgrnam\_r()* routine is available.

#### d\_getgrps

From *d\_getgrps.U*:

This variable conditionally defines the `HAS_GETGROUPS` symbol, which indicates to the C program that the *getgroups()* routine is available to get the list of process groups.

#### d\_gethbyaddr

From *d\_gethbyad.U*:

This variable conditionally defines the `HAS_GETHOSTBYADDR` symbol, which indicates to the C program that the *gethostbyaddr()* routine is available to look up hosts by their IP addresses.

#### d\_gethbyname

From *d\_gethbynm.U*:

This variable conditionally defines the `HAS_GETHOSTBYNAME` symbol, which indicates to the C program that the *gethostbyname()* routine is available to look up host names in some data base or other.

#### d\_gethent

From *d\_gethent.U*:

This variable conditionally defines `HAS_GETHOSTENT` if *gethostent()* is available to look up host names in some data base or another.

#### d\_gethname

From *d\_gethname.U*:

This variable conditionally defines the `HAS_GETHOSTNAME` symbol, which indicates to the C program that the *gethostname()* routine may be used to derive the host name.

#### d\_gethostbyaddr\_r

From *d\_gethostbyaddr\_r.U*:

This variable conditionally defines the `HAS_GETHOSTBYADDR_R` symbol, which indicates to the C program that the *gethostbyaddr\_r()* routine is available.

#### d\_gethostbyname\_r

From *d\_gethostbyname\_r.U*:

This variable conditionally defines the `HAS_GETHOSTBYNAME_R` symbol, which indicates to the C program that the *gethostbyname\_r()* routine is available.

#### d\_gethostent\_r

From *d\_gethostent\_r.U*:

This variable conditionally defines the `HAS_GETHOSTENT_R` symbol, which indicates to the C program that the *gethostent\_r()* routine is available.

#### d\_gethostprotos

From *d\_gethostprotos.U*:

This variable conditionally defines the `HAS_GETHOST_PROTOS` symbol, which indicates to the C program that `<netdb.h>` supplies prototypes for the various *gethost\*()* functions. See also *netdbtype.U* for probing for various `netdb` types.

#### d\_getitimer

From *d\_getitimer.U*:

This variable conditionally defines the `HAS_GETITIMER` symbol, which indicates to the C program that the *getitimer()* routine is available.

#### d\_getlogin

From *d\_getlogin.U*:

This variable conditionally defines the `HAS_GETLOGIN` symbol, which indicates to the C program

that the *getlogin()* routine is available to get the login name.

`d_getlogin_r`

From *d\_getlogin\_r.U*:

This variable conditionally defines the `HAS_GETLOGIN_R` symbol, which indicates to the C program that the *getlogin\_r()* routine is available.

`d_getmnt`

From *d\_getmnt.U*:

This variable conditionally defines the `HAS_GETMNT` symbol, which indicates to the C program that the *getmnt()* routine is available to retrieve one or more mount info blocks by filename.

`d_getmntent`

From *d\_getmntent.U*:

This variable conditionally defines the `HAS_GETMNTENT` symbol, which indicates to the C program that the *getmntent()* routine is available to iterate through mounted files to get their mount info.

`d_getnameinfo`

From *d\_getnameinfo.U*:

This variable conditionally defines the `HAS_GETNAMEINFO` symbol, which indicates to the C program that the *getnameinfo()* function is available.

`d_getnbyaddr`

From *d\_getnbyad.U*:

This variable conditionally defines the `HAS_GETNETBYADDR` symbol, which indicates to the C program that the *getnetbyaddr()* routine is available to look up networks by their IP addresses.

`d_getnbyname`

From *d\_getnbynm.U*:

This variable conditionally defines the `HAS_GETNETBYNAME` symbol, which indicates to the C program that the *getnetbyname()* routine is available to look up networks by their names.

`d_getnetent`

From *d\_getnetent.U*:

This variable conditionally defines `HAS_GETNETENT` if *getnetent()* is available to look up network names in some data base or another.

`d_getnetbyaddr_r`

From *d\_getnetbyaddr\_r.U*:

This variable conditionally defines the `HAS_GETNETBYADDR_R` symbol, which indicates to the C program that the *getnetbyaddr\_r()* routine is available.

`d_getnetbyname_r`

From *d\_getnetbyname\_r.U*:

This variable conditionally defines the `HAS_GETNETBYNAME_R` symbol, which indicates to the C program that the *getnetbyname\_r()* routine is available.

`d_getnetent_r`

From *d\_getnetent\_r.U*:

This variable conditionally defines the `HAS_GETNETENT_R` symbol, which indicates to the C program that the *getnetent\_r()* routine is available.

`d_getnetprotos`

From *d\_getnetprotos.U*:

This variable conditionally defines the `HAS_GETNET_PROTOS` symbol, which indicates to the C program that `<netdb.h>` supplies prototypes for the various *getnet\*()* functions. See also *netdbtype.U*

for probing for various netdb types.

`d_getpagesize`

From *d\_getpagesize.U*:

This variable conditionally defines `HAS_GETPAGESIZE` if *getpagesize()* is available to get the system page size.

`d_getpbyname`

From *d\_getprotby.U*:

This variable conditionally defines the `HAS_GETPROTOBYNAME` symbol, which indicates to the C program that the *getprotbyname()* routine is available to look up protocols by their name.

`d_getpbynumber`

From *d\_getprotby.U*:

This variable conditionally defines the `HAS_GETPROTOBYNUMBER` symbol, which indicates to the C program that the *getprotbynumber()* routine is available to look up protocols by their number.

`d_getpent`

From *d\_getpent.U*:

This variable conditionally defines `HAS_GETPROTOENT` if *getprotoent()* is available to look up protocols in some data base or another.

`d_getpgid`

From *d\_getpgid.U*:

This variable conditionally defines the `HAS_GETPGID` symbol, which indicates to the C program that the *getpgid(pid)* function is available to get the process group id.

`d_getpgrp`

From *d\_getpgrp.U*:

This variable conditionally defines `HAS_GETPGRP` if *getpgrp()* is available to get the current process group.

`d_getpgrp2`

From *d\_getpgrp2.U*:

This variable conditionally defines the `HAS_GETPGRP2` symbol, which indicates to the C program that the *getpgrp2()* (as in *DG/UX*) routine is available to get the current process group.

`d_getppid`

From *d\_getppid.U*:

This variable conditionally defines the `HAS_GETPPID` symbol, which indicates to the C program that the *getppid()* routine is available to get the parent process ID.

`d_getprior`

From *d\_getprior.U*:

This variable conditionally defines `HAS_GETPRIORITY` if *getpriority()* is available to get a process's priority.

`d_getprotbyname_r`

From *d\_getprotbyname\_r.U*:

This variable conditionally defines the `HAS_GETPROTOBYNAME_R` symbol, which indicates to the C program that the *getprotbyname\_r()* routine is available.

`d_getprotbynumber_r`

From *d\_getprotbynumber\_r.U*:

This variable conditionally defines the `HAS_GETPROTOBYNUMBER_R` symbol, which indicates to the C program that the *getprotbynumber\_r()* routine is available.

`d_getprotoent_r`

From *d\_getprotoent\_r.U*:

This variable conditionally defines the `HAS_GETPROTOENT_R` symbol, which indicates to the C program that the *getprotoent\_r()* routine is available.

`d_getprotoproto`

From *d\_getprotoproto.U*:

This variable conditionally defines the `HAS_GETPROTO_PROTOS` symbol, which indicates to the C program that `<netdb.h>` supplies prototypes for the various *getproto\*()* functions. See also *netdbtype.U* for probing for various netdb types.

`d_getprpwnam`

From *d\_getprpwnam.U*:

This variable conditionally defines `HAS_GETPRPWNAM` if *getprpwnam()* is available to retrieve protected (shadow) password entries by name.

`d_getpwent`

From *d\_getpwent.U*:

This variable conditionally defines the `HAS_GETPWENT` symbol, which indicates to the C program that the *getpwent()* routine is available for sequential access of the passwd database.

`d_getpwent_r`

From *d\_getpwent\_r.U*:

This variable conditionally defines the `HAS_GETPWENT_R` symbol, which indicates to the C program that the *getpwent\_r()* routine is available.

`d_getpwnam_r`

From *d\_getpwnam\_r.U*:

This variable conditionally defines the `HAS_GETPWNAM_R` symbol, which indicates to the C program that the *getpwnam\_r()* routine is available.

`d_getpwuid_r`

From *d\_getpwuid\_r.U*:

This variable conditionally defines the `HAS_GETPWUID_R` symbol, which indicates to the C program that the *getpwuid\_r()* routine is available.

`d_getsbyname`

From *d\_getsrvby.U*:

This variable conditionally defines the `HAS_GETSERVBYNAME` symbol, which indicates to the C program that the *getservbyname()* routine is available to look up services by their name.

`d_getsbyport`

From *d\_getsrvby.U*:

This variable conditionally defines the `HAS_GETSERVBYPOR` symbol, which indicates to the C program that the *getservbyport()* routine is available to look up services by their port.

`d_getsent`

From *d\_getsent.U*:

This variable conditionally defines `HAS_GETSERVENT` if *getservent()* is available to look up network services in some data base or another.

`d_getservbyname_r`

From *d\_getservbyname\_r.U*:

This variable conditionally defines the `HAS_GETSERVBYNAME_R` symbol, which indicates to the C program that the *getservbyname\_r()* routine is available.



`d_getservbyport_r`

From *d\_getservbyport\_r.U*:

This variable conditionally defines the `HAS_GETSERVBYPORTR` symbol, which indicates to the C program that the *getservbyport\_r()* routine is available.

`d_getservent_r`

From *d\_getservent\_r.U*:

This variable conditionally defines the `HAS_GETSERVENTR` symbol, which indicates to the C program that the *getservent\_r()* routine is available.

`d_getservprotos`

From *d\_getservprotos.U*:

This variable conditionally defines the `HAS_GETSERV_PROTOS` symbol, which indicates to the C program that `<netdb.h>` supplies prototypes for the various *getserv\*()* functions. See also *netdbtype.U* for probing for various `netdb` types.

`d_getspnam`

From *d\_getspnam.U*:

This variable conditionally defines `HAS_GETSPNAM` if *getspnam()* is available to retrieve SysV shadow password entries by name.

`d_getspnam_r`

From *d\_getspnam\_r.U*:

This variable conditionally defines the `HAS_GETSPNAM_R` symbol, which indicates to the C program that the *getspnam\_r()* routine is available.

`d_gettimeod`

From *d\_ftime.U*:

This variable conditionally defines the `HAS_GETTIMEOFDAY` symbol, which indicates that the *gettimeofday()* system call exists (to obtain a sub-second accuracy clock). You should probably include `<sys/resource.h>`.

`d_gmtime64`

From *d\_timefuncs64.U*:

This variable conditionally defines the `HAS_GMTIME64` symbol, which indicates to the C program that the *gmtime64 ()* routine is available.

`d_gmtime_r`

From *d\_gmtime\_r.U*:

This variable conditionally defines the `HAS_GMTIME_R` symbol, which indicates to the C program that the *gmtime\_r()* routine is available.

`d_gnulibc`

From *d\_gnulibc.U*:

Defined if we're dealing with the GNU C Library.

`d_grpasswd`

From *i\_grp.U*:

This variable conditionally defines `GRPASSWD`, which indicates that struct `group` in `<grp.h>` contains `gr_passwd`.

`d_hasmntopt`

From *d\_hasmntopt.U*:

This variable conditionally defines the `HAS_HASMNTOPT` symbol, which indicates to the C program that the *hasmntopt()* routine is available to query the mount options of file systems.

`d_htonl`

From *d\_htonl.U*:

This variable conditionally defines `HAS_HTONL` if *htonl()* and its friends are available to do network order byte swapping.

`d_ilogbl`

From *d\_ilogbl.U*:

This variable conditionally defines the `HAS_ILOGBL` symbol, which indicates to the C program that the *ilogbl()* routine is available. If *scalbnl* is also present we can emulate *frexpl*.

`d_inc_version_list`

From *inc\_version\_list.U*:

This variable conditionally defines `PERL_INC_VERSION_LIST`. It is set to `undef` when `PERL_INC_VERSION_LIST` is empty.

`d_index`

From *d\_strchr.U*:

This variable conditionally defines `HAS_INDEX` if *index()* and *rindex()* are available for string searching.

`d_inetaton`

From *d\_inetaton.U*:

This variable conditionally defines the `HAS_INET_ATON` symbol, which indicates to the C program that the *inet\_aton()* function is available to parse IP address dotted-quad strings.

`d_inetntop`

From *d\_inetntop.U*:

This variable conditionally defines the `HAS_INETNTOP` symbol, which indicates to the C program that the *inet\_ntop()* function is available.

`d_inetpton`

From *d\_inetpton.U*:

This variable conditionally defines the `HAS_INETPTON` symbol, which indicates to the C program that the *inet\_pton()* function is available.

`d_int64_t`

From *d\_int64\_t.U*:

This symbol will be defined if the C compiler supports `int64_t`.

`d_ip_mreq`

From *d\_socket.U*:

This variable conditionally defines the `HAS_IP_MREQ` symbol, which indicates the availability of a struct `ip_mreq`.

`d_ip_mreq_source`

From *d\_socket.U*:

This variable conditionally defines the `HAS_IP_MREQ_SOURCE` symbol, which indicates the availability of a struct `ip_mreq_source`.

`d_ipv6_mreq`

From *d\_socket.U*:

This variable conditionally defines the `HAS_IPV6_MREQ` symbol, which indicates the availability of a struct `ipv6_mreq`.

`d_ipv6_mreq_source`

From *d\_socket.U*:

This variable conditionally defines the `HAS_IPV6_MREQ_SOURCE` symbol, which indicates the availability of a struct `ipv6_mreq_source`.

`d_isascii`

From *d\_isascii.U*:

This variable conditionally defines the `HAS_ISASCII` constant, which indicates to the C program that *isascii()* is available.

`d_isblank`

From *d\_isblank.U*:

This variable conditionally defines the `HAS_ISBLANK` constant, which indicates to the C program that *isblank()* is available.

`d_isfinite`

From *d\_isfinite.U*:

This variable conditionally defines the `HAS_ISFINITE` symbol, which indicates to the C program that the *isfinite()* routine is available.

`d_isinf`

From *d\_isinf.U*:

This variable conditionally defines the `HAS_ISINF` symbol, which indicates to the C program that the *isinf()* routine is available.

`d_isnan`

From *d\_isnan.U*:

This variable conditionally defines the `HAS_ISNAN` symbol, which indicates to the C program that the *isnan()* routine is available.

`d_isnanl`

From *d\_isnanl.U*:

This variable conditionally defines the `HAS_ISNANL` symbol, which indicates to the C program that the *isnanl()* routine is available.

`d_killpg`

From *d\_killpg.U*:

This variable conditionally defines the `HAS_KILLPG` symbol, which indicates to the C program that the *killpg()* routine is available to kill process groups.

`d_lchown`

From *d\_lchown.U*:

This variable conditionally defines the `HAS_LCHOWN` symbol, which indicates to the C program that the *lchown()* routine is available to operate on a symbolic link (instead of following the link).

`d_ldbl_dig`

From *d\_ldbl\_dig.U*:

This variable conditionally defines `d_ldbl_dig` if this system's header files provide `LDBL_DIG`, which is the number of significant digits in a long double precision number.

`d_libm_lib_version`

From *d\_libm\_lib\_version.U*:

This variable conditionally defines the `LIBM_LIB_VERSION` symbol, which indicates to the C program that *math.h* defines `_LIB_VERSION` being available in `libm`

`d_libname_unique`

From *so.U*:

This variable is defined if the target system insists on unique basenames for shared library files. This is currently true on Android, false everywhere else we know of. Defaults to `undef`.

`d_link`

From *d\_link.U*:

This variable conditionally defines `HAS_LINK` if *link()* is available to create hard links.

`d_localtime64`

From *d\_timefuncs64.U*:

This variable conditionally defines the `HAS_LOCALTIME64` symbol, which indicates to the C program that the `localtime64()` routine is available.

`d_localtime_r`

From *d\_localtime\_r.U*:

This variable conditionally defines the `HAS_LOCALTIME_R` symbol, which indicates to the C program that the *localtime\_r()* routine is available.

`d_localtime_r_needs_tzset`

From *d\_localtime\_r.U*:

This variable conditionally defines the `LOCALTIME_R_NEEDS_TZSET` symbol, which makes us call `tzset` before *localtime\_r()*

`d_loconv`

From *d\_loconv.U*:

This variable conditionally defines `HAS_LOCALECONV` if *localeconv()* is available for numeric and monetary formatting conventions.

`d_lockf`

From *d\_lockf.U*:

This variable conditionally defines `HAS_LOCKF` if *lockf()* is available to do file locking.

`d_longdbl`

From *d\_longdbl.U*:

This variable conditionally defines `HAS_LONG_DOUBLE` if the long double type is supported.

`d_longlong`

From *d\_longlong.U*:

This variable conditionally defines `HAS_LONG_LONG` if the long long type is supported.

`d_lseekproto`

From *d\_lseekproto.U*:

This variable conditionally defines the `HAS_LSEEK_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *lseek()* function. Otherwise, it is up to the program to supply one.

`d_lstat`

From *d\_lstat.U*:

This variable conditionally defines `HAS_LSTAT` if *lstat()* is available to do file stats on symbolic links.

`d_madvise`

From *d\_madvise.U*:

This variable conditionally defines `HAS_MADVISE` if *madvise()* is available to map a file into memory.

`d_malloc_good_size`

From *d\_malloc\_size.U*:

This symbol, if defined, indicates that the `malloc_good_size` routine is available for use.

`d_malloc_size`

From *d\_malloc\_size.U*:

This symbol, if defined, indicates that the `malloc_size` routine is available for use.

`d_mblen`

From *d\_mblen.U*:

This variable conditionally defines the `HAS_MBLLEN` symbol, which indicates to the C program that the `mblen()` routine is available to find the number of bytes in a multibyte character.

`d_mbstowcs`

From *d\_mbstowcs.U*:

This variable conditionally defines the `HAS_MBSTOWCS` symbol, which indicates to the C program that the `mbstowcs()` routine is available to convert a multibyte string into a wide character string.

`d_mbtowc`

From *d\_mbtowc.U*:

This variable conditionally defines the `HAS_MBTOWC` symbol, which indicates to the C program that the `mbtowc()` routine is available to convert multibyte to a wide character.

`d_memchr`

From *d\_memchr.U*:

This variable conditionally defines the `HAS_MEMCHR` symbol, which indicates to the C program that the `memchr()` routine is available to locate characters within a C string.

`d_memcmp`

From *d\_memcmp.U*:

This variable conditionally defines the `HAS_MEMCMP` symbol, which indicates to the C program that the `memcmp()` routine is available to compare blocks of memory.

`d_memcpy`

From *d\_memcpy.U*:

This variable conditionally defines the `HAS_MEMCPY` symbol, which indicates to the C program that the `memcpy()` routine is available to copy blocks of memory.

`d_memmove`

From *d\_memmove.U*:

This variable conditionally defines the `HAS_MEMMOVE` symbol, which indicates to the C program that the `memmove()` routine is available to copy potentially overlapping blocks of memory.

`d_memset`

From *d\_memset.U*:

This variable conditionally defines the `HAS_MEMSET` symbol, which indicates to the C program that the `memset()` routine is available to set blocks of memory.

`d_mkdir`

From *d\_mkdir.U*:

This variable conditionally defines the `HAS_MKDIR` symbol, which indicates to the C program that the `mkdir()` routine is available to create *directories*.

`d_mkdtmp`

From *d\_mkdtmp.U*:

This variable conditionally defines the `HAS_MKDTEMP` symbol, which indicates to the C program that the `mkdtemp()` routine is available to exclusively create a uniquely named temporary directory.

`d_mkfifo`

From `d_mkfifo.U`:

This variable conditionally defines the `HAS_MKFIFO` symbol, which indicates to the C program that the `mkfifo()` routine is available.

`d_mkstemp`

From `d_mkstemp.U`:

This variable conditionally defines the `HAS_MKSTEMP` symbol, which indicates to the C program that the `mkstemp()` routine is available to exclusively create and open a uniquely named temporary file.

