

# 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 <code>%Config</code>, 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.

myconfig()

Returns a textual summary of the major perl configuration values. See also -v in "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 who's 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 "Switches" in perlrun.

# 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.

# 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

а

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.

\_0

# 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*.

### 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 Perl 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\_gethname.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 *\$sitelib/.*. 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.

#### archname64

#### From use64bits.U:

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

#### archname

#### From archname.U:

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

#### 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.



#### 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 a plain " 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.

#### 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.

#### 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 !

### С

# 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

С

### 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.

### cccdlflags

### 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*.

### 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 a plain " 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 a plain " 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 a plain " and is not useful.

### 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.

#### ср

# 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 a plain " and is not useful.

#### срр

# 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.

#### csh

#### From Loc.U:

This variable is used internally by Configure to determine the full pathname (if any) of the csh program. After Configure runs, the value is reset to a plain csh 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\_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\_atolf

#### From atolf.U:

This variable conditionally defines the HAS\_ATOLF symbol, which indicates to the C program that the atolf() 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\_format

#### From *d\_attribut\_format.U*:

This variable conditionally defines HASATTRIBUTE\_FORMAT, which indicates the C compiler can check for printf-like formats.

#### d\_attribute\_malloc

#### From *d\_attribute\_malloc.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\_attribute\_nonnull.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\_attribute\_noreturn.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\_attribute\_pure.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\_attribute\_unused.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\_attribute\_warn\_unused\_result.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  $\tt USE\_BSD\_GETPGRP$  if getpgrp needs one arguments whereas  $\tt USG$  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\_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\_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 wether 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  ${\tt HAS\_CLASS}$  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\_cmsghdr\_s

From d\_cmsghdr\_s.U:

This variable conditionally defines the  ${\tt HAS\_STRUCT\_CMSGHDR}$  symbol, which indicates that the struct cmsghdr is supported.

# d\_const

# From *d\_const.U*:

This variable conditionally defines the  ${\tt HASCONST}$  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\_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  ${\tt CSH}$  symbol, which indicates to the C program that the C-shell exists.

### 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\_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\_dbminitproto

### From *d\_dbminitproto.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\_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\_endnent



# From *d\_endnent.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  $\texttt{EOF}\_\texttt{NONBLOCK}$  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 ideosyncracies 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\_frexpl

### From *d\_frexpl.U*:

This variable conditionally defines the HAS\_FREXPL symbol, which indicates to the C program that the frexpl() 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.

### d\_ftime

# From *d\_ftime.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 f\_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 behaviour 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 sPRIgldbl), 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\_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 enchanced (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  ${\tt HAS\_GETMNTENT}$  symbol, which indicates to the C program that the getmntent() routine is available to iterate through mounted files to get their mount info.

### d\_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\_getnent

# From d\_getnent.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\_getpagsz

From d\_getpagsz.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 getprotobyname() 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 getprotobynumber() 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\_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\_getpgrp

### From *d\_getpgrp.U*:

This variable conditionally defines HAS\_GETPGRP if getpgrp() 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\_getprotobyname\_r

From d\_getprotobyname\_r.U:

This variable conditionally defines the HAS\_GETPROTOBYNAME\_R symbol, which indicates to



the C program that the getprotobyname\_r() routine is available.

### d\_getprotobynumber\_r

From *d\_getprotobynumber\_r.U*:

This variable conditionally defines the HAS\_GETPROTOBYNUMBER\_R symbol, which indicates to the C program that the getprotobynumber\_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\_getprotoprotos

### From *d\_getprotoprotos.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\_GETSERVBYPORT 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\_GETSERVBYPORT\_R 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  $HAS\_GETSERVENT\_R$  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\_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\_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\_int64\_t

### From d\_int64\_t.U:

This symbol will be defined if the C compiler supports int64\_t.

### 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\_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\_link

### From *d\_link.U*:

This variable conditionally defines HAS\_LINK if link() is available to create hard links.

### 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\_locconv

# From *d\_locconv.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  ${\tt HAS\_LSTAT}$  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\_size

From *d\_malloc\_size.U*:

This symbol, if defined, indicates that the malloc\_size routine is available for use.

### d\_malloc\_good\_size

From d\_malloc\_good\_size.U:

This symbol, if defined, indicates that the malloc\_good\_size routine is available for use.

### d\_mblen

### From *d\_mblen.U*:

This variable conditionally defines the HAS\_MBLEN symbol, which indicates to the C program that the mblen() routine is available to find the number of bytes in a multibye 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 potentatially 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\_mkdtemp

### From *d\_mkdtemp.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\_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  $\geq$  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  ${\tt HAS\_MSGRCV}$  symbol, which indicates to the C program that the  ${\tt msgrcv}()$  routine is available.