`d_mkstemps`

From `d_mkstemps.U`:

This variable conditionally defines the `HAS_MKSTEMPS` symbol, which indicates to the C program that the `mkstemps()` routine is available to exclusively create and open a uniquely named (with a suffix) temporary file.

`d_mktime`

From `d_mktime.U`:

This variable conditionally defines the `HAS_MKTIME` symbol, which indicates to the C program that the `mktime()` routine is available.

`d_mktime64`

From `d_timefuncs64.U`:

This variable conditionally defines the `HAS_MKTIME64` symbol, which indicates to the C program that the `mktime64()` routine is available.

`d_mmap`

From `d_mmap.U`:

This variable conditionally defines `HAS_MMAP` if `mmap()` is available to map a file into memory.

`d_modfl`

From `d_modfl.U`:

This variable conditionally defines the `HAS_MODFL` symbol, which indicates to the C program that the `modfl()` routine is available.

`d_modfl_pow32_bug`

From `d_modfl.U`:

This variable conditionally defines the `HAS_MODFL_POW32_BUG` symbol, which indicates that `modfl()` is broken for long doubles  $\geq \text{pow}(2, 32)$ . For example from 4294967303.150000 one would get 4294967302.000000 and 1.150000. The bug has been seen in certain versions of glibc, release 2.2.2 is known to be okay.

`d_modflproto`

From `d_modfl.U`:

This symbol, if defined, indicates that the system provides a prototype for the `modfl()` function. Otherwise, it is up to the program to supply one. C99 says it should be `long double modfl(long double, long double *)`;

`d_mprotect`

From `d_mprotect.U`:

This variable conditionally defines `HAS_MPROTECT` if `mprotect()` is available to modify the access protection of a memory mapped file.

`d_msg`

From *d\_msg.U*:

This variable conditionally defines the `HAS_MSG` symbol, which indicates that the entire `msg*(2)` library is present.

`d_msg_ctrunc`

From *d\_socket.U*:

This variable conditionally defines the `HAS_MSG_CTRUNC` symbol, which indicates that the `MSG_CTRUNC` is available. `#ifdef` is not enough because it may be an enum, `glibc` has been known to do this.

`d_msg_dontroute`

From *d\_socket.U*:

This variable conditionally defines the `HAS_MSG_DONTROUTE` symbol, which indicates that the `MSG_DONTROUTE` is available. `#ifdef` is not enough because it may be an enum, `glibc` has been known to do this.

`d_msg_oob`

From *d\_socket.U*:

This variable conditionally defines the `HAS_MSG_OOB` symbol, which indicates that the `MSG_OOB` is available. `#ifdef` is not enough because it may be an enum, `glibc` has been known to do this.

`d_msg_peek`

From *d\_socket.U*:

This variable conditionally defines the `HAS_MSG_PEEK` symbol, which indicates that the `MSG_PEEK` is available. `#ifdef` is not enough because it may be an enum, `glibc` has been known to do this.

`d_msg_proxy`

From *d\_socket.U*:

This variable conditionally defines the `HAS_MSG_PROXY` symbol, which indicates that the `MSG_PROXY` is available. `#ifdef` is not enough because it may be an enum, `glibc` has been known to do this.

`d_msgctl`

From *d\_msgctl.U*:

This variable conditionally defines the `HAS_MSGCTL` symbol, which indicates to the C program that the `msgctl()` routine is available.

`d_msgget`

From *d\_msgget.U*:

This variable conditionally defines the `HAS_MSGGET` symbol, which indicates to the C program that the `msgget()` routine is available.

`d_msghdr_s`

From *d\_msghdr\_s.U*:

This variable conditionally defines the `HAS_STRUCT_MSGHDR` symbol, which indicates that the `struct msghdr` is supported.

`d_msgrcv`

From *d\_msgrcv.U*:

This variable conditionally defines the `HAS_MSGRCV` symbol, which indicates to the C program that the `msgrcv()` routine is available.

**d\_msgsnd**

From *d\_msgsnd.U*:

This variable conditionally defines the HAS\_MSGSND symbol, which indicates to the C program that the *msgsnd()* routine is available.

**d\_msync**

From *d\_msync.U*:

This variable conditionally defines HAS\_MSUNMAP if *msync()* is available to synchronize a mapped file.

**d\_munmap**

From *d\_munmap.U*:

This variable conditionally defines HAS\_MUNMAP if *munmap()* is available to unmap a region mapped by *mmap()*.

**d\_mymalloc**

From *mallocsrc.U*:

This variable conditionally defines MYMALLOC in case other parts of the source want to take special action if MYMALLOC is used. This may include different sorts of profiling or error detection.

**d\_ndbm**

From *i\_ndbm.U*:

This variable conditionally defines the HAS\_NDBM symbol, which indicates that both the *ndbm.h* include file and an appropriate ndbm library exist. Consult the different *i\_\*ndbm* variables to find out the actual include location. Sometimes, a system has the header file but not the library. This variable will only be set if the system has both.

**d\_ndbm\_h\_uses\_prototypes**

From *i\_ndbm.U*:

This variable conditionally defines the NDBM\_H\_USES\_PROTOTYPES symbol, which indicates that the *ndbm.h* include file uses real ANSI C prototypes instead of K&R style function declarations. K&R style declarations are unsupported in C++, so the include file requires special handling when using a C++ compiler and this variable is undefined. Consult the different *d\_\*ndbm\_h\_uses\_prototypes* variables to get the same information for alternative *ndbm.h* include files.

**d\_nice**

From *d\_nice.U*:

This variable conditionally defines the HAS\_NICE symbol, which indicates to the C program that the *nice()* routine is available.

**d\_nl\_langinfo**

From *d\_nl\_langinfo.U*:

This variable conditionally defines the HAS\_NL\_LANGINFO symbol, which indicates to the C program that the *nl\_langinfo()* routine is available.

**d\_nv\_preserves\_uv**

From *perlxv.U*:

This variable indicates whether a variable of type *nvtype* can preserve all the bits a variable of type *uvtype*.

**d\_nv\_zero\_is\_allbits\_zero**

From *perlxv.U*:

This variable indicates whether a variable of type *nvtype* stores 0.0 in memory as all bits zero.



`d_off64_t`

From *d\_off64\_t.U*:

This symbol will be defined if the C compiler supports `off64_t`.

`d_old_pthread_create_joinable`

From *d\_pthattrj.U*:

This variable conditionally defines `pthread_create_joinable`. `undef` if *pthread.h* defines `PTHREAD_CREATE_JOINABLE`.

`d_oldpthreads`

From *usethreads.U*:

This variable conditionally defines the `OLD_PTHREADS_API` symbol, and indicates that Perl should be built to use the old draft POSIX threads API. This is only potentially meaningful if `usethreads` is set.

`d_oldsock`

From *d\_socket.U*:

This variable conditionally defines the `OLDSOCKET` symbol, which indicates that the BSD socket interface is based on 4.1c and not 4.2.

`d_open3`

From *d\_open3.U*:

This variable conditionally defines the `HAS_OPEN3` manifest constant, which indicates to the C program that the 3 argument version of the *open(2)* function is available.

`d_pathconf`

From *d\_pathconf.U*:

This variable conditionally defines the `HAS_PATHCONF` symbol, which indicates to the C program that the *pathconf()* routine is available to determine file-system related limits and options associated with a given filename.

`d_pause`

From *d\_pause.U*:

This variable conditionally defines the `HAS_PAUSE` symbol, which indicates to the C program that the *pause()* routine is available to suspend a process until a signal is received.

`d_perl_otherlibdirs`

From *otherlibdirs.U*:

This variable conditionally defines `PERL_OTHERLIBDIRS`, which contains a colon-separated set of paths for the perl binary to include in `@INC`. See also *otherlibdirs*.

`d_phostname`

From *d\_gethname.U*:

This variable conditionally defines the `HAS_PHOSTNAME` symbol, which contains the shell command which, when fed to *popen()*, may be used to derive the host name.

`d_pipe`

From *d\_pipe.U*:

This variable conditionally defines the `HAS_PIPE` symbol, which indicates to the C program that the *pipe()* routine is available to create an inter-process channel.

`d_poll`

From *d\_poll.U*:

This variable conditionally defines the `HAS_POLL` symbol, which indicates to the C program that the *poll()* routine is available to poll active file descriptors.

`d_portable`

From *d\_portable.U*:

This variable conditionally defines the `PORTABLE` symbol, which indicates to the C program that it should not assume that it is running on the machine it was compiled on.

`d_prctl`

From *d\_prctl.U*:

This variable conditionally defines the `HAS_PRCTL` symbol, which indicates to the C program that the *prctl()* routine is available.

`d_prctl_set_name`

From *d\_prctl.U*:

This variable conditionally defines the `HAS_PRCTL_SET_NAME` symbol, which indicates to the C program that the *prctl()* routine supports the `PR_SET_NAME` option.

`d_PRI64`

From *quadfio.U*:

This variable conditionally defines the `PERL_PRI64` symbol, which indicates that `stdio` has a symbol to print 64-bit decimal numbers.

`d_PRIeldbl`

From *longdblfiio.U*:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to print long doubles.

`d_PRIEUldbl`

From *longdblfiio.U*:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to print long doubles. The `U` in the name is to separate this from `d_PRIeldbl` so that even case-blind systems can see the difference.

`d_PRIfldbl`

From *longdblfiio.U*:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to print long doubles.

`d_PRIFULdbl`

From *longdblfiio.U*:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to print long doubles. The `U` in the name is to separate this from `d_PRIfldbl` so that even case-blind systems can see the difference.

`d_PRIgldbl`

From *longdblfiio.U*:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to print long doubles.

`d_PRIGUldbl`

From *longdblfiio.U*:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to print long doubles. The `U` in the name is to separate this from `d_PRIgldbl` so that even case-blind systems can see the difference.

`d_PRIi64`

From *quadfi.U*:

This variable conditionally defines the PERL\_PRIi64 symbol, which indicates that stdio has a symbol to print 64-bit decimal numbers.

`d_printf_format_null`

From *d\_attrib.U*:

This variable conditionally defines PRINTF\_FORMAT\_NULL\_OK, which indicates the C compiler allows printf-like formats to be null.

`d_PRIo64`

From *quadfi.U*:

This variable conditionally defines the PERL\_PRIo64 symbol, which indicates that stdio has a symbol to print 64-bit octal numbers.

`d_PRIu64`

From *quadfi.U*:

This variable conditionally defines the PERL\_PRIu64 symbol, which indicates that stdio has a symbol to print 64-bit unsigned decimal numbers.

`d_PRIx64`

From *quadfi.U*:

This variable conditionally defines the PERL\_PRIx64 symbol, which indicates that stdio has a symbol to print 64-bit hexadecimal numbers.

`d_PRIXU64`

From *quadfi.U*:

This variable conditionally defines the PERL\_PRIXU64 symbol, which indicates that stdio has a symbol to print 64-bit hExADECimAl numbers. The U in the name is to separate this from d\_PRIx64 so that even case-blind systems can see the difference.

`d_procseluxe`

From *d\_procseluxe.U*:

Defined if \$procseluxe is symlink to the absolute pathname of the executing program.

`d_pseudofork`

From *d\_yfork.U*:

This variable conditionally defines the HAS\_PSEUDOFORK symbol, which indicates that an emulation of the fork routine is available.

`d_pthread_atfork`

From *d\_pthread\_atfork.U*:

This variable conditionally defines the HAS\_PTHREAD\_ATFORK symbol, which indicates to the C program that the *pthread\_atfork()* routine is available.

`d_pthread_attr_setscope`

From *d\_pthread\_attr\_ss.U*:

This variable conditionally defines HAS\_PTHREAD\_ATTR\_SETSCOPE if *pthread\_attr\_setscope()* is available to set the contention scope attribute of a thread attribute object.

`d_pthread_yield`

From *d\_pthread\_y.U*:

This variable conditionally defines the HAS\_PTHREAD\_YIELD symbol if the *pthread\_yield* routine is available to yield the execution of the current thread.

`d_pwage`

From *i\_pwd.U*:

This variable conditionally defines `PWAGE`, which indicates that struct `passwd` contains `pw_age`.

`d_pwchange`

From *i\_pwd.U*:

This variable conditionally defines `PWCHANGE`, which indicates that struct `passwd` contains `pw_change`.

`d_pwclass`

From *i\_pwd.U*:

This variable conditionally defines `PWCLASS`, which indicates that struct `passwd` contains `pw_class`.

`d_pwcomment`

From *i\_pwd.U*:

This variable conditionally defines `PWCOMMENT`, which indicates that struct `passwd` contains `pw_comment`.

`d_pwexpire`

From *i\_pwd.U*:

This variable conditionally defines `PWEXPIRE`, which indicates that struct `passwd` contains `pw_expire`.

`d_pwgecos`

From *i\_pwd.U*:

This variable conditionally defines `PWGECOS`, which indicates that struct `passwd` contains `pw_gecos`.

`d_pwpasswd`

From *i\_pwd.U*:

This variable conditionally defines `PWPASSWD`, which indicates that struct `passwd` contains `pw_passwd`.

`d_pwquota`

From *i\_pwd.U*:

This variable conditionally defines `PWQUOTA`, which indicates that struct `passwd` contains `pw_quota`.

`d_qgcvt`

From *d\_qgcvt.U*:

This variable conditionally defines the `HAS_QGCVT` symbol, which indicates to the C program that the `qgcvt()` routine is available.

`d_quad`

From *quadtype.U*:

This variable, if defined, tells that there's a 64-bit integer type, `quadtype`.

`d_random_r`

From *d\_random\_r.U*:

This variable conditionally defines the `HAS_RANDOM_R` symbol, which indicates to the C program that the `random_r()` routine is available.

`d_readdir`

From *d\_readdir.U*:

This variable conditionally defines `HAS_READDIR` if `readdir()` is available to read directory entries.

`d_readdir64_r`

From *d\_readdir64\_r.U*:

This variable conditionally defines the `HAS_READDIR64_R` symbol, which indicates to the C program that the *readdir64\_r()* routine is available.

`d_readdir_r`

From *d\_readdir\_r.U*:

This variable conditionally defines the `HAS_READDIR_R` symbol, which indicates to the C program that the *readdir\_r()* routine is available.

`d_readlink`

From *d\_readlink.U*:

This variable conditionally defines the `HAS_READLINK` symbol, which indicates to the C program that the *readlink()* routine is available to read the value of a symbolic link.

`d_readv`

From *d\_readv.U*:

This variable conditionally defines the `HAS_READV` symbol, which indicates to the C program that the *readv()* routine is available.

`d_recvmsg`

From *d\_recvmsg.U*:

This variable conditionally defines the `HAS_RECVMSG` symbol, which indicates to the C program that the *recvmsg()* routine is available.

`d_rename`

From *d\_rename.U*:

This variable conditionally defines the `HAS_RENAME` symbol, which indicates to the C program that the *rename()* routine is available to rename files.

`d_rewinddir`

From *d\_rewinddir.U*:

This variable conditionally defines `HAS_REWINDDIR` if *rewinddir()* is available.

`d_rmdir`

From *d\_rmdir.U*:

This variable conditionally defines `HAS_RMDIR` if *rmdir()* is available to remove directories.

`d_safebcopy`

From *d\_safebcopy.U*:

This variable conditionally defines the `HAS_SAFE_BCOPY` symbol if the *bcopy()* routine can do overlapping copies. Normally, you should probably use *memmove()*.

`d_safemcpy`

From *d\_safemcpy.U*:

This variable conditionally defines the `HAS_SAFE_MEMCPY` symbol if the *memcpy()* routine can do overlapping copies. For overlapping copies, *memmove()* should be used, if available.

`d_sanemcmp`

From *d\_sanemcmp.U*:

This variable conditionally defines the `HAS_SANE_MEMCMP` symbol if the *memcpy()* routine is available and can be used to compare relative magnitudes of chars with their high bits set.

`d_sbrkproto`

From *d\_sbrkproto.U*:

This variable conditionally defines the `HAS_SBRK_PROTO` symbol, which indicates to the C program that the system provides a prototype for the `sbrk()` function. Otherwise, it is up to the program to supply one.

#### `d_scalbnl`

From `d_scalbnl.U`:

This variable conditionally defines the `HAS_SCALBNL` symbol, which indicates to the C program that the `scalbnl()` routine is available. If `ilogbl` is also present we can emulate `frexpl`.

#### `d_sched_yield`

From `d_pthread_y.U`:

This variable conditionally defines the `HAS_SCHED_YIELD` symbol if the `sched_yield` routine is available to yield the execution of the current thread.

#### `d_scm_rights`

From `d_socket.U`:

This variable conditionally defines the `HAS_SCM_RIGHTS` symbol, which indicates that the `SCM_RIGHTS` is available. `#ifdef` is not enough because it may be an enum, glibc has been known to do this.

#### `d_SCNfldbl`

From `longdblfl.U`:

This variable conditionally defines the `PERL_PRIfldbl` symbol, which indicates that `stdio` has a symbol to scan long doubles.

#### `d_seekdir`

From `d_readdir.U`:

This variable conditionally defines `HAS_SEEKDIR` if `seekdir()` is available.

#### `d_select`

From `d_select.U`:

This variable conditionally defines `HAS_SELECT` if `select()` is available to select active file descriptors. A `<sys/time.h>` inclusion may be necessary for the timeout field.

#### `d_sem`

From `d_sem.U`:

This variable conditionally defines the `HAS_SEM` symbol, which indicates that the entire `sem*(2)` library is present.

#### `d_semctl`

From `d_semctl.U`:

This variable conditionally defines the `HAS_SEMCTL` symbol, which indicates to the C program that the `semctl()` routine is available.

#### `d_semctl_semid_ds`

From `d_union_semun.U`:

This variable conditionally defines `USE_SEMCTL_SEMID_DS`, which indicates that `struct semid_ds *` is to be used for `semctl IPC_STAT`.

#### `d_semctl_semun`

From `d_union_semun.U`:

This variable conditionally defines `USE_SEMCTL_SEMUN`, which indicates that `union semun` is to be used for `semctl IPC_STAT`.

`d_semget`

From *d\_semget.U*:

This variable conditionally defines the `HAS_SEMGET` symbol, which indicates to the C program that the *semget()* routine is available.

`d_semop`

From *d\_semop.U*:

This variable conditionally defines the `HAS_SEMOP` symbol, which indicates to the C program that the *semop()* routine is available.

`d_sendmsg`

From *d\_sendmsg.U*:

This variable conditionally defines the `HAS_SENDMSG` symbol, which indicates to the C program that the *sendmsg()* routine is available.

`d_setegid`

From *d\_setegid.U*:

This variable conditionally defines the `HAS_SETEGID` symbol, which indicates to the C program that the *setegid()* routine is available to change the effective gid of the current program.

`d_seteuid`

From *d\_seteuid.U*:

This variable conditionally defines the `HAS_SETEUID` symbol, which indicates to the C program that the *seteuid()* routine is available to change the effective uid of the current program.

`d_setgrent`

From *d\_setgrent.U*:

This variable conditionally defines the `HAS_SETGRENT` symbol, which indicates to the C program that the *setgrent()* routine is available for initializing sequential access to the group database.

`d_setgrent_r`

From *d\_setgrent\_r.U*:

This variable conditionally defines the `HAS_SETGRENT_R` symbol, which indicates to the C program that the *setgrent\_r()* routine is available.

`d_setgrps`

From *d\_setgrps.U*:

This variable conditionally defines the `HAS_SETGROUPS` symbol, which indicates to the C program that the *setgroups()* routine is available to set the list of process groups.

`d_sethent`

From *d\_sethent.U*:

This variable conditionally defines `HAS_SETHOSTENT` if *sethostent()* is available.

`d_sethostent_r`

From *d\_sethostent\_r.U*:

This variable conditionally defines the `HAS_SETHOSTENT_R` symbol, which indicates to the C program that the *sethostent\_r()* routine is available.

`d_setitimer`

From *d\_setitimer.U*:

This variable conditionally defines the `HAS_SETITIMER` symbol, which indicates to the C program that the *setitimer()* routine is available.

`d_setlinebuf`

From *d\_setlnbuf.U*:

This variable conditionally defines the `HAS_SETLINEBUF` symbol, which indicates to the C program that the *setlinebuf()* routine is available to change stderr or stdout from block-buffered or unbuffered to a line-buffered mode.

`d_setlocale`

From *d\_setlocale.U*:

This variable conditionally defines `HAS_SETLOCALE` if *setlocale()* is available to handle locale-specific ctype implementations.

`d_setlocale_r`

From *d\_setlocale\_r.U*:

This variable conditionally defines the `HAS_SETLOCALE_R` symbol, which indicates to the C program that the *setlocale\_r()* routine is available.

`d_setnetent`

From *d\_setnetent.U*:

This variable conditionally defines `HAS_SETNETENT` if *setnetent()* is available.

`d_setnetent_r`

From *d\_setnetent\_r.U*:

This variable conditionally defines the `HAS_SETNETENT_R` symbol, which indicates to the C program that the *setnetent\_r()* routine is available.

`d_setpent`

From *d\_setpent.U*:

This variable conditionally defines `HAS_SETPROTOENT` if *setprotoent()* is available.

`d_setpgid`

From *d\_setpgid.U*:

This variable conditionally defines the `HAS_SETPGID` symbol if the *setpgid(pid, gpid)* function is available to set process group ID.

`d_setpgrp`

From *d\_setpgrp.U*:

This variable conditionally defines `HAS_SETPGRP` if *setpgrp()* is available to set the current process group.

`d_setpgrp2`

From *d\_setpgrp2.U*:

This variable conditionally defines the `HAS_SETPGRP2` symbol, which indicates to the C program that the *setpgrp2()* (as in *DG/UX*) routine is available to set the current process group.

`d_setprior`

From *d\_setprior.U*:

This variable conditionally defines `HAS_SETPRIORITY` if *setpriority()* is available to set a process's priority.

`d_setproctitle`

From *d\_setproctitle.U*:

This variable conditionally defines the `HAS_SETPROCTITLE` symbol, which indicates to the C program that the *setproctitle()* routine is available.



`d_setprotoent_r`

From *d\_setprotoent\_r.U*:

This variable conditionally defines the `HAS_SETPROTOENT_R` symbol, which indicates to the C program that the *setprotoent\_r()* routine is available.

`d_setpwent`

From *d\_setpwent.U*:

This variable conditionally defines the `HAS_SETPWENT` symbol, which indicates to the C program that the *setpwent()* routine is available for initializing sequential access to the passwd database.

`d_setpwent_r`

From *d\_setpwent\_r.U*:

This variable conditionally defines the `HAS_SETPWENT_R` symbol, which indicates to the C program that the *setpwent\_r()* routine is available.

`d_setregid`

From *d\_setregid.U*:

This variable conditionally defines `HAS_SETREGID` if *setregid()* is available to change the real and effective gid of the current process.

`d_setresgid`

From *d\_setregid.U*:

This variable conditionally defines `HAS_SETRESGID` if *setresgid()* is available to change the real, effective and saved gid of the current process.

`d_setresuid`

From *d\_setresuid.U*:

This variable conditionally defines `HAS_SETRESUID` if *setresuid()* is available to change the real, effective and saved uid of the current process.

`d_setreuid`

From *d\_setreuid.U*:

This variable conditionally defines `HAS_SETREUID` if *setreuid()* is available to change the real and effective uid of the current process.

`d_setrgid`

From *d\_setrgid.U*:

This variable conditionally defines the `HAS_SETRGID` symbol, which indicates to the C program that the *setrgid()* routine is available to change the real gid of the current program.

`d_setruid`

From *d\_setruid.U*:

This variable conditionally defines the `HAS_SETRUID` symbol, which indicates to the C program that the *setruid()* routine is available to change the real uid of the current program.

`d_setsent`

From *d\_setsent.U*:

This variable conditionally defines `HAS_SETSERVENT` if *setservent()* is available.

`d_setservent_r`

From *d\_setservent\_r.U*:

This variable conditionally defines the `HAS_SETSERVENT_R` symbol, which indicates to the C program that the *setservent\_r()* routine is available.

**d\_setsid**

From *d\_setsid.U*:

This variable conditionally defines `HAS_SETSID` if *setsid()* is available to set the process group ID.

**d\_setvbuf**

From *d\_setvbuf.U*:

This variable conditionally defines the `HAS_SETVBUF` symbol, which indicates to the C program that the *setvbuf()* routine is available to change buffering on an open `stdio` stream.

**d\_shm**

From *d\_shm.U*:

This variable conditionally defines the `HAS_SHM` symbol, which indicates that the entire `shm*(2)` library is present.

**d\_shmat**

From *d\_shmat.U*:

This variable conditionally defines the `HAS_SHMAT` symbol, which indicates to the C program that the *shmat()* routine is available.

**d\_shmatprototype**

From *d\_shmat.U*:

This variable conditionally defines the `HAS_SHMAT_PROTOTYPE` symbol, which indicates that *sys/shm.h* has a prototype for *shmat*.

**d\_shmctl**

From *d\_shmctl.U*:

This variable conditionally defines the `HAS_SHMCTL` symbol, which indicates to the C program that the *shmctl()* routine is available.

**d\_shmdt**

From *d\_shmdt.U*:

This variable conditionally defines the `HAS_SHMDT` symbol, which indicates to the C program that the *shmdt()* routine is available.

**d\_shmget**

From *d\_shmget.U*:

This variable conditionally defines the `HAS_SHMGET` symbol, which indicates to the C program that the *shmget()* routine is available.

**d\_sigaction**

From *d\_sigaction.U*:

This variable conditionally defines the `HAS_SIGACTION` symbol, which indicates that the `Vr4` *sigaction()* routine is available.

**d\_signbit**

From *d\_signbit.U*:

This variable conditionally defines the `HAS_SIGNBIT` symbol, which indicates to the C program that the *signbit()* routine is available and safe to use with perl's intern `NV` type.

**d\_sigprocmask**

From *d\_sigprocmask.U*:

This variable conditionally defines `HAS_SIGPROCMAK` if *sigprocmask()* is available to examine or change the signal mask of the calling process.

**d\_sigsetjmp**

From *d\_sigsetjmp.U*:

This variable conditionally defines the `HAS_SIGSETJMP` symbol, which indicates that the *sigsetjmp()* routine is available to call *setjmp()* and optionally save the process's signal mask.

**d\_sin6\_scope\_id**

From *d\_socket.U*:

This variable conditionally defines the `HAS_SIN6_SCOPE_ID` symbol, which indicates that a struct `sockaddr_in6` structure has the `sin6_scope_id` member.

**d\_sitearch**

From *sitearch.U*:

This variable conditionally defines `SITEARCH` to hold the pathname of architecture-dependent library files for `$package`. If `$sitearch` is the same as `$archlib`, then this is set to `undef`.

**d\_snprintf**

From *d\_snprintf.U*:

This variable conditionally defines the `HAS_SNPRINTF` symbol, which indicates to the C program that the `snprintf()` library function is available.

**d\_sockaddr\_in6**

From *d\_socket.U*:

This variable conditionally defines the `HAS_SOCKADDR_IN6` symbol, which indicates the availability of a struct `sockaddr_in6`.

**d\_sockaddr\_sa\_len**

From *d\_socket.U*:

This variable conditionally defines the `HAS_SOCKADDR_SA_LEN` symbol, which indicates that a struct `sockaddr` structure has the `sa_len` member.

**d\_sockatmark**

From *d\_sockatmark.U*:

This variable conditionally defines the `HAS_SOCKATMARK` symbol, which indicates to the C program that the *socketatmark()* routine is available.

**d\_sockatmarkproto**

From *d\_sockatmarkproto.U*:

This variable conditionally defines the `HAS_SOCKATMARK_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *socketatmark()* function. Otherwise, it is up to the program to supply one.

**d\_socket**

From *d\_socket.U*:

This variable conditionally defines `HAS_SOCKET`, which indicates that the BSD socket interface is supported.

**d\_socklen\_t**

From *d\_socklen\_t.U*:

This symbol will be defined if the C compiler supports `socklen_t`.

**d\_socketpair**

From *d\_socket.U*:

This variable conditionally defines the `HAS_SOCKETPAIR` symbol, which indicates that the BSD *socketpair()* is supported.

`d_socks5_init`

From *d\_socks5\_init.U*:

This variable conditionally defines the `HAS_SOCKS5_INIT` symbol, which indicates to the C program that the *socks5\_init()* routine is available.

`d_sprintf_returns_strlen`

From *d\_sprintf\_len.U*:

This variable defines whether `sprintf` returns the length of the string (as per the ANSI spec). Some C libraries retain compatibility with pre-ANSI C and return a pointer to the passed in buffer; for these this variable will be `undef`.

`d_sqrtl`

From *d\_sqrtl.U*:

This variable conditionally defines the `HAS_SQRTL` symbol, which indicates to the C program that the *sqrtl()* routine is available.

`d_srand48_r`

From *d\_srand48\_r.U*:

This variable conditionally defines the `HAS_SRAND48_R` symbol, which indicates to the C program that the *srand48\_r()* routine is available.

`d_srandom_r`

From *d\_srandom\_r.U*:

This variable conditionally defines the `HAS_SRANDOM_R` symbol, which indicates to the C program that the *srandom\_r()* routine is available.

`d_sresgproto`

From *d\_sresgproto.U*:

This variable conditionally defines the `HAS_SETRESGID_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *setresgid()* function. Otherwise, it is up to the program to supply one.

`d_sresuproto`

From *d\_sresuproto.U*:

This variable conditionally defines the `HAS_SETRESUID_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *setresuid()* function. Otherwise, it is up to the program to supply one.

`d_statblks`

From *d\_statblks.U*:

This variable conditionally defines `USE_STAT_BLOCKS` if this system has a `stat` structure declaring `st_blksize` and `st_blocks`.

`d_statfs_f_flags`

From *d\_statfs\_f\_flags.U*:

This variable conditionally defines the `HAS_STRUCT_STATFS_F_FLAGS` symbol, which indicates to `struct statfs` from has `f_flags` member. This kind of `struct statfs` is coming from *sys/mount.h* (BSD), not from *sys/statfs.h* (SYSV).

`d_statfs_s`

From *d\_statfs\_s.U*:

This variable conditionally defines the `HAS_STRUCT_STATFS` symbol, which indicates that the `struct statfs` is supported.

`d_static_inline`

From *d\_static\_inline.U*:

This variable conditionally defines the `HAS_STATIC_INLINE` symbol, which indicates that the C compiler supports C99-style static inline. That is, the function can't be called from another translation unit.

`d_statvfs`

From *d\_statvfs.U*:

This variable conditionally defines the `HAS_STATVFS` symbol, which indicates to the C program that the *statvfs()* routine is available.

`d_stdio_cnt_lval`

From *d\_stdstdio.U*:

This variable conditionally defines `STDIO_CNT_LVALUE` if the `FILE_cnt` macro can be used as an lvalue.

`d_stdio_ptr_lval`

From *d\_stdstdio.U*:

This variable conditionally defines `STDIO_PTR_LVALUE` if the `FILE_ptr` macro can be used as an lvalue.

`d_stdio_ptr_lval_nochange_cnt`

From *d\_stdstdio.U*:

This symbol is defined if using the `FILE_ptr` macro as an lvalue to increase the pointer by *n* leaves `File_cnt(fp)` unchanged.

`d_stdio_ptr_lval_sets_cnt`

From *d\_stdstdio.U*:

This symbol is defined if using the `FILE_ptr` macro as an lvalue to increase the pointer by *n* has the side effect of decreasing the value of `File_cnt(fp)` by *n*.

`d_stdio_stream_array`

From *stdio\_streams.U*:

This variable tells whether there is an array holding the stdio streams.

`d_stdiobase`

From *d\_stdstdio.U*:

This variable conditionally defines `USE_STDIO_BASE` if this system has a `FILE` structure declaring a usable `_base` field (or equivalent) in *stdio.h*.

`d_stdstdio`

From *d\_stdstdio.U*:

This variable conditionally defines `USE_STDIO_PTR` if this system has a `FILE` structure declaring usable `_ptr` and `_cnt` fields (or equivalent) in *stdio.h*.

`d_strchr`

From *d\_strchr.U*:

This variable conditionally defines `HAS_STRCHR` if *strchr()* and *strrchr()* are available for string searching.

`d_strcoll`

From *d\_strcoll.U*:

This variable conditionally defines `HAS_STRCOLL` if *strcoll()* is available to compare strings using collating information.

`d_structcopy`

From *d\_structcopy.U*:

This variable conditionally defines the `USE_STRUCT_COPY` symbol, which indicates to the C program that this C compiler knows how to copy structures.

`d_strerror`

From *d\_strerror.U*:

This variable holds what `Strerror` is defined as to translate an error code condition into an error message string. It could be `strerror` or a more complex macro emulating `strerror` with `sys_errlist[]`, or the unknown string when both `strerror` and `sys_errlist` are missing.

`d_strerror`

From *d\_strerror.U*:

This variable conditionally defines `HAS_STRERROR` if `strerror()` is available to translate error numbers to strings.

`d_strerror_r`

From *d\_strerror\_r.U*:

This variable conditionally defines the `HAS_STRERROR_R` symbol, which indicates to the C program that the `strerror_r()` routine is available.

`d_strftime`

From *d\_strftime.U*:

This variable conditionally defines the `HAS_STRFTIME` symbol, which indicates to the C program that the `strftime()` routine is available.

`d_strlcat`

From *d\_strlcat.U*:

This variable conditionally defines the `HAS_STRLCAT` symbol, which indicates to the C program that the `strlcat()` routine is available.

`d_strlcpy`

From *d\_strlcpy.U*:

This variable conditionally defines the `HAS_STRLCPY` symbol, which indicates to the C program that the `strlcpy()` routine is available.

`d_strtod`

From *d\_strtod.U*:

This variable conditionally defines the `HAS_STRTOD` symbol, which indicates to the C program that the `strtod()` routine is available to provide better numeric string conversion than `atof()`.

`d_strtol`

From *d\_strtol.U*:

This variable conditionally defines the `HAS_STRTOL` symbol, which indicates to the C program that the `strtol()` routine is available to provide better numeric string conversion than `atoi()` and friends.

`d_strtold`

From *d\_strtold.U*:

This variable conditionally defines the `HAS_STRTOLD` symbol, which indicates to the C program that the `strtold()` routine is available.

`d_strtoll`

From *d\_strtoll.U*:

This variable conditionally defines the `HAS_STRTOLL` symbol, which indicates to the C program that the `strtoll()` routine is available.

**d\_strtoq**

From *d\_strtoq.U*:

This variable conditionally defines the HAS\_STRTOQ symbol, which indicates to the C program that the *strtoq()* routine is available.

**d\_strtoul**

From *d\_strtoul.U*:

This variable conditionally defines the HAS\_STRTOUL symbol, which indicates to the C program that the *strtoul()* routine is available to provide conversion of strings to unsigned long.

**d\_strtoull**

From *d\_strtoull.U*:

This variable conditionally defines the HAS\_STRTOULL symbol, which indicates to the C program that the *strtoull()* routine is available.

**d\_strtouq**

From *d\_strtouq.U*:

This variable conditionally defines the HAS\_STRTOUQ symbol, which indicates to the C program that the *strtouq()* routine is available.

**d\_strxfrm**

From *d\_strxfrm.U*:

This variable conditionally defines HAS\_STRXFRM if *strxfrm()* is available to transform strings.

**d\_suidsafe**

From *d\_dosuid.U*:

This variable conditionally defines SETUID\_SCRIPTS\_ARE\_SECURE\_NOW if setuid scripts can be secure. This test looks in */dev/fd/*.

**d\_symlink**

From *d\_symlink.U*:

This variable conditionally defines the HAS\_SYMLINK symbol, which indicates to the C program that the *symlink()* routine is available to create symbolic links.

**d\_syscall**

From *d\_syscall.U*:

This variable conditionally defines HAS\_SYSCALL if *syscall()* is available call arbitrary system calls.

**d\_syscallproto**

From *d\_syscallproto.U*:

This variable conditionally defines the HAS\_SYSCALL\_PROTO symbol, which indicates to the C program that the system provides a prototype for the *syscall()* function. Otherwise, it is up to the program to supply one.

**d\_sysconf**

From *d\_sysconf.U*:

This variable conditionally defines the HAS\_SYSCONF symbol, which indicates to the C program that the *sysconf()* routine is available to determine system related limits and options.

**d\_syserrnlst**

From *d\_strerror.U*:

This variable conditionally defines HAS\_SYS\_ERRNOLIST if *sys\_errnolist[]* is available to translate error numbers to the symbolic name.

`d_syserrlst`

From *d\_strerror.U*:

This variable conditionally defines `HAS_SYS_ERRLIST` if `sys_errlist[]` is available to translate error numbers to strings.

`d_system`

From *d\_system.U*:

This variable conditionally defines `HAS_SYSTEM` if `system()` is available to issue a shell command.

`d_tcgetpgrp`

From *d\_tcgrp.U*:

This variable conditionally defines the `HAS_TCGETPGRP` symbol, which indicates to the C program that the `tcgetpgrp()` routine is available. to get foreground process group ID.

`d_tcsetpgrp`

From *d\_tcgrp.U*:

This variable conditionally defines the `HAS_TCSETPGRP` symbol, which indicates to the C program that the `tcsetpgrp()` routine is available to set foreground process group ID.

`d_telldir`

From *d\_readdir.U*:

This variable conditionally defines `HAS_TELLDIR` if `telldir()` is available.

`d_telldirproto`

From *d\_telldirproto.U*:

This variable conditionally defines the `HAS_TELLDIR_PROTO` symbol, which indicates to the C program that the system provides a prototype for the `telldir()` function. Otherwise, it is up to the program to supply one.

`d_time`

From *d\_time.U*:

This variable conditionally defines the `HAS_TIME` symbol, which indicates that the `time()` routine exists. The `time()` routine is normally provided on UNIX systems.

`d_timegm`

From *d\_timegm.U*:

This variable conditionally defines the `HAS_TIMEGM` symbol, which indicates to the C program that the `timegm()` routine is available.

`d_times`

From *d\_times.U*:

This variable conditionally defines the `HAS_TIMES` symbol, which indicates that the `times()` routine exists. The `times()` routine is normally provided on UNIX systems. You may have to include `<sys/times.h>`.

`d_tm_tm_gmtoff`

From *i\_time.U*:

This variable conditionally defines `HAS_TM_TM_GMTOFF`, which indicates indicates to the C program that the struct `tm` has the `tm_gmtoff` field.

`d_tm_tm_zone`

From *i\_time.U*:

This variable conditionally defines `HAS_TM_TM_ZONE`, which indicates indicates to the C program that the struct `tm` has the `tm_zone` field.



`d_tmpnam_r`

From *d\_tmpnam\_r.U*:

This variable conditionally defines the `HAS_TMPNAM_R` symbol, which indicates to the C program that the *tmpnam\_r()* routine is available.

`d_truncate`

From *d\_truncate.U*:

This variable conditionally defines `HAS_TRUNCATE` if *truncate()* is available to truncate files.

`d_ttyname_r`

From *d\_ttyname\_r.U*:

This variable conditionally defines the `HAS_TTYNAME_R` symbol, which indicates to the C program that the *ttyname\_r()* routine is available.

`d_tzname`

From *d\_tzname.U*:

This variable conditionally defines `HAS_TZNAME` if `tzname[]` is available to access timezone names.

`d_u32align`

From *d\_u32align.U*:

This variable tells whether you must access character data through U32-aligned pointers.

`d_ualarm`

From *d\_ualarm.U*:

This variable conditionally defines the `HAS_UALARM` symbol, which indicates to the C program that the *ualarm()* routine is available.

`d_umask`

From *d\_umask.U*:

This variable conditionally defines the `HAS_UMASK` symbol, which indicates to the C program that the *umask()* routine is available. to set and get the value of the file creation mask.

`d_uname`

From *d\_gethname.U*:

This variable conditionally defines the `HAS_UNAME` symbol, which indicates to the C program that the *uname()* routine may be used to derive the host name.

`d_union_semun`

From *d\_union\_semun.U*:

This variable conditionally defines `HAS_UNION_SEMUN` if the union `semun` is defined by including `<sys/sem.h>`.

`d_unordered`

From *d\_unordered.U*:

This variable conditionally defines the `HAS_UNORDERED` symbol, which indicates to the C program that the *unordered()* routine is available.

`d_unsetenv`

From *d\_unsetenv.U*:

This variable conditionally defines the `HAS_UNSETENV` symbol, which indicates to the C program that the `unsetenv ()` routine is available.

`d_usleep`

From *d\_usleep.U*:

This variable conditionally defines `HAS_USLEEP` if *usleep()* is available to do high granularity sleeps.