### d\_msgsnd

### From *d\_msgsnd.U*:

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

### d\_msync

### From d\_msync.U:

This variable conditionally defines HAS\_MSYNC 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\_nanosleep

# From *d\_nanosleep.U*:

This variable conditionally defines HAS\_NANOSLEEP if nanosleep() is available to sleep with 1E-9 sec accuracy.

# 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\_pthrattrj.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\_PRId64

### From quadfio.U:

This variable conditionally defines the PERL\_PRId64 symbol, which indiciates that stdio has a symbol to print 64-bit decimal numbers.

#### d\_PRIeldbl

### From *longdblfio.U*:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates that stdio has a symbol to print long doubles.

### d\_PRIEUldbl

### From *longdblfio.U*:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates 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 *longdblfio.U*:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates that stdio has a symbol to print long doubles.

### d\_PRIFUldbl

### From *longdblfio.U*:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates that stdio has a symbol to print long doubles. The  $\upsilon$  in the name is to separate this from d\_PRIfldbl so that even case-blind systems can see the difference.

### d\_PRIgldbl

### From *longdblfio.U*:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates that stdio has a symbol to print long doubles.

### d\_PRIGUldbl

### From longdblfio.U:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates that stdio has a



symbol to print long doubles. The  $\cup$  in the name is to separate this from d\_PRIgldbl so that even case-blind systems can see the difference.

### d\_PRIi64

### From quadfio.U:

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

### d\_PRI064

### From quadfio.U:

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

### d\_PRIu64

### From quadfio.U:

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

### d\_PRIx64

### From quadfio.U:

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

#### d\_PRIXU64

### From quadfio.U:

This variable conditionally defines the PERL\_PRIXU64 symbol, which indiciates 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\_procselfexe

### From *d\_procselfexe.U*:

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

### 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  ${\tt PWCLASS},$  which indicates that struct passwd contains  ${\tt pw\_class}.$ 

### d\_pwcomment

### From *i\_pwd.U*:

This variable conditionally defines  ${\tt PWCOMMENT},$  which indicates that struct passwd contains  ${\tt pw\_comment}.$ 

### 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  ${\tt PWGECOS},$  which indicates that struct passwd contains  ${\tt pw\_gecos}.$ 

### 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\_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

### From *d\_readdir.U*:

This variable conditionally defines HAS\_READDIR if readdir() is available to read directory entries.

### 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\_readdir.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\_safebcpy

### From d\_safebcpy.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 <code>HAS\_SCM\_RIGHTS</code> symbol, which indicates that the <code>SCM\_RIGHTS</code> is available. #ifdef is not enough because it may be an enum, glibc has been known to do this.

### d\_SCNfldbl

### From longdblfio.U:

This variable conditionally defines the PERL\_PRIfldbl symbol, which indiciates 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 <code>USE\_SEMCTL\_SEMID\_DS</code>, which indicates that struct semid\_ds \* is to be used for semctl <code>IPC\_STAT</code>.
## 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\_setInbuf.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\_setnent

From *d\_setnent.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\_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\_setpgrp

#### From *d\_setpgrp.U*:

This variable conditionally defines HAS\_SETPGRP if setpgrp() 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\_setreuid.U*:

This variable conditionally defines HAS\_SETREUID 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\_sfio

## From *d\_sfio.U*:

This variable conditionally defines the  $USE\_SFIO$  symbol, and indicates whether sfio is available (and should be used).

#### 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\_sigprocmask

## From *d\_sigprocmask.U*:

This variable conditionally defines HAS\_SIGPROCMASK 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\_sockatmark

## From *d\_sockatmark.U*:

This variable conditionally defines the HAS\_SOCKATMARK symbol, which indicates to the C program that the sockatmark() 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 sockatmark() function. Otherwise, it is up to the program to supply one.

#### d\_socket

# From *d\_socket.U*:

This variable conditionally defines  ${\tt HAS\_SOCKET},$  which indicates that the  ${\tt BSD}$  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\_sockpair

# 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\_returns\_strlen.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  $\tt USE\_STAT\_BLOCKS$  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\_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\_strctcpy

#### From *d\_strctcpy.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\_strerrm

## From *d\_strerror.U*:

This variable holds what Strerrr is defined as to translate an error code condition into an error message string. It could be strerror or a more complex macro emulating strrror 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 <code>SETUID\_SCRIPTS\_ARE\_SECURE\_NOW</code> 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\_sysernlst

#### 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\_tcgtpgrp.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\_tcstpgrp.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 normaly provided on UNIX systems.