`d_usleepproto`

From *d\_usleepproto.U*:

This variable conditionally defines the `HAS_USLEEP_PROTO` symbol, which indicates to the C program that the system provides a prototype for the *usleep()* function. Otherwise, it is up to the program to supply one.

`d_ustat`

From *d\_ustat.U*:

This variable conditionally defines `HAS_USTAT` if *ustat()* is available to query file system statistics by `dev_t`.

`d_vendorarch`

From *vendorarch.U*:

This variable conditionally defined `PERL_VENDORARCH`.

`d_vendorbin`

From *vendorbin.U*:

This variable conditionally defines `PERL_VENDORBIN`.

`d_vendorlib`

From *vendorlib.U*:

This variable conditionally defines `PERL_VENDORLIB`.

`d_vendorscript`

From *vendorscript.U*:

This variable conditionally defines `PERL_VENDORSRIPT`.

`d_vfork`

From *d\_vfork.U*:

This variable conditionally defines the `HAS_VFORK` symbol, which indicates the *vfork()* routine is available.

`d_void_closedir`

From *d\_closedir.U*:

This variable conditionally defines `VOID_CLOSEDIR` if *closedir()* does not return a value.

`d_voidsig`

From *d\_voidsig.U*:

This variable conditionally defines `VOIDSIG` if this system declares “`void (*signal(...))()`” in *signal.h*. The old way was to declare it as “`int (*signal(...))()`”.

`d_voidtty`

From *i\_sysioctl.U*:

This variable conditionally defines `USE_IOCTLNOTTY` to indicate that the *ioctl()* call with `TIOCNOTTY` should be used to void tty association. Otherwise (on `USG` probably), it is enough to close the standard file descriptors and do a *setpgrp()*.

`d_volatile`

From *d\_volatile.U*:

This variable conditionally defines the `HASVOLATILE` symbol, which indicates to the C program that this C compiler knows about the volatile declaration.

`d_vprintf`

From *d\_vprintf.U*:

This variable conditionally defines the `HAS_VPRINTF` symbol, which indicates to the C program that

the *vprintf()* routine is available to *printf* with a pointer to an argument list.

`d_vsnprintf`

From *d\_snprintf.U*:

This variable conditionally defines the `HAS_VSNPRINTF` symbol, which indicates to the C program that the `vsnprintf()` library function is available.

`d_wait4`

From *d\_wait4.U*:

This variable conditionally defines the `HAS_WAIT4` symbol, which indicates the `wait4()` routine is available.

`d_waitpid`

From *d\_waitpid.U*:

This variable conditionally defines `HAS_WAITPID` if `waitpid()` is available to wait for child process.

`d_wcstombs`

From *d\_wcstombs.U*:

This variable conditionally defines the `HAS_WCSTOMBS` symbol, which indicates to the C program that the `wcstombs()` routine is available to convert wide character strings to multibyte strings.

`d_wctomb`

From *d\_wctomb.U*:

This variable conditionally defines the `HAS_WCTOMB` symbol, which indicates to the C program that the `wctomb()` routine is available to convert a wide character to a multibyte.

`d_writev`

From *d\_writev.U*:

This variable conditionally defines the `HAS_WRITEV` symbol, which indicates to the C program that the `writev()` routine is available.

`d_xenix`

From *Guess.U*:

This variable conditionally defines the symbol `XENIX`, which alerts the C program that it runs under Xenix.

`date`

From *Loc.U*:

This variable is used internally by `Configure` to determine the full pathname (if any) of the `date` program. After `Configure` runs, the value is reset to a plain `date` and is not useful.

`db_hashtype`

From *i\_db.U*:

This variable contains the type of the hash structure element in the `<db.h>` header file. In older versions of `DB`, it was `int`, while in newer ones it is `u_int32_t`.

`db_prefixtype`

From *i\_db.U*:

This variable contains the type of the prefix structure element in the `<db.h>` header file. In older versions of `DB`, it was `int`, while in newer ones it is `size_t`.

`db_version_major`

From *i\_db.U*:

This variable contains the major version number of Berkeley `DB` found in the `<db.h>` header file.

`db_version_minor`

From *i\_db.U*:

This variable contains the minor version number of Berkeley DB found in the `<db.h>` header file. For DB version 1 this is always 0.

`db_version_patch`

From *i\_db.U*:

This variable contains the patch version number of Berkeley DB found in the `<db.h>` header file. For DB version 1 this is always 0.

`direntrytype`

From *i\_dirent.U*:

This symbol is set to `struct direct` or `struct dirent` depending on whether `dirent` is available or not. You should use this pseudo type to portably declare your directory entries.

`dlex`

From *dlex.U*:

This variable contains the extension that is to be used for the dynamically loaded modules that perl generates.

`dlsrc`

From *dlsrc.U*:

This variable contains the name of the dynamic loading file that will be used with the package.

`doublesize`

From *doublesize.U*:

This variable contains the value of the `DOUBLESIZE` symbol, which indicates to the C program how many bytes there are in a double.

`drand01`

From *randfunc.U*:

Indicates the macro to be used to generate normalized random numbers. Uses `randfunc`, often divided by `(double) (((unsigned long) 1 << randbits))` in order to normalize the result. In C programs, the macro `Drand01` is mapped to `drand01`.

`drand48_r_proto`

From *d\_drand48\_r.U*:

This variable encodes the prototype of `drand48_r`. It is zero if `d_drand48_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_drand48_r` is defined.

`dtrace`

From *usedtrace.U*:

This variable holds the location of the `dtrace` executable.

`dynamic_ext`

From *Extensions.U*:

This variable holds a list of XS extension files we want to link dynamically into the package. It is used by Makefile.

**e**`eagain`

From *nblock\_io.U*:

This variable bears the symbolic `errno` code set by `read()` when no data is present on the file and non-blocking I/O was enabled (otherwise, `read()` blocks naturally).

**ebcdic**

From *ebcdic.U*:

This variable conditionally defines EBCDIC if this system uses EBCDIC encoding.

**echo**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the echo program. After Configure runs, the value is reset to a plain `echo` and is not useful.

**egrep**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the egrep program. After Configure runs, the value is reset to a plain `egrep` and is not useful.

**emacs**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**endgrent\_r\_proto**

From *d\_endgrent\_r.U*:

This variable encodes the prototype of `endgrent_r`. It is zero if `d_endgrent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_endgrent_r` is defined.

**endhostent\_r\_proto**

From *d\_endhostent\_r.U*:

This variable encodes the prototype of `endhostent_r`. It is zero if `d_endhostent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_endhostent_r` is defined.

**endnetent\_r\_proto**

From *d\_endnetent\_r.U*:

This variable encodes the prototype of `endnetent_r`. It is zero if `d_endnetent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_endnetent_r` is defined.

**endprotoent\_r\_proto**

From *d\_endprotoent\_r.U*:

This variable encodes the prototype of `endprotoent_r`. It is zero if `d_endprotoent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_endprotoent_r` is defined.

**endpwent\_r\_proto**

From *d\_endpwent\_r.U*:

This variable encodes the prototype of `endpwent_r`. It is zero if `d_endpwent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_endpwent_r` is defined.

**endservent\_r\_proto**

From *d\_endservent\_r.U*:

This variable encodes the prototype of `endservent_r`. It is zero if `d_endservent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_endservent_r` is defined.

**eunicefix**

From *Init.U*:

When running under Eunice this variable contains a command which will convert a shell script to the proper form of text file for it to be executable by the shell. On other systems it is a no-op.

**exe\_ext**

From *Unix.U*:

This is an old synonym for `_exe`.

`expr`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `expr` program. After Configure runs, the value is reset to a plain `expr` and is not useful.

`extensions`

From *Extensions.U*:

This variable holds a list of all extension files (both XS and non-xs) installed with the package. It is propagated to *Config.pm* and is typically used to test whether a particular extension is available.

`extern_C`

From *Csym.U*:

ANSI C requires `extern` where C++ requires 'extern C'. This variable can be used in Configure to do the right thing.

`extras`

From *Extras.U*:

This variable holds a list of extra modules to install.

**f**

`fflushall`

From *fflushall.U*:

This symbol, if defined, tells that to flush all pending stdio output one must loop through all the stdio file handles stored in an array and fflush them. Note that if `fflushNULL` is defined, `fflushall` will not even be probed for and will be left undefined.

`fflushNULL`

From *fflushall.U*:

This symbol, if defined, tells that `fflush(NULL)` correctly flushes all pending stdio output without side effects. In particular, on some platforms calling `fflush(NULL)` \*still\* corrupts `STDIN` if it is a pipe.

`find`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`firstmakefile`

From *Unix.U*:

This variable defines the first file searched by make. On unix, it is `makefile` (then `Makefile`). On case-insensitive systems, it might be something else. This is only used to deal with convoluted make depend tricks.

`flex`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`fposize`

From *fposize.U*:

This variable contains the size of a `fpos_t` in bytes.

`fpostype`

From *fpostype.U*:

This variable defines `Fpos_t` to be something like `fpos_t`, `long`, `uint`, or whatever type is used to declare file positions in `libc`.

**freetype**

From *mallosrc.U*:

This variable contains the return type of *free()*. It is usually void, but occasionally int.

**from**

From *Cross.U*:

This variable contains the command used by Configure to copy files from the target host. Useful and available only during Perl build. The string `:` if not cross-compiling.

**full\_ar**

From *Loc\_ar.U*:

This variable contains the full pathname to `ar`, whether or not the user has specified `portability`. This is only used in the *Makefile.SH*.

**full\_csh**

From *d\_csh.U*:

This variable contains the full pathname to `csh`, whether or not the user has specified `portability`. This is only used in the compiled C program, and we assume that all systems which can share this executable will have the same full pathname to *csh*.

**full\_sed**

From *Loc\_sed.U*:

This variable contains the full pathname to `sed`, whether or not the user has specified `portability`. This is only used in the compiled C program, and we assume that all systems which can share this executable will have the same full pathname to *sed*.

**g****gccansipedantic**

From *gccvers.U*:

If GNU `cc` (`gcc`) is used, this variable will enable (if set) the `-ansi` and `-pedantic` `cflags` for building core files (through `cflags` script). (See *Porting/pumpkin.pod* for full description).

**gccosandvers**

From *gccvers.U*:

If GNU `cc` (`gcc`) is used, this variable holds the operating system and version used to compile `gcc`. It is set to `''` if not `gcc`, or if nothing useful can be parsed as the os version.

**gccversion**

From *gccvers.U*:

If GNU `cc` (`gcc`) is used, this variable holds 1 or 2 to indicate whether the compiler is version 1 or 2. This is used in setting some of the default `cflags`. It is set to `''` if not `gcc`.

**getgrent\_r\_proto**

From *d\_getgrent\_r.U*:

This variable encodes the prototype of `getgrent_r`. It is zero if `d_getgrent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_getgrent_r` is defined.

**getgrgid\_r\_proto**

From *d\_getgrgid\_r.U*:

This variable encodes the prototype of `getgrgid_r`. It is zero if `d_getgrgid_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_getgrgid_r` is defined.

**getgrnam\_r\_proto**

From *d\_getgrnam\_r.U*:

This variable encodes the prototype of `getgrnam_r`. It is zero if `d_getgrnam_r` is undef, and one of the

REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getgrnam_r` is defined.

`gethostbyaddr_r_proto`

From *d\_gethostbyaddr\_r.U*:

This variable encodes the prototype of `gethostbyaddr_r`. It is zero if `d_gethostbyaddr_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_gethostbyaddr_r` is defined.

`gethostbyname_r_proto`

From *d\_gethostbyname\_r.U*:

This variable encodes the prototype of `gethostbyname_r`. It is zero if `d_gethostbyname_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_gethostbyname_r` is defined.

`gethostent_r_proto`

From *d\_gethostent\_r.U*:

This variable encodes the prototype of `gethostent_r`. It is zero if `d_gethostent_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_gethostent_r` is defined.

`getlogin_r_proto`

From *d\_getlogin\_r.U*:

This variable encodes the prototype of `getlogin_r`. It is zero if `d_getlogin_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getlogin_r` is defined.

`getnetbyaddr_r_proto`

From *d\_getnetbyaddr\_r.U*:

This variable encodes the prototype of `getnetbyaddr_r`. It is zero if `d_getnetbyaddr_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getnetbyaddr_r` is defined.

`getnetbyname_r_proto`

From *d\_getnetbyname\_r.U*:

This variable encodes the prototype of `getnetbyname_r`. It is zero if `d_getnetbyname_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getnetbyname_r` is defined.

`getnetent_r_proto`

From *d\_getnetent\_r.U*:

This variable encodes the prototype of `getnetent_r`. It is zero if `d_getnetent_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getnetent_r` is defined.

`getprotobyname_r_proto`

From *d\_getprotobyname\_r.U*:

This variable encodes the prototype of `getprotobyname_r`. It is zero if `d_getprotobyname_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getprotobyname_r` is defined.

`getprotobynumber_r_proto`

From *d\_getprotobynumber\_r.U*:

This variable encodes the prototype of `getprotobynumber_r`. It is zero if `d_getprotobynumber_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getprotobynumber_r` is defined.

`getprotoent_r_proto`

From *d\_getprotoent\_r.U*:

This variable encodes the prototype of `getprotoent_r`. It is zero if `d_getprotoent_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getprotoent_r` is defined.

`getpwent_r_proto`

From *d\_getpwent\_r.U*:

This variable encodes the prototype of `getpwent_r`. It is zero if `d_getpwent_r` is undef, and one of the



REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getpwent_r` is defined.

`getpwnam_r_proto`

From *d\_getpwnam\_r.U*:

This variable encodes the prototype of `getpwnam_r`. It is zero if `d_getpwnam_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getpwnam_r` is defined.

`getpwuid_r_proto`

From *d\_getpwuid\_r.U*:

This variable encodes the prototype of `getpwuid_r`. It is zero if `d_getpwuid_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getpwuid_r` is defined.

`getservbyname_r_proto`

From *d\_getservbyname\_r.U*:

This variable encodes the prototype of `getservbyname_r`. It is zero if `d_getservbyname_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getservbyname_r` is defined.

`getservbyport_r_proto`

From *d\_getservbyport\_r.U*:

This variable encodes the prototype of `getservbyport_r`. It is zero if `d_getservbyport_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getservbyport_r` is defined.

`getservent_r_proto`

From *d\_getservent\_r.U*:

This variable encodes the prototype of `getservent_r`. It is zero if `d_getservent_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getservent_r` is defined.

`getspnam_r_proto`

From *d\_getspnam\_r.U*:

This variable encodes the prototype of `getspnam_r`. It is zero if `d_getspnam_r` is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if `d_getspnam_r` is defined.

`gidformat`

From *gidf.U*:

This variable contains the format string used for printing a `Gid_t`.

`gidsign`

From *gidsign.U*:

This variable contains the signedness of a `gidtype`. 1 for unsigned, -1 for signed.

`gidsize`

From *gidsize.U*:

This variable contains the size of a `gidtype` in bytes.

`gidtype`

From *gidtype.U*:

This variable defines `Gid_t` to be something like `gid_t`, `int`, `ushort`, or whatever type is used to declare the return type of `getgid()`. Typically, it is the type of group ids in the kernel.

`glibpth`

From *libpth.U*:

This variable holds the general path (space-separated) used to find libraries. It may contain directories that do not exist on this platform, `libpth` is the cleaned-up version.

**gmake**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the gmake program. After Configure runs, the value is reset to a plain gmake and is not useful.

**gmtime\_r\_proto**

From *d\_gmtime\_r.U*:

This variable encodes the prototype of gmtime\_r. It is zero if d\_gmtime\_r is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if d\_gmtime\_r is defined.

**gnulibc\_version**

From *d\_gnulibc.U*:

This variable contains the version number of the GNU C library. It is usually something like 2.2.5. It is a plain " " if this is not the GNU C library, or if the version is unknown.

**grep**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the grep program. After Configure runs, the value is reset to a plain grep and is not useful.

**groupcat**

From *nis.U*:

This variable contains a command that produces the text of the */etc/group* file. This is normally "cat */etc/group*", but can be "ypcat group" when NIS is used. On some systems, such as os390, there may be no equivalent command, in which case this variable is unset.

**groupstype**

From *groupstype.U*:

This variable defines Groups\_t to be something like gid\_t, int, ushort, or whatever type is used for the second argument to *getgroups()* and *setgroups()*. Usually, this is the same as gidtype (gid\_t), but sometimes it isn't.

**gzip**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the gzip program. After Configure runs, the value is reset to a plain gzip and is not useful.

**h****h\_fcntl**

From *h\_fcntl.U*:

This variable gets set in various places to tell i\_fcntl that <fcntl.h> should be included.

**h\_sysfile**

From *h\_sysfile.U*:

This variable gets set in various places to tell i\_sys\_file that <sys/file.h> should be included.

**hint**

From *Oldconfig.U*:

Gives the type of hints used for previous answers. May be one of default, recommended or previous.

**hostperl**

From *Cross.U*:

This variable contains the path to a miniperl binary that can be run on the host OS when cross-compiling. Useful and available only during Perl build. Empty string " " if not cross-compiling.

**hostgenerate**

From *Cross.U*:

This variable contains the path to a `generate_uudmap` binary that can be run on the host OS when cross-compiling. Useful and available only during Perl build. Empty string "" if not cross-compiling.

**hostosname**

From *Cross.U*:

This variable contains the original value of `$_O` for `hostperl` when cross-compiling. This is useful to pick the proper tools when running build code in the host. Empty string "" if not cross-compiling.

**hostcat**

From *nis.U*:

This variable contains a command that produces the text of the `/etc/hosts` file. This is normally "cat `/etc/hosts`", but can be "ypcat hosts" when NIS is used. On some systems, such as os390, there may be no equivalent command, in which case this variable is unset.

**html1dir**

From *html1dir.U*:

This variable contains the name of the directory in which html source pages are to be put. This directory is for pages that describe whole programs, not libraries or modules. It is intended to correspond roughly to section 1 of the Unix manuals.

**html1direxp**

From *html1dir.U*:

This variable is the same as the `html1dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

**html3dir**

From *html3dir.U*:

This variable contains the name of the directory in which html source pages are to be put. This directory is for pages that describe libraries or modules. It is intended to correspond roughly to section 3 of the Unix manuals.

**html3direxp**

From *html3dir.U*:

This variable is the same as the `html3dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

**i****i16size**

From *perlxv.U*:

This variable is the size of an I16 in bytes.

**i16type**

From *perlxv.U*:

This variable contains the C type used for Perl's I16.

**i32size**

From *perlxv.U*:

This variable is the size of an I32 in bytes.

**i32type**

From *perlxv.U*:

This variable contains the C type used for Perl's I32.

**i64size**

From *perlxv.U*:

This variable is the size of an I64 in bytes.

**i64type**

From *perlxv.U*:

This variable contains the C type used for Perl's I64.

**i8size**

From *perlxv.U*:

This variable is the size of an I8 in bytes.

**i8type**

From *perlxv.U*:

This variable contains the C type used for Perl's I8.

**i\_arpainet**

From *i\_arpainet.U*:

This variable conditionally defines the `I_ARPA_INET` symbol, and indicates whether a C program should include `<arpa/inet.h>`.

**i\_assert**

From *i\_assert.U*:

This variable conditionally defines the `I_ASSERT` symbol, which indicates to the C program that `<assert.h>` exists and could be included.

**i\_bsdioc1**

From *i\_sysioc1.U*:

This variable conditionally defines the `I_SYS_BSDIOCTL` symbol, which indicates to the C program that `<sys/bsdioc1.h>` exists and should be included.

**i\_crypt**

From *i\_crypt.U*:

This variable conditionally defines the `I_CRYPT` symbol, and indicates whether a C program should include `<crypt.h>`.

**i\_db**

From *i\_db.U*:

This variable conditionally defines the `I_DB` symbol, and indicates whether a C program may include Berkeley's DB include file `<db.h>`.

**i\_dbm**

From *i\_dbm.U*:

This variable conditionally defines the `I_DBM` symbol, which indicates to the C program that `<dbm.h>` exists and should be included.

**i\_dirent**

From *i\_dirent.U*:

This variable conditionally defines `I_DIRENT`, which indicates to the C program that it should include `<dirent.h>`.

**i\_dlfcn**

From *i\_dlfcn.U*:

This variable conditionally defines the `I_DLFCN` symbol, which indicates to the C program that `<dlfcn.h>` exists and should be included.

**i\_fcntl**

From *i\_fcntl.U*:

This variable controls the value of `I_FCNTL` (which tells the C program to include `<fcntl.h>`).

**i\_float**

From *i\_float.U*:

This variable conditionally defines the `I_FLOAT` symbol, and indicates whether a C program may include `<float.h>` to get symbols like `DBL_MAX` or `DBL_MIN`, *i.e.* machine dependent floating point values.

**i\_fp**

From *i\_fp.U*:

This variable conditionally defines the `I_FP` symbol, and indicates whether a C program should include `<fp.h>`.

**i\_fp\_class**

From *i\_fp\_class.U*:

This variable conditionally defines the `I_FP_CLASS` symbol, and indicates whether a C program should include `<fp_class.h>`.

**i\_gdbm**

From *i\_gdbm.U*:

This variable conditionally defines the `I_GDBM` symbol, which indicates to the C program that `<gdbm.h>` exists and should be included.

**i\_gdbm\_ndbm**

From *i\_ndbm.U*:

This variable conditionally defines the `I_GDBM_NDBM` symbol, which indicates to the C program that `<gdbm-ndbm.h>` exists and should be included. This is the location of the *ndbm.h* compatibility file in Debian 4.0.

**i\_gdbmndbm**

From *i\_ndbm.U*:

This variable conditionally defines the `I_GDBMNDBM` symbol, which indicates to the C program that `<gdbm/ndbm.h>` exists and should be included. This was the location of the *ndbm.h* compatibility file in RedHat 7.1.

**i\_grp**

From *i\_grp.U*:

This variable conditionally defines the `I_GRP` symbol, and indicates whether a C program should include `<grp.h>`.

**i\_ieeefp**

From *i\_ieeefp.U*:

This variable conditionally defines the `I_IEEEFP` symbol, and indicates whether a C program should include `<ieeefp.h>`.

**i\_inttypes**

From *i\_inttypes.U*:

This variable conditionally defines the `I_INTTYPES` symbol, and indicates whether a C program should include `<inttypes.h>`.

**i\_langinfo**

From *i\_langinfo.U*:

This variable conditionally defines the `I_LANGINFO` symbol, and indicates whether a C program

should include `<langinfo.h>`.

#### `i_libutil`

From *i\_libutil.U*:

This variable conditionally defines the `I_LIBUTIL` symbol, and indicates whether a C program should include `<libutil.h>`.

#### `i_limits`

From *i\_limits.U*:

This variable conditionally defines the `I_LIMITS` symbol, and indicates whether a C program may include `<limits.h>` to get symbols like `WORD_BIT` and friends.

#### `i_locale`

From *i\_locale.U*:

This variable conditionally defines the `I_LOCALE` symbol, and indicates whether a C program should include `<locale.h>`.

#### `i_machcthr`

From *i\_machcthr.U*:

This variable conditionally defines the `I_MACH_CTHREADS` symbol, and indicates whether a C program should include `<mach/cthreads.h>`.

#### `i_malloc`

From *i\_malloc.U*:

This variable conditionally defines the `I_MALLOC` symbol, and indicates whether a C program should include `<malloc.h>`.

#### `i_mallocmalloc`

From *i\_mallocmalloc.U*:

This variable conditionally defines the `I_MALLOCMALLOC` symbol, and indicates whether a C program should include `<malloc/malloc.h>`.

#### `i_math`

From *i\_math.U*:

This variable conditionally defines the `I_MATH` symbol, and indicates whether a C program may include `<math.h>`.

#### `i_memory`

From *i\_memory.U*:

This variable conditionally defines the `I_MEMORY` symbol, and indicates whether a C program should include `<memory.h>`.

#### `i_mntent`

From *i\_mntent.U*:

This variable conditionally defines the `I_MNTENT` symbol, and indicates whether a C program should include `<mntent.h>`.

#### `i_ndbm`

From *i\_ndbm.U*:

This variable conditionally defines the `I_NDBM` symbol, which indicates to the C program that `<ndbm.h>` exists and should be included.

#### `i_netdb`

From *i\_netdb.U*:

This variable conditionally defines the `I_NETDB` symbol, and indicates whether a C program should include `<netdb.h>`.

### `i_neterrno`

From *i\_neterrno.U*:

This variable conditionally defines the `I_NET_ERRNO` symbol, which indicates to the C program that `<net/errno.h>` exists and should be included.

### `i_netinettcp`

From *i\_netinettcp.U*:

This variable conditionally defines the `I_NETINET_TCP` symbol, and indicates whether a C program should include `<netinet/tcp.h>`.

### `i_niin`

From *i\_niin.U*:

This variable conditionally defines `I_NETINET_IN`, which indicates to the C program that it should include `<netinet/in.h>`. Otherwise, you may try `<sys/in.h>`.

### `i_poll`

From *i\_poll.U*:

This variable conditionally defines the `I_POLL` symbol, and indicates whether a C program should include `<poll.h>`.

### `i_prot`

From *i\_prot.U*:

This variable conditionally defines the `I_PROT` symbol, and indicates whether a C program should include `<prot.h>`.

### `i_pthread`

From *i\_pthread.U*:

This variable conditionally defines the `I_PTHREAD` symbol, and indicates whether a C program should include `<pthread.h>`.

### `i_pwd`

From *i\_pwd.U*:

This variable conditionally defines `I_PWD`, which indicates to the C program that it should include `<pwd.h>`.

### `i_rpcsvcdbm`

From *i\_dbm.U*:

This variable conditionally defines the `I_RPC SVC_DBM` symbol, which indicates to the C program that `<rpcsvc/dbm.h>` exists and should be included. Some System V systems might need this instead of `<dbm.h>`.

### `i_sgtty`

From *i\_termio.U*:

This variable conditionally defines the `I_SGTTY` symbol, which indicates to the C program that it should include `<sgtty.h>` rather than `<termio.h>`.

### `i_shadow`

From *i\_shadow.U*:

This variable conditionally defines the `I_SHADOW` symbol, and indicates whether a C program should include `<shadow.h>`.

### `i_socks`

From *i\_socks.U*:

This variable conditionally defines the `I SOCKS` symbol, and indicates whether a C program should include `<socks.h>`.

**i\_stdarg**

From *i\_varhdr.U*:

This variable conditionally defines the `I_STDARG` symbol, which indicates to the C program that `<stdarg.h>` exists and should be included.

**i\_stdbool**

From *i\_stdbool.U*:

This variable conditionally defines the `I_STDBOOL` symbol, which indicates to the C program that `<stdbool.h>` exists and should be included.

**i\_stddef**

From *i\_stddef.U*:

This variable conditionally defines the `I_STDDEF` symbol, which indicates to the C program that `<stddef.h>` exists and should be included.

**i\_stdlib**

From *i\_stdlib.U*:

This variable conditionally defines the `I_STDLIB` symbol, which indicates to the C program that `<stdlib.h>` exists and should be included.

**i\_string**

From *i\_string.U*:

This variable conditionally defines the `I_STRING` symbol, which indicates that `<string.h>` should be included rather than `<strings.h>`.

**i\_sunmath**

From *i\_sunmath.U*:

This variable conditionally defines the `I_SUNMATH` symbol, and indicates whether a C program should include `<sunmath.h>`.

**i\_sysaccess**

From *i\_sysaccess.U*:

This variable conditionally defines the `I_SYS_ACCESS` symbol, and indicates whether a C program should include `<sys/access.h>`.

**i\_sysdir**

From *i\_sysdir.U*:

This variable conditionally defines the `I_SYS_DIR` symbol, and indicates whether a C program should include `<sys/dir.h>`.

**i\_sysfile**

From *i\_sysfile.U*:

This variable conditionally defines the `I_SYS_FILE` symbol, and indicates whether a C program should include `<sys/file.h>` to get `R_OK` and friends.

**i\_sysfilio**

From *i\_sysioctl.U*:

This variable conditionally defines the `I_SYS_FILIO` symbol, which indicates to the C program that `<sys/filio.h>` exists and should be included in preference to `<sys/ioctl.h>`.

**i\_sysin**

From *i\_niin.U*:

This variable conditionally defines `I_SYS_IN`, which indicates to the C program that it should include `<sys/in.h>` instead of `<netinet/in.h>`.



`i_sysioctl`

From *i\_sysioctl.U*:

This variable conditionally defines the `I_SYS_IOCTL` symbol, which indicates to the C program that `<sys/ioctl.h>` exists and should be included.

`i_syslog`

From *i\_syslog.U*:

This variable conditionally defines the `I_SYSLOG` symbol, and indicates whether a C program should include `<syslog.h>`.

`i_sysmman`

From *i\_sysmman.U*:

This variable conditionally defines the `I_SYS_MMAN` symbol, and indicates whether a C program should include `<sys/mman.h>`.

`i_sysmode`

From *i\_sysmode.U*:

This variable conditionally defines the `I_SYSMODE` symbol, and indicates whether a C program should include `<sys/mode.h>`.

`i_sysmount`

From *i\_sysmount.U*:

This variable conditionally defines the `I_SYSMOUNT` symbol, and indicates whether a C program should include `<sys/mount.h>`.

`i_sysndir`

From *i\_sysndir.U*:

This variable conditionally defines the `I_SYS_NDIR` symbol, and indicates whether a C program should include `<sys/ndir.h>`.

`i_sysparam`

From *i\_sysparam.U*:

This variable conditionally defines the `I_SYS_PARAM` symbol, and indicates whether a C program should include `<sys/param.h>`.

`i_syspoll`

From *i\_syspoll.U*:

This variable conditionally defines the `I_SYS_POLL` symbol, which indicates to the C program that it should include `<sys/poll.h>`.

`i_sysresrc`

From *i\_sysresrc.U*:

This variable conditionally defines the `I_SYS_RESOURCE` symbol, and indicates whether a C program should include `<sys/resource.h>`.

`i_sysseclt`

From *i\_sysseclt.U*:

This variable conditionally defines the `I_SYS_SECURITY` symbol, and indicates whether a C program should include `<sys/security.h>`.

`i_sysselect`

From *i\_sysselect.U*:

This variable conditionally defines `I_SYS_SELECT`, which indicates to the C program that it should include `<sys/select.h>` in order to get the definition of `struct timeval`.

**i\_syssockio**

From *i\_sysioctl.U*:

This variable conditionally defines `I_SYS_SOCKETIO` to indicate to the C program that socket ioctl codes may be found in `<sys/sockio.h>` instead of `<sys/ioctl.h>`.

**i\_sysstat**

From *i\_sysstat.U*:

This variable conditionally defines the `I_SYS_STAT` symbol, and indicates whether a C program should include `<sys/stat.h>`.

**i\_sysstatfs**

From *i\_sysstatfs.U*:

This variable conditionally defines the `I_SYSSTATFS` symbol, and indicates whether a C program should include `<sys/statfs.h>`.

**i\_sysstatvfs**

From *i\_sysstatvfs.U*:

This variable conditionally defines the `I_SYSSTATVFS` symbol, and indicates whether a C program should include `<sys/statvfs.h>`.

**i\_systemtime**

From *i\_time.U*:

This variable conditionally defines `I_SYS_TIME`, which indicates to the C program that it should include `<sys/time.h>`.

**i\_systemtimek**

From *i\_time.U*:

This variable conditionally defines `I_SYS_TIME_KERNEL`, which indicates to the C program that it should include `<sys/time.h>` with `KERNEL` defined.

**i\_systemtimes**

From *i\_systemtimes.U*:

This variable conditionally defines the `I_SYS_TIMES` symbol, and indicates whether a C program should include `<sys/times.h>`.

**i\_systypes**

From *i\_systypes.U*:

This variable conditionally defines the `I_SYS_TYPES` symbol, and indicates whether a C program should include `<sys/types.h>`.

**i\_sysuio**

From *i\_sysuio.U*:

This variable conditionally defines the `I_SYSUIO` symbol, and indicates whether a C program should include `<sys/uio.h>`.

**i\_sysun**

From *i\_sysun.U*:

This variable conditionally defines `I_SYS_UN`, which indicates to the C program that it should include `<sys/un.h>` to get UNIX domain socket definitions.

**i\_sysutsname**

From *i\_sysutsname.U*:

This variable conditionally defines the `I_SYSUTSNAME` symbol, and indicates whether a C program should include `<sys/utsname.h>`.

**i\_sysvfs**

From *i\_sysvfs.U*:

This variable conditionally defines the `I_SYSVFS` symbol, and indicates whether a C program should include `<sys/vfs.h>`.

**i\_syswait**

From *i\_syswait.U*:

This variable conditionally defines `I_SYS_WAIT`, which indicates to the C program that it should include `<sys/wait.h>`.

**i\_termio**

From *i\_termio.U*:

This variable conditionally defines the `I_TERMIO` symbol, which indicates to the C program that it should include `<termio.h>` rather than `<sgtty.h>`.

**i\_termios**

From *i\_termio.U*:

This variable conditionally defines the `I_TERMIOS` symbol, which indicates to the C program that the POSIX `<termios.h>` file is to be included.

**i\_time**

From *i\_time.U*:

This variable conditionally defines `I_TIME`, which indicates to the C program that it should include `<time.h>`.

**i\_unistd**

From *i\_unistd.U*:

This variable conditionally defines the `I_UNISTD` symbol, and indicates whether a C program should include `<unistd.h>`.

**i\_ustat**

From *i\_ustat.U*:

This variable conditionally defines the `I_USTAT` symbol, and indicates whether a C program should include `<ustat.h>`.

**i\_utime**

From *i\_utime.U*:

This variable conditionally defines the `I_UTIME` symbol, and indicates whether a C program should include `<utime.h>`.

**i\_values**

From *i\_values.U*:

This variable conditionally defines the `I_VALUES` symbol, and indicates whether a C program may include `<values.h>` to get symbols like `MAXLONG` and friends.

**i\_varargs**

From *i\_varhdr.U*:

This variable conditionally defines `I_VARARGS`, which indicates to the C program that it should include `<varargs.h>`.

**i\_varhdr**

From *i\_varhdr.U*:

Contains the name of the header to be included to get `va_dcl` definition. Typically one of `varargs.h` or `stdarg.h`.

`i_vfork`

From *i\_vfork.U*:

This variable conditionally defines the `I_VFORK` symbol, and indicates whether a C program should include *vfork.h*.

`ignore_versioned_solibs`

From *libs.U*:

This variable should be non-empty if non-versioned shared libraries (*libfoo.so.x.y*) are to be ignored (because they cannot be linked against).

`inc_version_list`

From *inc\_version\_list.U*:

This variable specifies the list of subdirectories in over which *perl.c:incpush()* and *lib/lib.pm* will automatically search when adding directories to `@INC`. The elements in the list are separated by spaces. This is only useful if you have a perl library directory tree structured like the default one. See `INSTALL` for how this works. The versioned `site_perl` directory was introduced in 5.005, so that is the lowest possible value.

This list includes architecture-dependent directories back to version `$api_versionstring` (e.g. 5.5.640) and architecture-independent directories all the way back to 5.005.

`inc_version_list_init`

From *inc\_version\_list.U*:

This variable holds the same list as `inc_version_list`, but each item is enclosed in double quotes and separated by commas, suitable for use in the `PERL_INC_VERSION_LIST` initialization.

`incpath`

From *usrinc.U*:

This variable must precede the normal include path to get the right one, as in *\$incpath/usr/include* or *\$incpath/usr/lib*. Value can be "" or */bsd43* on mips.

`incpth`

From *libpth.U*:

This variable must precede the normal include path to get the right one, as in *\$incpath/usr/include* or *\$incpath/usr/lib*. Value can be "" or */bsd43* on mips.

`inews`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`initialinstalllocation`

From *bin.U*:

When `userelocatableinc` is true, this variable holds the location that make install should copy the perl binary to, with all the run-time relocatable paths calculated from this at install time. When used, it is initialized to the original value of `binexp`, and then `binexp` is set to `.../`, as the other binaries are found relative to the perl binary.

`installarchlib`

From *archlib.U*:

This variable is really the same as `archlibexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installbin`

From *bin.U*:

This variable is the same as `binexp` unless AFS is running in which case the user is explicitly prompted

for it. This variable should always be used in your makefiles for maximum portability.

`installhtml1dir`

From *html1dir.U*:

This variable is really the same as `html1direxp`, unless you are using a different `installprefix`. For extra portability, you should only use this variable within your makefiles.

`installhtml3dir`

From *html3dir.U*:

This variable is really the same as `html3direxp`, unless you are using a different `installprefix`. For extra portability, you should only use this variable within your makefiles.

`installman1dir`

From *man1dir.U*:

This variable is really the same as `man1direxp`, unless you are using AFS in which case it points to the read/write location whereas `man1direxp` only points to the read-only access location. For extra portability, you should only use this variable within your makefiles.

`installman3dir`

From *man3dir.U*:

This variable is really the same as `man3direxp`, unless you are using AFS in which case it points to the read/write location whereas `man3direxp` only points to the read-only access location. For extra portability, you should only use this variable within your makefiles.

`installprefix`

From *installprefix.U*:

This variable holds the name of the directory below which “make install” will install the package. For most users, this is the same as `prefix`. However, it is useful for installing the software into a different (usually temporary) location after which it can be bundled up and moved somehow to the final location specified by `prefix`.

`installprefixexp`

From *installprefix.U*:

This variable holds the full absolute path of `installprefix` with all `~`-expansion done.

`installprivlib`

From *privlib.U*:

This variable is really the same as `privlibexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installscript`

From *scriptdir.U*:

This variable is usually the same as `scriptdirexp`, unless you are on a system running AFS, in which case they may differ slightly. You should always use this variable within your makefiles for portability.

`installsitearch`

From *sitearch.U*:

This variable is really the same as `sitearchexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installsitebin`

From *sitebin.U*:

This variable is usually the same as `sitebinexp`, unless you are on a system running AFS, in which case they may differ slightly. You should always use this variable within your makefiles for portability.

`installsitehtml1dir`

From *sitehtml1dir.U*:

This variable is really the same as `sitehtml1direxp`, unless you are using AFS in which case it points to the read/write location whereas `html1direxp` only points to the read-only access location. For extra portability, you should only use this variable within your makefiles.

`installsitehtml3dir`

From *sitehtml3dir.U*:

This variable is really the same as `sitehtml3direxp`, unless you are using AFS in which case it points to the read/write location whereas `html3direxp` only points to the read-only access location. For extra portability, you should only use this variable within your makefiles.

`installsitelib`

From *sitelib.U*:

This variable is really the same as `sitelibexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installsiteman1dir`

From *siteman1dir.U*:

This variable is really the same as `siteman1direxp`, unless you are using AFS in which case it points to the read/write location whereas `man1direxp` only points to the read-only access location. For extra portability, you should only use this variable within your makefiles.

`installsiteman3dir`

From *siteman3dir.U*:

This variable is really the same as `siteman3direxp`, unless you are using AFS in which case it points to the read/write location whereas `man3direxp` only points to the read-only access location. For extra portability, you should only use this variable within your makefiles.

`installsitescript`

From *sitescript.U*:

This variable is usually the same as `sitescriptexp`, unless you are on a system running AFS, in which case they may differ slightly. You should always use this variable within your makefiles for portability.

`installstyle`

From *installstyle.U*:

This variable describes the `style` of the perl installation. This is intended to be useful for tools that need to manipulate entire perl distributions. Perl itself doesn't use this to find its libraries — the library directories are stored directly in *Config.pm*. Currently, there are only two styles: `lib` and `lib/perl5`. The default library locations (e.g. `privlib`, `sitelib`) are either `$prefix/lib` or `$prefix/lib/perl5`. The former is useful if `$prefix` is a directory dedicated to perl (e.g. `/opt/perl`), while the latter is useful if `$prefix` is shared by many packages, e.g. if `$prefix=/usr/local`.

Unfortunately, while this `style` variable is used to set defaults for all three directory hierarchies (core, vendor, and site), there is no guarantee that the same style is actually appropriate for all those directories. For example, `$prefix` might be `/opt/perl`, but `$siteprefix` might be `/usr/local`. (Perhaps, in retrospect, the `lib` style should never have been supported, but it did seem like a nice idea at the time.)