## 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 normaly 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\_VENDORSCRIPT.

# 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\_IOCNOTTY 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 decriptors 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\_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  $X \in NIX$ , 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.

#### defvoidused

#### From *voidflags.U*:

This variable contains the default value of the VOIDUSED symbol (15).

#### direntrytype

#### From *i\_dirent.U*:

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

#### dlext

## From *dlext.U*:

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

#### 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.

#### 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.

#### 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. Among other things, this means that the character ranges are not contiguous. See *trnl.U* 

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 a plain " 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 linked into the package. It is propagated to *Config.pm* and is typically used to test whether a particular extession is available.

#### 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) does flush all pending stdio output.

find

# From Loc.U:

This variable is defined but not used by Configure. The value is a plain " 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 a plain " and is not useful.



#### fpossize

#### From *fpossize.U*:

This variable contains the size of a fpostype 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 *mallocsrc.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 ccflags 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 is variable gets set in various places to tell i\_fcntl that <fcntl.h> should be included.

## h\_sysfile

# From h\_sysfile.U:

This is 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.

#### 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.

#### htmlldirexp

#### 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 <code>I\_ARPA\_INET</code> symbol, and indicates whether a C program should include <arpa/inet.h>.

# i\_bsdioctl

# From *i\_sysioctl.U*:

This variable conditionally defines the I\_SYS\_BSDIOCTL symbol, which indicates to the C program that <sys/bsdioctl.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  ${\tt I\_DBM}$  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\_dld

# From *i\_dld.U*:

This variable conditionally defines the  $I_DLD$  symbol, which indicates to the C program that <dld.h> (GNU dynamic loading) exists and should be included.

# 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\_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 <intrypes.h>.

## i\_langinfo

From *i\_langinfo.U*:

This variable conditionally defines the <code>I\_LANGINFO</code> 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 <code>I\_MALLOC</code> symbol, and indicates whether a C program should include <malloc.h>.

## i\_math

#### From *i\_math.U*:

This variable conditionally defines the  ${\tt I\_MATH}$  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  ${\tt I\_POLL}$  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 cprot.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  $I\_RPCSVC\_DBM$  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\_sfio

# From *i\_sfio.U*:

This variable conditionally defines the  $I\_SFIO$  symbol, and indicates whether a C program should include <sfio.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  ${\tt I\_SOCKS}$  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\_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 <code>I\_SUNMATH</code> 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 <code>I\_SYS\_DIR</code> 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 <code>I\_SYS\_FILIO</code> 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 <code>I\_SYS\_IOCTL</code> 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  ${\tt I\_SYSLOG}$  symbol, and indicates whether a C program should include <syslog.h>.

#### i\_sysmman

## From i\_sysmman.U:

This variable conditionally defines the <code>I\_SYS\_MMAN</code> symbol, and indicates whether a C program should include <sys/mman.h>.

#### i\_sysmode

# From i\_sysmode.U:

This variable conditionally defines the  ${\tt I\_SYSMODE}$  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 <code>I\_SYS\_NDIR</code> 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\_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\_syssecrt



# From *i\_syssecrt.U*:

This variable conditionally defines the I\_SYS\_SECURITY symbol, and indicates whether a C program should include <sys/security.h>.

#### i\_sysselct

## From *i\_sysselct.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  $I\_SYS\_SOCKIO$  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\_systime

#### 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\_systimek

#### 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\_systimes

# From *i\_systimes.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  ${\tt I\_SYSVFS}$  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 <code>I\_TERMIOS</code> symbol, which indicates to the C program that the <code>POSIX</code> <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.

#### 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 <code>PERL\_INC\_VERSION\_LIST</code> initialization.

#### incpath

#### From *usrinc.U*:

This variable must preceed the normal include path to get hte right one, as in *\$ 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 a plain " and is not useful.

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

#### installhtmlldir

# 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 instubperI.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 *perlxvf.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

I

known\_extensions

From Extensions.U:

This variable holds a list of all XS extensions included in the package.

#### ksh

From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

# ld

## From *dlsrc.U*:

This variable indicates the program to be used to link libraries for dynamic loading. On some systems, it is 1d. On ELF systems, it should be \$cc. Mostly, we'll try to respect the hint file setting.

#### 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 a plain " and is not useful.

#### lint

# From *Loc.U*:

This variable is defined but not used by Configure. The value is a plain " 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 Ins.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 a plain " and is not useful.