The situation is even less clear for tools such as MakeMaker that can be used to install additional modules into non-standard places. For example, if a user intends to install a module into a private directory (perhaps by setting `PREFIX` on the *Makefile.PL* command line), then there is no reason to assume that the Configure-time `$installstyle` setting will be relevant for that `PREFIX`.

This may later be extended to include other information, so be careful with pattern-matching on the results.

For compatibility with *perl5.005* and earlier, the default setting is based on whether or not `$prefix` contains the string `perl`.

`installusrbinperl`

From *instubperl.U*:

This variable tells whether Perl should be installed also as `/usr/bin/perl` in addition to `$installbin/perl`

`installvendorarch`

From *vendorarch.U*:

This variable is really the same as `vendorarchexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorbin`

From *vendorbin.U*:

This variable is really the same as `vendorbinexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorhtml1dir`

From *vendorhtml1dir.U*:

This variable is really the same as `vendorhtml1direxp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorhtml3dir`

From *vendorhtml3dir.U*:

This variable is really the same as `vendorhtml3direxp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorlib`

From *vendorlib.U*:

This variable is really the same as `vendorlibexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorman1dir`

From *vendorman1dir.U*:

This variable is really the same as `vendorman1direxp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorman3dir`

From *vendorman3dir.U*:

This variable is really the same as `vendorman3direxp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`installvendorscript`

From *vendorscript.U*:

This variable is really the same as `vendorscriptexp` but may differ on those systems using AFS. For extra portability, only this variable should be used in makefiles.

`intsize`

From *intsize.U*:

This variable contains the value of the `INTSIZE` symbol, which indicates to the C program how many bytes there are in an int.

`issymlink`

From *issymlink.U*:

This variable holds the test command to test for a symbolic link (if they are supported). Typical values

include test -h and test -L.

ivdformat

From *perlxf.U*:

This variable contains the format string used for printing a Perl IV as a signed decimal integer.

ivsize

From *perlxv.U*:

This variable is the size of an IV in bytes.

ivtype

From *perlxv.U*:

This variable contains the C type used for Perl's IV.

## k

known\_extensions

From *Extensions.U*:

This variable holds a list of all extensions (both XS and non-xs) included in the package source distribution. This information is only really of use during the Perl build, as the list makes no distinction between extensions which were build and installed, and those which where not. See *extensions* for the list of extensions actually built and available.

ksh

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

## l

ld From *dlsrc.U*:

This variable indicates the program to be used to link libraries for dynamic loading. On some systems, it is ld. On ELF systems, it should be `$cc`. Mostly, we'll try to respect the hint file setting.

ld\_can\_script

From *dlsrc.U*:

This variable shows if the loader accepts scripts in the form of `-Wl,--version-script=ld.script`. This is currently only supported for GNU ld on ELF in dynamic loading builds.

lddlflags

From *dlsrc.U*:

This variable contains any special flags that might need to be passed to `$ld` to create a shared library suitable for dynamic loading. It is up to the makefile to use it. For hpux, it should be `-b`. For sunos 4.1, it is empty.

ldflags

From *ccflags.U*:

This variable contains any additional C loader flags desired by the user. It is up to the Makefile to use this.

ldflags\_uselargefiles

From *uselfs.U*:

This variable contains the loader flags needed by large file builds and added to ldflags by hints files.

ldlibpthname

From *libperl.U*:

This variable holds the name of the shared library search path, often `LD_LIBRARY_PATH`. To get an empty string, the hints file must set this to none.



**less**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the less program. After Configure runs, the value is reset to a plain `less` and is not useful.

**lib\_ext**

From *Unix.U*:

This is an old synonym for `_a`.

**libc**

From *libc.U*:

This variable contains the location of the C library.

**libperl**

From *libperl.U*:

The perl executable is obtained by linking *perlmain.c* with `libperl`, any static extensions (usually just DynaLoader), and any other libraries needed on this system. `libperl` is usually *libperl.a*, but can also be *libperl.so.xxx* if the user wishes to build a perl executable with a shared library.

**libpth**

From *libpth.U*:

This variable holds the general path (space-separated) used to find libraries. It is intended to be used by other units.

**libs**

From *libs.U*:

This variable holds the additional libraries we want to use. It is up to the Makefile to deal with it. The list can be empty.

**libsdirs**

From *libs.U*:

This variable holds the directory names aka `dirnames` of the libraries we found and accepted, duplicates are removed.

**libsfiles**

From *libs.U*:

This variable holds the filenames aka `basenames` of the libraries we found and accepted.

**libsfound**

From *libs.U*:

This variable holds the full pathnames of the libraries we found and accepted.

**libspath**

From *libs.U*:

This variable holds the directory names probed for libraries.

**libswanted**

From *Myinit.U*:

This variable holds a list of all the libraries we want to search. The order is chosen to pick up the `c` library ahead of `ucb` or `bsd` libraries for SVR4.

**libswanted\_uselargefiles**

From *uselfs.U*:

This variable contains the libraries needed by large file builds and added to `ldflags` by hints files. It is a space separated list of the library names without the `lib` prefix or any suffix, just like *libswanted*.

**line**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**lint**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**lkflags**

From *ccflags.U*:

This variable contains any additional C partial linker flags desired by the user. It is up to the Makefile to use this.

**ln** From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the ln program. After Configure runs, the value is reset to a plain ln and is not useful.

**lns**

From *lns.U*:

This variable holds the name of the command to make symbolic links (if they are supported). It can be used in the Makefile. It is either ln -s or ln

**localtime\_r\_proto**

From *d\_localtime\_r.U*:

This variable encodes the prototype of localtime\_r. It is zero if d\_localtime\_r is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if d\_localtime\_r is defined.

**locincpth**

From *ccflags.U*:

This variable contains a list of additional directories to be searched by the compiler. The appropriate -I directives will be added to ccflags. This is intended to simplify setting local directories from the Configure command line. It's not much, but it parallels the loclibpth stuff in *libpth.U*.

**loclibpth**

From *libpth.U*:

This variable holds the paths (space-separated) used to find local libraries. It is prepended to libpth, and is intended to be easily set from the command line.

**longdblsize**

From *d\_longdbl.U*:

This variable contains the value of the LONG\_DOUBLESIZE symbol, which indicates to the C program how many bytes there are in a long double, if this system supports long doubles.

**longlongsize**

From *d\_longlong.U*:

This variable contains the value of the LONGLONGSIZE symbol, which indicates to the C program how many bytes there are in a long long, if this system supports long long.

**longsize**

From *intsize.U*:

This variable contains the value of the LONGSIZE symbol, which indicates to the C program how many bytes there are in a long.

**lp** From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**lpr**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**ls**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `ls` program. After Configure runs, the value is reset to a plain `ls` and is not useful.

**lseeksize**

From *lseektype.U*:

This variable defines `lseektype` to be something like `off_t`, `long`, or whatever type is used to declare `lseek` offset's type in the kernel (which also appears to be `lseek`'s return type).

**lseektype**

From *lseektype.U*:

This variable defines `lseektype` to be something like `off_t`, `long`, or whatever type is used to declare `lseek` offset's type in the kernel (which also appears to be `lseek`'s return type).

**m****mad**

From *mad.U*:

This variable indicates that the Misc Attribute Definition code is to be compiled.

**madlyh**

From *mad.U*:

If the Misc Attribute Decoration is to be compiled, this variable is set to the name of the extra header files to be used, else it is ""

**madlyobj**

From *mad.U*:

If the Misc Attribute Decoration is to be compiled, this variable is set to the name of the extra object files to be used, else it is ""

**madlysrc**

From *mad.U*:

If the Misc Attribute Decoration is to be compiled, this variable is set to the name of the extra C source files to be used, else it is ""

**mail**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**mailx**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**make**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `make` program. After Configure runs, the value is reset to a plain `make` and is not useful.

**make\_set\_make**

From *make.U*:

Some versions of `make` set the variable `MAKE`. Others do not. This variable contains the string to be included in *Makefile.SH* so that `MAKE` is set if needed, and not if not needed. Possible values are:

```
make_set_make=# # If your make program handles this for you,
```

```
make_set_make=MAKE=$make # if it doesn't.
```

This uses a comment character so that we can distinguish a `set` value (from a previous `config.sh` or `Configure -D` option) from an uncomputed value.

#### `mallocobj`

From *mallocsrc.U*:

This variable contains the name of the *malloc.o* that this package generates, if that *malloc.o* is preferred over the system `malloc`. Otherwise the value is null. This variable is intended for generating Makefiles. See `mallocsrc`.

#### `mallocsrc`

From *mallocsrc.U*:

This variable contains the name of the *malloc.c* that comes with the package, if that *malloc.c* is preferred over the system `malloc`. Otherwise the value is null. This variable is intended for generating Makefiles.

#### `malloctype`

From *mallocsrc.U*:

This variable contains the kind of ptr returned by `malloc` and `realloc`.

#### `man1dir`

From *man1dir.U*:

This variable contains the name of the directory in which manual source pages are to be put. It is the responsibility of the *Makefile.SH* to get the value of this into the proper command. You must be prepared to do the *~name* expansion yourself.

#### `man1direxp`

From *man1dir.U*:

This variable is the same as the `man1dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

#### `man1ext`

From *man1dir.U*:

This variable contains the extension that the manual page should have: one of `n`, `1`, or `1`. The Makefile must supply the `..`. See `man1dir`.

#### `man3dir`

From *man3dir.U*:

This variable contains the name of the directory in which manual source pages are to be put. It is the responsibility of the *Makefile.SH* to get the value of this into the proper command. You must be prepared to do the *~name* expansion yourself.

#### `man3direxp`

From *man3dir.U*:

This variable is the same as the `man3dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

#### `man3ext`

From *man3dir.U*:

This variable contains the extension that the manual page should have: one of `n`, `1`, or `3`. The Makefile must supply the `..`. See `man3dir`.

**mips\_type**

From *usrinc.U*:

This variable holds the environment type for the mips system. Possible values are “BSD 4.3” and “System V”.

**mistrustnm**

From *Csym.U*:

This variable can be used to establish a fallback for the cases where nm fails to find a symbol. If `usenm` is false or `usenm` is true and `mistrustnm` is false, this variable has no effect. If `usenm` is true and `mistrustnm` is `compile`, a test program will be compiled to try to find any symbol that can't be located via nm lookup. If `mistrustnm` is `run`, the test program will be run as well as being compiled.

**mkdir**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `mkdir` program. After Configure runs, the value is reset to a plain `mkdir` and is not useful.

**mmaptype**

From *d\_mmap.U*:

This symbol contains the type of pointer returned by `mmap()` (and simultaneously the type of the first argument). It can be `void *` or `caddr_t`.

**modetype**

From *modetype.U*:

This variable defines `modetype` to be something like `mode_t`, `int`, `unsigned short`, or whatever type is used to declare file modes for system calls.

**more**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `more` program. After Configure runs, the value is reset to a plain `more` and is not useful.

**multiarch**

From *multiarch.U*:

This variable conditionally defines the `MULTIARCH` symbol which signifies the presence of multiplatform files. This is normally set by hints files.

**mv** From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**myarchname**

From *archname.U*:

This variable holds the architecture name computed by Configure in a previous run. It is not intended to be perused by any user and should never be set in a hint file.

**mydomain**

From *myhostname.U*:

This variable contains the eventual value of the `MYDOMAIN` symbol, which is the domain of the host the program is going to run on. The domain must be appended to `myhostname` to form a complete host name. The dot comes with `mydomain`, and need not be supplied by the program.

**myhostname**

From *myhostname.U*:

This variable contains the eventual value of the `MYHOSTNAME` symbol, which is the name of the host the program is going to run on. The domain is not kept with `hostname`, but must be gotten from

mydomain. The dot comes with mydomain, and need not be supplied by the program.

myuname

From *Oldconfig.U*:

The output of `uname -a` if available, otherwise the hostname. The whole thing is then lower-cased and slashes and single quotes are removed.

## n

n From *n.U*:

This variable contains the `-n` flag if that is what causes the `echo` command to suppress newline. Otherwise it is null. Correct usage is `$echo $n "prompt for a question: $c"`.

need\_va\_copy

From *need\_va\_copy.U*:

This symbol, if defined, indicates that the system stores the variable argument list datatype, `va_list`, in a format that cannot be copied by simple assignment, so that some other means must be used when copying is required. As such systems vary in their provision (or non-provision) of copying mechanisms, *handy.h* defines a platform-independent macro, `Perl_va_copy(src, dst)`, to do the job.

netdb\_hlen\_type

From *netdbtype.U*:

This variable holds the type used for the 2nd argument to `gethostbyaddr()`. Usually, this is `int` or `size_t` or `unsigned`. This is only useful if you have `gethostbyaddr()`, naturally.

netdb\_host\_type

From *netdbtype.U*:

This variable holds the type used for the 1st argument to `gethostbyaddr()`. Usually, this is `char *` or `void *`, possibly with or without a `const` prefix. This is only useful if you have `gethostbyaddr()`, naturally.

netdb\_name\_type

From *netdbtype.U*:

This variable holds the type used for the argument to `gethostbyname()`. Usually, this is `char *` or `const char *`. This is only useful if you have `gethostbyname()`, naturally.

netdb\_net\_type

From *netdbtype.U*:

This variable holds the type used for the 1st argument to `getnetbyaddr()`. Usually, this is `int` or `long`. This is only useful if you have `getnetbyaddr()`, naturally.

nm From *Loc.U*:

This variable is used internally by `Configure` to determine the full pathname (if any) of the `nm` program. After `Configure` runs, the value is reset to a plain `nm` and is not useful.

nm\_opt

From *usenm.U*:

This variable holds the options that may be necessary for `nm`.

nm\_so\_opt

From *usenm.U*:

This variable holds the options that may be necessary for `nm` to work on a shared library but that can not be used on an archive library. Currently, this is only used by Linux, where `nm --dynamic` is `*required*` to get symbols from an ELF library which has been stripped, but `nm --dynamic` is `*fatal*` on an archive library. Maybe Linux should just always set `usenm=false`.

`nonxs_ext`

From *Extensions.U*:

This variable holds a list of all non-xs extensions built and installed by the package. By default, all non-xs extensions distributed will be built, with the exception of platform-specific extensions (currently only one VMS specific extension).

`nroff`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `nroff` program. After Configure runs, the value is reset to a plain `nroff` and is not useful.

`nv_overflows_integers_at`

From *perl.v.U*:

This variable gives the largest integer value that NVs can hold as a constant floating point expression. If it could not be determined, it holds the value 0.

`nv_preserves_uv_bits`

From *perl.v.U*:

This variable indicates how many of bits type `uvtype` a variable `nvtype` can preserve.

`nveformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl NV using `%e`-ish floating point format.

`nvEUformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl NV using `%E`-ish floating point format.

`nvffformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl NV using `%f`-ish floating point format.

`nvFUformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl NV using `%F`-ish floating point format.

`nvgformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl NV using `%g`-ish floating point format.

`nvGUformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl NV using `%G`-ish floating point format.

`nvsize`

From *perl.v.U*:

This variable is the size of an NV in bytes.

`nvtype`

From *perl.v.U*:

This variable contains the C type used for Perl's NV.

**o**

`o_nonblock`

From *nblock.io.U*:

This variable bears the symbol value to be used during *open()* or *fcntl()* to turn on non-blocking I/O for a file descriptor. If you wish to switch between blocking and non-blocking, you may try `ioctl(FIOSNBIO)` instead, but that is only supported by some devices.

#### obj\_ext

From *Unix.U*:

This is an old synonym for `_o`.

#### old\_pthread\_create\_joinable

From *d\_pthratrj.U*:

This variable defines the constant to use for creating joinable (aka undetached) pthreads. Unused if *pthread.h* defines `PTHREAD_CREATE_JOINABLE`. If used, possible values are `PTHREAD_CREATE_UNDETACHED` and `__UNDETACHED`.

#### optimize

From *ccflags.U*:

This variable contains any *optimizer/debugger* flag that should be used. It is up to the Makefile to use it.

#### orderlib

From *orderlib.U*:

This variable is `true` if the components of libraries must be ordered (with `'lorder $* | tsort'`) before placing them in an archive. Set to `false` if `ranlib` or `ar` can generate random libraries.

#### osname

From *Oldconfig.U*:

This variable contains the operating system name (e.g. `sunos`, `solaris`, `hpux`, etc.). It can be useful later on for setting defaults. Any spaces are replaced with underscores. It is set to a null string if we can't figure it out.

#### osvers

From *Oldconfig.U*:

This variable contains the operating system version (e.g. `4.1.3`, `5.2`, etc.). It is primarily used for helping select an appropriate hints file, but might be useful elsewhere for setting defaults. It is set to "" if we can't figure it out. We try to be flexible about how much of the version number to keep, e.g. if `4.1.1`, `4.1.2`, and `4.1.3` are essentially the same for this package, hints files might just be `os_4.0` or `os_4.1`, etc., not keeping separate files for each little release.

#### otherlibdirs

From *otherlibdirs.U*:

This variable contains a colon-separated set of paths for the perl binary to search for additional library files or modules. These directories will be tacked to the end of `@INC`. Perl will automatically search below each path for version- and architecture-specific directories. See `inc_version_list` for more details. A value of `''` means none and is used to preserve this value for the next run through `Configure`.

## P

#### package

From *package.U*:

This variable contains the name of the package being constructed. It is primarily intended for the use of later `Configure` units.

#### pager

From *pager.U*:

This variable contains the name of the preferred pager on the system. Usual values are (the full



pathnames of) more, less, pg, or cat.

#### passcat

From *nis.U*:

This variable contains a command that produces the text of the */etc/passwd* file. This is normally "cat */etc/passwd*", but can be "ypcat passwd" when NIS is used. On some systems, such as os390, there may be no equivalent command, in which case this variable is unset.

#### patchlevel

From *patchlevel.U*:

The patchlevel level of this package. The value of patchlevel comes from the *patchlevel.h* file. In a version number such as 5.6.1, this is the 6. In *patchlevel.h*, this is referred to as PERL\_VERSION.

#### path\_sep

From *Unix.U*:

This is an old synonym for p\_ in *Head.U*, the character used to separate elements in the command shell search PATH.

#### perl

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the perl program. After Configure runs, the value is reset to a plain perl and is not useful.

#### perl5

From *perl5.U*:

This variable contains the full path (if any) to a previously installed *perl5.005* or later suitable for running the script to determine inc\_version\_list.

## P

#### PERL\_API\_REVISION

From *patchlevel.h*:

This number describes the earliest compatible PERL\_REVISION of Perl (compatibility here being defined as sufficient *binary/API* compatibility to run XS code built with the older version). Normally this does not change across maintenance releases. Please read the comment in *patchlevel.h*.

#### PERL\_API\_SUBVERSION

From *patchlevel.h*:

This number describes the earliest compatible PERL\_SUBVERSION of Perl (compatibility here being defined as sufficient *binary/API* compatibility to run XS code built with the older version). Normally this does not change across maintenance releases. Please read the comment in *patchlevel.h*.

#### PERL\_API\_VERSION

From *patchlevel.h*:

This number describes the earliest compatible PERL\_VERSION of Perl (compatibility here being defined as sufficient *binary/API* compatibility to run XS code built with the older version). Normally this does not change across maintenance releases. Please read the comment in *patchlevel.h*.

#### PERL\_CONFIG\_SH

From *Oldsyms.U*:

This is set to true in *config.sh* so that a shell script sourcing *config.sh* can tell if it has been sourced already.

#### PERL\_PATCHLEVEL

From *Oldsyms.U*:

This symbol reflects the patchlevel, if available. Will usually come from the *.patch* file, which is

available when the perl source tree was fetched with rsync.

`perl_patchlevel`

From *patchlevel.U*:

This is the Perl patch level, a numeric change identifier, as defined by whichever source code maintenance system is used to maintain the patches; currently Perforce. It does not correlate with the Perl version numbers or the maintenance versus development dichotomy except by also being increasing.

`PERL_REVISION`

From *Oldsyms.U*:

In a Perl version number such as 5.6.2, this is the 5. This value is manually set in *patchlevel.h*

`perl_static_inline`

From *d\_static\_inline.U*:

This variable defines the `PERL_STATIC_INLINE` symbol to the best-guess incantation to use for static inline functions. Possibilities include `static inline` (c99) `static __inline__` (gcc -ansi) `static __inline` (MSVC) `static _inline` (older MSVC) `static` (c89 compilers)

`PERL_SUBVERSION`

From *Oldsyms.U*:

In a Perl version number such as 5.6.2, this is the 2. Values greater than 50 represent potentially unstable development subversions. This value is manually set in *patchlevel.h*

`PERL_VERSION`

From *Oldsyms.U*:

In a Perl version number such as 5.6.2, this is the 6. This value is manually set in *patchlevel.h*

`perladmin`

From *perladmin.U*:

Electronic mail address of the [perl5\(1\)](#) administrator.

`perllibs`

From *End.U*:

The list of libraries needed by Perl only (any libraries needed by extensions only will be dropped, if using dynamic loading).

`perlpath`

From *perlpath.U*:

This variable contains the eventual value of the `PERL_PATH` symbol, which contains the name of the perl interpreter to be used in shell scripts and in the "eval exec" idiom. This variable is not necessarily the pathname of the file containing the perl interpreter; you must append the executable extension (`_exe`) if it is not already present. Note that Perl code that runs during the Perl build process cannot reference this variable, as Perl may not have been installed, or even if installed, may be a different version of Perl.

`pg` From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `pg` program. After Configure runs, the value is reset to a plain `pg` and is not useful.

`phostname`

From *myhostname.U*:

This variable contains the eventual value of the `PHOSTNAME` symbol, which is a command that can be fed to `popen()` to get the host name. The program should probably not presume that the domain is or isn't there already.

**pidtype**

From *pidtype.U*:

This variable defines `PIDTYPE` to be something like `pid_t`, `int`, `ushort`, or whatever type is used to declare process ids in the kernel.

**plibpth**

From *libpth.U*:

Holds the private path used by `Configure` to find out the libraries. Its value is prepended to `libpth`. This variable takes care of special machines, like the mips. Usually, it should be empty.

**pmake**

From *Loc.U*:

This variable is defined but not used by `Configure`. The value is the empty string and is not useful.

**pr** From *Loc.U*:

This variable is defined but not used by `Configure`. The value is the empty string and is not useful.

**prefix**

From *prefix.U*:

This variable holds the name of the directory below which the user will install the package. Usually, this is `/usr/local`, and executables go in `/usr/local/bin`, library stuff in `/usr/local/lib`, man pages in `/usr/local/man`, etc. It is only used to set defaults for things in *bin.U*, *mansrc.U*, *privlib.U*, or *scriptdir.U*.

**prefixexp**

From *prefix.U*:

This variable holds the full absolute path of the directory below which the user will install the package. Derived from `prefix`.

**privlib**

From *privlib.U*:

This variable contains the eventual value of the `PRIVLIB` symbol, which is the name of the private library for this package. It may have a `~` on the front. It is up to the makefile to eventually create this directory while performing installation (with `~` substitution).

**privlibexp**

From *privlib.U*:

This variable is the `~name` expanded version of `privlib`, so that you may use it directly in Makefiles or shell scripts.

**proclselfexe**

From *d\_proclselfexe.U*:

If `d_proclselfexe` is defined, `$proclselfexe` is the filename of the symbolic link pointing to the absolute pathname of the executing program.

**prototype**

From *prototype.U*:

This variable holds the eventual value of `CAN_PROTOTYPE`, which indicates the C compiler can handle function prototypes.

**ptrsize**

From *ptrsize.U*:

This variable contains the value of the `PTRSIZE` symbol, which indicates to the C program how many bytes there are in a pointer.

**q**

quadkind

From *quadtype.U*:

This variable, if defined, encodes the type of a quad: 1 = int, 2 = long, 3 = long long, 4 = int64\_t.

quadtype

From *quadtype.U*:

This variable defines Quad\_t to be something like long, int, long long, int64\_t, or whatever type is used for 64-bit integers.

**r**

randbits

From *randfunc.U*:

Indicates how many bits are produced by the function used to generate normalized random numbers.

randfunc

From *randfunc.U*:

Indicates the name of the random number function to use. Values include drand48, random, and rand. In C programs, the Drand01 macro is defined to generate uniformly distributed random numbers over the range [0., 1.[ (see drand01 and nrand).

random\_r\_proto

From *d\_random\_r.U*:

This variable encodes the prototype of random\_r. It is zero if d\_random\_r is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if d\_random\_r is defined.

randseedtype

From *randfunc.U*:

Indicates the type of the argument of the seedfunc.

ranlib

From *orderlib.U*:

This variable is set to the pathname of the ranlib program, if it is needed to generate random libraries. Set to : if ar can generate random libraries or if random libraries are not supported

rd\_nodata

From *nblock\_io.U*:

This variable holds the return code from *read()* when no data is present. It should be -1, but some systems return 0 when O\_NDELAY is used, which is a shame because you cannot make the difference between no data and an EOF. Sigh!

readdir64\_r\_proto

From *d\_readdir64\_r.U*:

This variable encodes the prototype of readdir64\_r. It is zero if d\_readdir64\_r is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if d\_readdir64\_r is defined.

readdir\_r\_proto

From *d\_readdir\_r.U*:

This variable encodes the prototype of readdir\_r. It is zero if d\_readdir\_r is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if d\_readdir\_r is defined.

revision

From *patchlevel.U*:

The value of revision comes from the *patchlevel.h* file. In a version number such as 5.6.1, this is the 5. In *patchlevel.h*, this is referred to as PERL\_REVISION.

`rm` From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `rm` program. After Configure runs, the value is reset to a plain `rm` and is not useful.

`rm_try`

From *Unix.U*:

This is a cleanup variable for try test programs. Internal Configure use only.

`rmail`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`run`

From *Cross.U*:

This variable contains the command used by Configure to copy and execute a cross-compiled executable in the target host. Useful and available only during Perl build. Empty string "" if not cross-compiling.

`runnm`

From *usenm.U*:

This variable contains `true` or `false` depending whether the `nm` extraction should be performed or not, according to the value of `usenm` and the flags on the Configure command line.

## s

`sched_yield`

From *d\_pthread\_y.U*:

This variable defines the way to yield the execution of the current thread.

`scriptdir`

From *scriptdir.U*:

This variable holds the name of the directory in which the user wants to put publicly scripts for the package in question. It is either the same directory as for binaries, or a special one that can be mounted across different architectures, like `/usr/share`. Programs must be prepared to deal with `~name` expansion.

`scriptdirexp`

From *scriptdir.U*:

This variable is the same as `scriptdir`, but is filename expanded at configuration time, for programs not wanting to bother with it.

`sed`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `sed` program. After Configure runs, the value is reset to a plain `sed` and is not useful.

`seedfunc`

From *randfunc.U*:

Indicates the random number generating seed function. Values include `srand48`, `srandom`, and `srand`.

`selectminbits`

From *selectminbits.U*:

This variable holds the minimum number of bits operated by `select`. That is, if you do `select(n, ...)`, how many bits at least will be cleared in the masks if some activity is detected. Usually this is either `n` or `32*ceil(n/32)`, especially many little-endians do the latter. This is only useful if you have `select()`, naturally.

**selecttype**

From *selecttype.U*:

This variable holds the type used for the 2nd, 3rd, and 4th arguments to `select`. Usually, this is `fd_set *`, if `HAS_FD_SET` is defined, and `int *` otherwise. This is only useful if you have `select()`, naturally.

**sendmail**

From *Loc.U*:

This variable is defined but not used by `Configure`. The value is the empty string and is not useful.

**setgrent\_r\_proto**

From *d\_setgrent\_r.U*:

This variable encodes the prototype of `setgrent_r`. It is zero if `d_setgrent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_setgrent_r` is defined.

**sethostent\_r\_proto**

From *d\_sethostent\_r.U*:

This variable encodes the prototype of `sethostent_r`. It is zero if `d_sethostent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_sethostent_r` is defined.

**setlocale\_r\_proto**

From *d\_setlocale\_r.U*:

This variable encodes the prototype of `setlocale_r`. It is zero if `d_setlocale_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_setlocale_r` is defined.

**setnetent\_r\_proto**

From *d\_setnetent\_r.U*:

This variable encodes the prototype of `setnetent_r`. It is zero if `d_setnetent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_setnetent_r` is defined.

**setprotoent\_r\_proto**

From *d\_setprotoent\_r.U*:

This variable encodes the prototype of `setprotoent_r`. It is zero if `d_setprotoent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_setprotoent_r` is defined.

**setpwent\_r\_proto**

From *d\_setpwent\_r.U*:

This variable encodes the prototype of `setpwent_r`. It is zero if `d_setpwent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_setpwent_r` is defined.

**setservent\_r\_proto**

From *d\_setservent\_r.U*:

This variable encodes the prototype of `setservent_r`. It is zero if `d_setservent_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_setservent_r` is defined.

**sGMTIME\_max**

From *time\_size.U*:

This variable defines the maximum value of the `time_t` offset that the system function `gmtime ()` accepts

**sGMTIME\_min**

From *time\_size.U*:

This variable defines the minimum value of the `time_t` offset that the system function `gmtime ()` accepts

sh From *sh.U*:

This variable contains the full pathname of the shell used on this system to execute Bourne shell scripts. Usually, this will be */bin/sh*, though it's possible that some systems will have */bin/ksh*, */bin/pdksh*, */bin/ash*, */bin/bash*, or even something such as *D:/bin/sh.exe*. This unit comes before *Options.U*, so you can't set *sh* with a *-D* option, though you can override this (and *startsh*) with *-O -Dsh=/bin/whatever -Dstartsh=whatever*

shar

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

sharpbang

From *spitshell.U*:

This variable contains the string *#!* if this system supports that construct.

shmattype

From *d\_shmat.U*:

This symbol contains the type of pointer returned by *shmat()*. It can be *void \** or *char \**.

shortsize

From *intsize.U*:

This variable contains the value of the *SHORTSIZE* symbol which indicates to the C program how many bytes there are in a short.

shrpenv

From *libperl.U*:

If the user builds a shared *libperl.so*, then we need to tell the *perl* executable where it will be able to find the installed *libperl.so*. One way to do this on some systems is to set the environment variable *LD\_RUN\_PATH* to the directory that will be the final location of the shared *libperl.so*. The makefile can use this with something like *\$shrpenv \$(CC) -o perl perlmain.o \$libperl \$libs* Typical values are *shrpenv="env LD\_RUN\_PATH=\$archlibexp/CORE"* or *shrpenv=""* See the main *perl Makefile.SH* for actual working usage. Alternatively, we might be able to use a command line option such as *-R \$archlibexp/CORE* (Solaris) or *-Wl,-rpath \$archlibexp/CORE* (Linux).

shsharp

From *spitshell.U*:

This variable tells further Configure units whether your *sh* can handle *#* comments.

sig\_count

From *sig\_name.U*:

This variable holds a number larger than the largest valid signal number. This is usually the same as the *NSIG* macro.

sig\_name

From *sig\_name.U*:

This variable holds the signal names, space separated. The leading *SIG* in signal name is removed. A *ZERO* is prepended to the list. This is currently not used, *sig\_name\_init* is used instead.

sig\_name\_init

From *sig\_name.U*:

This variable holds the signal names, enclosed in double quotes and separated by commas, suitable for use in the *SIG\_NAME* definition below. A *ZERO* is prepended to the list, and the list is terminated with a plain *0*. The leading *SIG* in signal names is removed. See *sig\_num*.

`sig_num`

From *sig\_name.U*:

This variable holds the signal numbers, space separated. A ZERO is prepended to the list (corresponding to the fake SIGZERO). Those numbers correspond to the value of the signal listed in the same place within the *sig\_name* list. This is currently not used, *sig\_num\_init* is used instead.

`sig_num_init`

From *sig\_name.U*:

This variable holds the signal numbers, enclosed in double quotes and separated by commas, suitable for use in the `SIG_NUM` definition below. A ZERO is prepended to the list, and the list is terminated with a plain 0.

`sig_size`

From *sig\_name.U*:

This variable contains the number of elements of the *sig\_name* and *sig\_num* arrays.

`signal_t`

From *d\_voidsig.U*:

This variable holds the type of the signal handler (void or int).

`sitearch`

From *sitearch.U*:

This variable contains the eventual value of the `SITEARCH` symbol, which is the name of the private library for this package. It may have a `~` on the front. It is up to the makefile to eventually create this directory while performing installation (with `~` substitution). The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local architecture-dependent modules in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`sitearchexp`

From *sitearch.U*:

This variable is the `~name` expanded version of *sitearch*, so that you may use it directly in Makefiles or shell scripts.

`sitebin`

From *sitebin.U*:

This variable holds the name of the directory in which the user wants to put add-on publicly executable files for the package in question. It is most often a local directory such as `/usr/local/bin`. Programs using this variable must be prepared to deal with `~name` substitution. The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local executables in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`sitebinexp`

From *sitebin.U*:

This is the same as the *sitebin* variable, but is filename expanded at configuration time, for use in your makefiles.

`sitehtmlldir`

From *sitehtmlldir.U*:

This variable contains the name of the directory in which site-specific html source pages are to be put. It is the responsibility of the *Makefile.SH* to get the value of this into the proper command. You must be prepared to do the `~name` expansion yourself. The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local html pages in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.



`sitehtml1direxp`

From *sitehtml1dir.U*:

This variable is the same as the `sitehtml1dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

`sitehtml3dir`

From *sitehtml3dir.U*:

This variable contains the name of the directory in which site-specific library html source pages are to be put. It is the responsibility of the *Makefile.SH* to get the value of this into the proper command. You must be prepared to do the *~name* expansion yourself. The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local library html pages in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`sitehtml3direxp`

From *sitehtml3dir.U*:

This variable is the same as the `sitehtml3dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

`sitelib`

From *sitelib.U*:

This variable contains the eventual value of the `SITELIB` symbol, which is the name of the private library for this package. It may have a `~` on the front. It is up to the makefile to eventually create this directory while performing installation (with `~` substitution). The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local architecture-independent modules in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`sitelib_stem`

From *sitelib.U*:

This variable is `$(sitelibexp)` with any trailing version-specific component removed. The elements in `inc_version_list` (*inc\_version\_list.U*) can be tacked onto this variable to generate a list of directories to search.

`sitelibexp`

From *sitelib.U*:

This variable is the *~name* expanded version of `sitelib`, so that you may use it directly in Makefiles or shell scripts.

`siteman1dir`

From *siteman1dir.U*:

This variable contains the name of the directory in which site-specific manual source pages are to be put. It is the responsibility of the *Makefile.SH* to get the value of this into the proper command. You must be prepared to do the *~name* expansion yourself. The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local man1 pages in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`siteman1direxp`

From *siteman1dir.U*:

This variable is the same as the `siteman1dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

`siteman3dir`

From *siteman3dir.U*:

This variable contains the name of the directory in which site-specific library man source pages are to be put. It is the responsibility of the *Makefile.SH* to get the value of this into the proper command. You

must be prepared to do the *~name* expansion yourself. The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local man3 pages in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`siteman3direxp`

From *siteman3dir.U*:

This variable is the same as the `siteman3dir` variable, but is filename expanded at configuration time, for convenient use in makefiles.

`siteprefix`

From *siteprefix.U*:

This variable holds the full absolute path of the directory below which the user will install add-on packages. See `INSTALL` for usage and examples.

`siteprefixexp`

From *siteprefix.U*:

This variable holds the full absolute path of the directory below which the user will install add-on packages. Derived from `siteprefix`.

`sitescript`

From *sitescript.U*:

This variable holds the name of the directory in which the user wants to put add-on publicly executable files for the package in question. It is most often a local directory such as `/usr/local/bin`. Programs using this variable must be prepared to deal with *~name* substitution. The standard distribution will put nothing in this directory. After perl has been installed, users may install their own local scripts in this directory with MakeMaker *Makefile.PL* or equivalent. See `INSTALL` for details.

`sitescriptexp`

From *sitescript.U*:

This is the same as the `sitescript` variable, but is filename expanded at configuration time, for use in your makefiles.

`size`

From *size.U*:

This variable contains the size of a `sizetype` in bytes.

`sizetype`

From *sizetype.U*:

This variable defines `sizetype` to be something like `size_t`, unsigned long, or whatever type is used to declare length parameters for string functions.

`sleep`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`sLOCALTIME_max`

From *time\_size.U*:

This variable defines the maximum value of the `time_t` offset that the system function `localtime ()` accepts

`sLOCALTIME_min`

From *time\_size.U*:

This variable defines the minimum value of the `time_t` offset that the system function `localtime ()` accepts

`smaill`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`so` From *so.U*:

This variable holds the extension used to identify shared libraries (also known as shared objects) on the system. Usually set to `so`.

`sockethdr`

From *d\_socket.U*:

This variable has any `cpp -I` flags needed for socket support.

`socketlib`

From *d\_socket.U*:

This variable has the names of any libraries needed for socket support.

`socksizetype`

From *socksizetype.U*:

This variable holds the type used for the size argument for various socket calls like `accept`. Usual values include `socklen_t`, `size_t`, and `int`.

`sort`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `sort` program. After Configure runs, the value is reset to a plain `sort` and is not useful.

`spackage`

From *package.U*:

This variable contains the name of the package being constructed, with the first letter uppercased, *i.e.* suitable for starting sentences.

`spitshell`

From *spitshell.U*:

This variable contains the command necessary to spit out a runnable shell on this system. It is either `cat` or a `grep -v` for `#` comments.

`sPRId64`

From *quadfio.U*:

This variable, if defined, contains the string used by `stdio` to format 64-bit decimal numbers (format `d`) for output.

`sPRId64l`

From *longdblfiio.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `e`) for output.

`sPRIEU64l`

From *longdblfiio.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `E`) for output. The `U` in the name is to separate this from `sPRId64l` so that even case-blind systems can see the difference.

`sPRIf64l`

From *longdblfiio.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `F`) for output.

`sPRIFUldbl`

From *longdblfi.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `F`) for output. The `U` in the name is to separate this from `sPRIfdbl` so that even case-blind systems can see the difference.

`sPRIGldbl`

From *longdblfi.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `g`) for output.

`sPRIGUldbl`

From *longdblfi.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `G`) for output. The `U` in the name is to separate this from `sPRIGldbl` so that even case-blind systems can see the difference.

`sPRIi64`

From *quadfi.U*:

This variable, if defined, contains the string used by `stdio` to format 64-bit decimal numbers (format `i`) for output.

`sPRIO64`

From *quadfi.U*:

This variable, if defined, contains the string used by `stdio` to format 64-bit octal numbers (format `o`) for output.

`sPRIu64`

From *quadfi.U*:

This variable, if defined, contains the string used by `stdio` to format 64-bit unsigned decimal numbers (format `u`) for output.

`sPRIx64`

From *quadfi.U*:

This variable, if defined, contains the string used by `stdio` to format 64-bit hexadecimal numbers (format `x`) for output.

`sPRIXU64`

From *quadfi.U*:

This variable, if defined, contains the string used by `stdio` to format 64-bit hExADEcImAl numbers (format `X`) for output. The `U` in the name is to separate this from `sPRIx64` so that even case-blind systems can see the difference.

`srand48_r_proto`

From *d\_srand48\_r.U*:

This variable encodes the prototype of `srand48_r`. It is zero if `d_srand48_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_srand48_r` is defined.

`srandom_r_proto`

From *d\_srandom\_r.U*:

This variable encodes the prototype of `srandom_r`. It is zero if `d_srandom_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_srandom_r` is defined.

`src`

From *src.U*:

This variable holds the (possibly relative) path of the package source. It is up to the Makefile to use

this variable and set `VPATH` accordingly to find the sources remotely. Use `$pkgsrc` to have an absolute path.

`sSCNfldbl`

From *longdblfl.c.U*:

This variable, if defined, contains the string used by `stdio` to format long doubles (format `£`) for input.

`ssize_t`

From *ssize\_t.U*:

This variable defines `ssize_t` to be something like `ssize_t`, `long` or `int`. It is used by functions that return a count of bytes or an error condition. It must be a signed type. We will pick a type such that `sizeof(SSize_t) == sizeof(Size_t)`.

`st_ino_sign`

From *st\_ino\_def.U*:

This variable contains the signedness of struct `stat`'s `st_ino`. 1 for unsigned, -1 for signed.

`st_ino_size`

From *st\_ino\_def.U*:

This variable contains the size of struct `stat`'s `st_ino` in bytes.

`startperl`

From *startperl.U*:

This variable contains the string to put on the front of a perl script to make sure (hopefully) that it runs with perl and not some shell. Of course, that leading line must be followed by the classical perl idiom: `eval 'exec perl -S $0 ${1+$@}' if $running_under_some_shell`; to guarantee perl startup should the shell execute the script. Note that this magic incantation is not understood by `csh`.

`startsh`

From *startsh.U*:

This variable contains the string to put on the front of a shell script to make sure (hopefully) that it runs with `sh` and not some other shell.

`static_ext`

From *Extensions.U*:

This variable holds a list of XS extension files we want to link statically into the package. It is used by `Makefile`.

`stdchar`

From *stdchar.U*:

This variable conditionally defines `STDCHAR` to be the type of `char` used in *stdio.h*. It has the values “unsigned char” or `char`.

`stdio_base`

From *d\_stdstdio.U*:

This variable defines how, given a `FILE` pointer, `fp`, to access the `_base` field (or equivalent) of *stdio.h*'s `FILE` structure. This will be used to define the macro `FILE_base(fp)`.

`stdio_bufsiz`

From *d\_stdstdio.U*:

This variable defines how, given a `FILE` pointer, `fp`, to determine the number of bytes store in the I/O buffer pointer to by the `_base` field (or equivalent) of *stdio.h*'s `FILE` structure. This will be used to define the macro `FILE_bufsiz(fp)`.

**stdio\_cnt**

From *d\_stdstdio.U*:

This variable defines how, given a FILE pointer, fp, to access the \_cnt field (or equivalent) of *stdio.h*'s FILE structure. This will be used to define the macro FILE\_cnt(fp).

**stdio\_filbuf**

From *d\_stdstdio.U*:

This variable defines how, given a FILE pointer, fp, to tell stdio to refill its internal buffers (?). This will be used to define the macro FILE\_filbuf(fp).

**stdio\_ptr**

From *d\_stdstdio.U*:

This variable defines how, given a FILE pointer, fp, to access the \_ptr field (or equivalent) of *stdio.h*'s FILE structure. This will be used to define the macro FILE\_ptr(fp).

**stdio\_stream\_array**

From *stdio\_streams.U*:

This variable tells the name of the array holding the stdio streams. Usual values include \_job, \_\_job, and \_\_sF.

**strerror\_r\_proto**

From *d\_strerror\_r.U*:

This variable encodes the prototype of strerror\_r. It is zero if d\_strerror\_r is undef, and one of the REENTRANT\_PROTO\_T\_ABC macros of *reentr.h* if d\_strerror\_r is defined.

**strings**

From *i\_string.U*:

This variable holds the full path of the string header that will be used. Typically */usr/include/string.h* or */usr/include/strings.h*.

**submit**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**subversion**

From *patchlevel.U*:

The subversion level of this package. The value of subversion comes from the *patchlevel.h* file. In a version number such as 5.6.1, this is the 1. In *patchlevel.h*, this is referred to as PERL\_SUBVERSION. This is unique to perl.

**sysman**

From *sysman.U*:

This variable holds the place where the manual is located on this system. It is not the place where the user wants to put his manual pages. Rather it is the place where Configure may look to find manual for unix commands (section 1 of the manual usually). See mansrc.

**sysroot**

From *Sysroot.U*:

This variable is empty unless supplied by the Configure user. It can contain a path to an alternative root directory, under which headers and libraries for the compilation target can be found. This is generally used when cross-compiling using a gcc-like compiler.

**t**

**tail**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**tar**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**targetarch**

From *Cross.U*:

If cross-compiling, this variable contains the target architecture. If not, this will be empty.

**targetdir**

From *Cross.U*:

This variable contains a path that will be created on the target host using `targetmkdir`, and then used to copy the cross-compiled executables to. Defaults to `/tmp` if not set.

**targetenv**

From *Cross.U*:

If cross-compiling, this variable can be used to modify the environment on the target system. However, how and where it's used, and even if it's used at all, is entirely dependent on both the transport mechanism (`targetrun`) and what the target system is. Unless the relevant documentation says otherwise, it is generally not useful.

**targethost**

From *Cross.U*:

This variable contains the name of a separate host machine that can be used to run compiled test programs and perl tests on. Set to empty string if not in use.

**targetmkdir**

From *Cross.U*:

This variable contains the command used by Configure to create a new directory on the target host.

**targetport**

From *Cross.U*:

This variable contains the number of a network port to be used to connect to the host in `targethost`, if unset defaults to 22 for ssh.

**targetsh**

From *Cross.U*:

If cross-compiling, this variable contains the location of `sh` on the target system. If not, this will be the same as `$sh`.

**tbl**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**tee**

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**test**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the test program. After Configure runs, the value is reset to a plain `test` and is not useful.

`timeincl`

From *i\_time.U*:

This variable holds the full path of the included time header(s).

`timetype`

From *d\_time.U*:

This variable holds the type returned by *time()*. It can be long, or `time_t` on BSD sites (in which case `<sys/types.h>` should be included). Anyway, the type `Time_t` should be used.

`tmpnam_r_proto`

From *d\_tmpnam\_r.U*:

This variable encodes the prototype of `tmpnam_r`. It is zero if `d_tmpnam_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_tmpnam_r` is defined.

`to` From *Cross.U*:

This variable contains the command used by Configure to copy to from the target host. Useful and available only during Perl build. The string: if not cross-compiling.

`touch`

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the touch program. After Configure runs, the value is reset to a plain `touch` and is not useful.

`tr` From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `tr` program. After Configure runs, the value is reset to a plain `tr` and is not useful.

`trnl`

From *trnl.U*:

This variable contains the value to be passed to the *tr(1)* command to transliterate a newline. Typical values are `and \n`. This is needed for EBCDIC systems where `ne wline` is not necessarily .

`troff`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

`ttyname_r_proto`

From *d\_ttyname\_r.U*:

This variable encodes the prototype of `ttyname_r`. It is zero if `d_ttyname_r` is undef, and one of the `REENTRANT_PROTO_T_ABC` macros of *reentr.h* if `d_ttyname_r` is defined.

**u**`u16size`

From *perlxv.U*:

This variable is the size of an U16 in bytes.

`u16type`

From *perlxv.U*:

This variable contains the C type used for Perl's U16.

`u32size`

From *perlxv.U*:

This variable is the size of an U32 in bytes.



**u32type**

From *perlxv.U*:

This variable contains the C type used for Perl's U32.

**u64size**

From *perlxv.U*:

This variable is the size of an U64 in bytes.

**u64type**

From *perlxv.U*:

This variable contains the C type used for Perl's U64.

**u8size**

From *perlxv.U*:

This variable is the size of an U8 in bytes.

**u8type**

From *perlxv.U*:

This variable contains the C type used for Perl's U8.

**uidformat**

From *uidf.U*:

This variable contains the format string used for printing a Uid\_t.

**uidsign**

From *uidsign.U*:

This variable contains the signedness of a uidtype. 1 for unsigned, -1 for signed.

**uidsize**

From *uidsize.U*:

This variable contains the size of a uidtype in bytes.

**uidtype**

From *uidtype.U*:

This variable defines Uid\_t to be something like uid\_t, int, ushort, or whatever type is used to declare user ids in the kernel.

**uname**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the uname program. After Configure runs, the value is reset to a plain `uname` and is not useful.

**uniq**

From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the `uniq` program. After Configure runs, the value is reset to a plain `uniq` and is not useful.

**uquadtype**

From *quadtype.U*:

This variable defines Uquad\_t to be something like unsigned long, unsigned int, unsigned long long, `uint64_t`, or whatever type is used for 64-bit integers.

**use5005threads**

From *sethreads.U*:

This variable conditionally defines the `USE_5005THREADS` symbol, and indicates that Perl should be

built to use the 5.005-based threading implementation. Only valid up to 5.8.x.

#### `use64bitall`

From *use64bits.U*:

This variable conditionally defines the `USE_64_BIT_ALL` symbol, and indicates that 64-bit integer types should be used when available. The maximal possible 64-bitness is employed: LP64 or ILP64, meaning that you will be able to use more than 2 gigabytes of memory. This mode is even more binary incompatible than `USE_64_BIT_INT`. You may not be able to run the resulting executable in a 32-bit CPU at all or you may need at least to reboot your OS to 64-bit mode.

#### `use64bitint`

From *use64bits.U*:

This variable conditionally defines the `USE_64_BIT_INT` symbol, and indicates that 64-bit integer types should be used when available. The minimal possible 64-bitness is employed, just enough to get 64-bit integers into Perl. This may mean using for example “long longs”, while your memory may still be limited to 2 gigabytes.

#### `usecrosscompile`

From *Cross.U*:

This variable conditionally defines the `USE_CROSS_COMPILE` symbol, and indicates that Perl has been cross-compiled.

#### `usedevel`

From *Devel.U*:

This variable indicates that Perl was configured with development features enabled. This should not be done for production builds.

#### `usedl`

From *dlsrc.U*:

This variable indicates if the system supports dynamic loading of some sort. See also `dlsrc` and `dlobj`.

#### `usedtrace`

From *usedtrace.U*:

This variable indicates whether we are compiling with `dtrace` support. See also `dtrace`.

#### `usefaststdio`

From *usefaststdio.U*:

This variable conditionally defines the `USE_FAST_STDIO` symbol, and indicates that Perl should be built to use `fast_stdio`. Defaults to define in Perls 5.8 and earlier, to undef later.

#### `useithreads`

From *usethreads.U*:

This variable conditionally defines the `USE_ITHREADS` symbol, and indicates that Perl should be built to use the interpreter-based threading implementation.

#### `usekernprocpathname`

From *usekernprocpathname.U*:

This variable, indicates that we can use `sysctl` with `KERN_PROC_PATHNAME` to get a full path for the executable, and hence convert `$$X` to an absolute path.

#### `uselargefiles`

From *usefs.U*:

This variable conditionally defines the `USE_LARGE_FILES` symbol, and indicates that large file interfaces should be used when available.

`uselongdouble`

From *uselongdbl.U*:

This variable conditionally defines the `USE_LONG_DOUBLE` symbol, and indicates that long doubles should be used when available.

`usemallocwrap`

From *mallosrc.U*:

This variable contains `y` if we are wrapping `malloc` to prevent integer overflow during size calculations.

`usemorebits`

From *usemorebits.U*:

This variable conditionally defines the `USE_MORE_BITS` symbol, and indicates that explicit 64-bit interfaces and long doubles should be used when available.

`usemultiplicity`

From *usemultiplicity.U*:

This variable conditionally defines the `MULTIPLICITY` symbol, and indicates that Perl should be built to use multiplicity.

`usemymalloc`

From *mallosrc.U*:

This variable contains `y` if the `malloc` that comes with this package is desired over the system's version of `malloc`. People often include special versions of `malloc` for efficiency, but such versions are often less portable. See also `mallosrc` and `mallocobj`. If this is `y`, then `-lmalloc` is removed from `$libs`.

`usenm`

From *usenm.U*:

This variable contains `true` or `false` depending whether the `nm` extraction is wanted or not.

`usensgetexecutablepath`

From *usensgetexecutablepath.U*:

This symbol, if defined, indicates that we can use `_NSGetExecutablePath` and `realpath` to get a full path for the executable, and hence convert `$^X` to an absolute path.

`useopcode`

From *Extensions.U*:

This variable holds either `true` or `false` to indicate whether the Opcode extension should be used. The sole use for this currently is to allow an easy mechanism for users to skip the Opcode extension from the Configure command line.

`useperlio`

From *useperlio.U*:

This variable conditionally defines the `USE_PERLIO` symbol, and indicates that the PerLIO abstraction should be used throughout.

`useposix`

From *Extensions.U*:

This variable holds either `true` or `false` to indicate whether the POSIX extension should be used. The sole use for this currently is to allow an easy mechanism for hints files to indicate that POSIX will not compile on a particular system.

`usereentrant`

From *usethreads.U*:

This variable conditionally defines the `USE_REENTRANT_API` symbol, which indicates that the

thread code may try to use the various `_r` versions of library functions. This is only potentially meaningful if `usethreads` is set and is very experimental, it is not even prompted for.

#### `userelocatableinc`

From *bin.U*:

This variable is set to true to indicate that perl should relocate `@INC` entries at runtime based on the path to the perl binary. Any `@INC` paths starting `../` are relocated relative to the directory containing the perl binary, and a logical cleanup of the path is then made around the join point (removing `dir/..` pairs)

#### `useshrplib`

From *libperl.U*:

This variable is set to `true` if the user wishes to build a shared `libperl`, and `false` otherwise.

#### `usesitecustomize`

From *d\_sitecustomize.U*:

This variable is set to true when the user requires a mechanism that allows the sysadmin to add entries to `@INC` at runtime. This variable being set, makes perl run `$siteLib/sitecustomize.pl` at startup.

#### `usesocks`

From *usesocks.U*:

This variable conditionally defines the `USE_SOCKS` symbol, and indicates that Perl should be built to use SOCKS.

#### `usethreads`

From *usethreads.U*:

This variable conditionally defines the `USE_THREADS` symbol, and indicates that Perl should be built to use threads.

#### `usevendorprefix`

From *vendorprefix.U*:

This variable tells whether the `vendorprefix` and consequently other `vendor*` paths are in use.

#### `useversionedarchname`

From *archname.U*:

This variable indicates whether to include the `$api_versionstring` as a component of the `$archname`.

#### `usevfork`

From *d\_vfork.U*:

This variable is set to true when the user accepts to use `vfork`. It is set to false when no `vfork` is available or when the user explicitly requests not to use `vfork`.

#### `usrinc`

From *usrinc.U*:

This variable holds the path of the include files, which is usually `/usr/include`. It is mainly used by other Configure units.

#### `uname`

From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

#### `uvoformat`

From *perlxyf.U*:

This variable contains the format string used for printing a Perl UV as an unsigned octal integer.

`uvsize`

From *perl.v.U*:

This variable is the size of a UV in bytes.

`uvtype`

From *perl.v.U*:

This variable contains the C type used for Perl's UV.

`uvuformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl UV as an unsigned decimal integer.

`uvxformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl UV as an unsigned hexadecimal integer in lowercase abcdef.

`uvXUformat`

From *perl.vf.U*:

This variable contains the format string used for printing a Perl UV as an unsigned hexadecimal integer in uppercase ABCDEF.

**v**`vaproto`

From *vaproto.U*:

This variable conditionally defines `CAN_VAPROTO` on systems supporting prototype declaration of functions with a variable number of arguments. See also `prototype`.

`vendorarch`

From *vendorarch.U*:

This variable contains the value of the `PERL_VENDORARCH` symbol. It may have a `~` on the front. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place their own architecture-dependent modules and extensions in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

`vendorarchexp`

From *vendorarch.U*:

This variable is the *~name* expanded version of `vendorarch`, so that you may use it directly in Makefiles or shell scripts.

`vendorbin`

From *vendorbin.U*:

This variable contains the eventual value of the `VENDORBIN` symbol. It may have a `~` on the front. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place additional binaries in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

`vendorbinexp`

From *vendorbin.U*:

This variable is the *~name* expanded version of `vendorbin`, so that you may use it directly in Makefiles or shell scripts.

`vendorhtmlldir`

From *vendorhtmlldir.U*:

This variable contains the name of the directory for html pages. It may have a `~` on the front. The

standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place their own html pages in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

#### `vendorhtml1direxp`

From *vendorhtml1dir.U*:

This variable is the *~name* expanded version of `vendorhtml1dir`, so that you may use it directly in Makefiles or shell scripts.

#### `vendorhtml3dir`

From *vendorhtml3dir.U*:

This variable contains the name of the directory for html library pages. It may have a *~* on the front. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place their own html pages for modules and extensions in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

#### `vendorhtml3direxp`

From *vendorhtml3dir.U*:

This variable is the *~name* expanded version of `vendorhtml3dir`, so that you may use it directly in Makefiles or shell scripts.

#### `vendorlib`

From *vendorlib.U*:

This variable contains the eventual value of the `VENDORLIB` symbol, which is the name of the private library for this package. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place their own modules in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

#### `vendorlib_stem`

From *vendorlib.U*:

This variable is `$vendorlibexp` with any trailing version-specific component removed. The elements in `inc_version_list` (*inc\_version\_list.U*) can be tacked onto this variable to generate a list of directories to search.

#### `vendorlibexp`

From *vendorlib.U*:

This variable is the *~name* expanded version of `vendorlib`, so that you may use it directly in Makefiles or shell scripts.

#### `vendorman1dir`

From *vendorman1dir.U*:

This variable contains the name of the directory for man1 pages. It may have a *~* on the front. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place their own man1 pages in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

#### `vendorman1direxp`

From *vendorman1dir.U*:

This variable is the *~name* expanded version of `vendorman1dir`, so that you may use it directly in Makefiles or shell scripts.

#### `vendorman3dir`

From *vendorman3dir.U*:

This variable contains the name of the directory for man3 pages. It may have a *~* on the front. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place

their own man3 pages in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

#### `vendorman3direxp`

From *vendorman3dir.U*:

This variable is the *~name* expanded version of `vendorman3dir`, so that you may use it directly in Makefiles or shell scripts.

#### `vendorprefix`

From *vendorprefix.U*:

This variable holds the full absolute path of the directory below which the vendor will install add-on packages. See `INSTALL` for usage and examples.

#### `vendorprefixexp`

From *vendorprefix.U*:

This variable holds the full absolute path of the directory below which the vendor will install add-on packages. Derived from `vendorprefix`.

#### `vendorscript`

From *vendorscript.U*:

This variable contains the eventual value of the `VENDORSCRIPT` symbol. It may have a *~* on the front. The standard distribution will put nothing in this directory. Vendors who distribute perl may wish to place additional executable scripts in this directory with MakeMaker *Makefile.PL* `INSTALLDIRS=vendor` or equivalent. See `INSTALL` for details.

#### `vendorscriptexp`

From *vendorscript.U*:

This variable is the *~name* expanded version of `vendorscript`, so that you may use it directly in Makefiles or shell scripts.

#### `version`

From *patchlevel.U*:

The full version number of this package, such as 5.6.1 (or 5\_6\_1). This combines revision, patchlevel, and subversion to get the full version number, including any possible subversions. This is suitable for use as a directory name, and hence is filesystem dependent.

#### `version_patchlevel_string`

From *patchlevel.U*:

This is a string combining version, subversion and `perl_patchlevel` (if `perl_patchlevel` is non-zero). It is typically something like 'version 7 subversion 1' or 'version 7 subversion 1 patchlevel 11224' It is computed here to avoid duplication of code in *myconfig.SH* and *lib/Config.pm*.

#### `versiononly`

From *versiononly.U*:

If set, this symbol indicates that only the version-specific components of a perl installation should be installed. This may be useful for making a test installation of a new version without disturbing the existing installation. Setting `versiononly` is equivalent to setting `installperl`'s `-v` option. In particular, the non-versioned scripts and programs such as `a2p`, `c2ph`, `h2xs`, `pod2*`, and [perldoc\(1\)](#) are not installed (see `INSTALL` for a more complete list). Nor are the man pages installed. Usually, this is undef.

#### `vi`

From *Loc.U*:

This variable is defined but not used by `Configure`. The value is the empty string and is not useful.

**x****xlibpth**From *libpth.U*:

This variable holds extra path (space-separated) used to find libraries on this platform, for example CPU-specific libraries (on multi-CPU platforms) may be listed here.

**y****yacc**From *yacc.U*:

This variable holds the name of the compiler compiler we want to use in the Makefile. It can be yacc, byacc, or bison -y.

**yaccflags**From *yacc.U*:

This variable contains any additional yacc flags desired by the user. It is up to the Makefile to use this.

**z****zcat**From *Loc.U*:

This variable is defined but not used by Configure. The value is the empty string and is not useful.

**zip**From *Loc.U*:

This variable is used internally by Configure to determine the full pathname (if any) of the zip program. After Configure runs, the value is reset to a plain zip and is not useful.

**GIT DATA**

Information on the git commit from which the current perl binary was compiled can be found in the variable `$Config::Git_Data`. The variable is a structured string that looks something like this:

```
git_commit_id='ea0c2dbd5f5ac6845ecc7ec6696415bf8e27bd52'  
git_describe='GitLive-blead-1076-gea0c2db'  
git_branch='smartmatch'  
git_uncommitted_changes=''  
git_commit_id_title='Commit id:'  
git_commit_date='2009-05-09 17:47:31 +0200'
```

Its format is not guaranteed not to change over time.

**NOTE**

This module contains a good example of how to use tie to implement a cache and an example of how to make a tied variable readonly to those outside of it.