## lpr

From Loc.U:

This variable is defined but not used by Configure. The value is a plain " 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 Iseektype.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

## mail

From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

mailx

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " 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 to 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.

### manldir

## 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.

## manldirexp

#### From man1dir.U:

This variable is the same as the man1dir variable, but is filename expanded at configuration time, for convenient use in makefiles.

## manlext

## 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.

## Μ

## Мсс

## From Loc.U:

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

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 fallthrough 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.



## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " 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. On Xenix, pseudo variables assignments in the output are stripped, thank you. The whole thing is then lower-cased.

## 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 included in the package. All of them will be built.

## 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\_preserves\_uv\_bits

## From *perlxv.U*:

This variable indicates how many of bits type uvtype a variable nvtype can preserve.

## nveformat

## From *perlxvf.U*:

This variable contains the format string used for printing a Perl  ${\tt NV}$  using %e-ish floating point format.

## nvEUformat

## From *perlxvf.U*:

This variable contains the format string used for printing a Perl  ${\rm NV}$  using %E-ish floating point format.

## nvfformat

From *perlxvf.U*:



This variable confains the format string used for printing a Perl NV using %f-ish floating point format.

### nvFUformat

From perlxvf.U:

This variable confains the format string used for printing a Perl NV using %F-ish floating point format.

## nvgformat

From perlxvf.U:

This variable contains the format string used for printing a Perl NV using %g-ish floating point format.

#### nvGUformat

#### From perlxvf.U:

This variable contains the format string used for printing a Perl  ${\tt NV}$  using %G-ish floating point format.

### nvsize

From *perlxv.U*:

This variable is the size of an NV in bytes.

#### nvtype

From *perlxv.U*:

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

## 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\_pthrattrj.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.

## р

## 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.

#### 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.

### perl

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

### 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.

#### Ρ

## 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\_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 administrator.

## perllibs

## From End.U:

The list of libraries needed by Perl only (any libraries needed by extensions only will by dropped, if using dynamic loading).

## perlpath

## From *perlpath.U*:

This variable contains the eventual value of the PERLPATH 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 prepend 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 a plain " and is not useful.

#### pr

## From *Loc.U*:

This variable is defined but not used by Configure. The value is a plain " 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.

#### procselfexe

## From *d\_procselfexe.U*:

If d\_procselfexe is defined, \$procselfexe 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 funciton 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

r

## 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.

#### 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.

#### rmail

#### From *Loc.U*:

This variable is defined but not used by Configure. The value is a plain " 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  $32^{\text{ceil}}(n/32)$ , 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 a plain " 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.

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 a plain " 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 -WI,-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.

### sitehtml1dir

## From sitehtml1dir.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.

#### sitehtmlldirexp

## 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.

#### sitemanldir

## 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.

#### sitemanldirexp

## 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.





### sizesize

## From *sizesize.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 a plain " and is not useful.

#### smail

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " 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  $s_0$ .

#### 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.

### sPRIeldbl

From longdblfio.U:

This variable, if defined, contains the string used by stdio to format long doubles (format e) for output.

## sPRIEUldbl

### From longdblfio.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 sPRIeldbl so that even case-blind systems can see the difference.

#### sPRIfldbl

## From longdblfio.U:

This variable, if defined, contains the string used by stdio to format long doubles (format f) for output.

#### sPRIFUldbl

### From longdblfio.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 sPRIfldbl so that even case-blind systems can see the difference.

#### sPRIgldbl

## From longdblfio.U:

This variable, if defined, contains the string used by stdio to format long doubles (format g) for output.

## sPRIGUldbl

## From longdblfio.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 quadfio.U:

This variable, if defined, contains the string used by stdio to format 64-bit decimal numbers (format i) for output.

## sPRIO64

## From quadfio.U:

This variable, if defined, contains the string used by stdio to format 64-bit octal numbers (format  $\circ$ ) for output.

## sPRIu64

## From quadfio.U:

This variable, if defined, contains the string used by stdio to format 64-bit unsigned decimal numbers (format u) for output.

### sPRIx64

From quadfio.U:



This variable, if defined, contains the string used by stdio to format 64-bit hexadecimal numbers (format x) for output.

#### sPRIXU64

## From quadfio.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 path to the package source. It is up to the Makefile to use this variable and set VPATH accordingly to find the sources remotely.

## sSCNfldbl

## From longdblfio.U:

This variable, if defined, contains the string used by stdio to format long doubles (format  ${\tt f}$ ) for input.

## ssizetype

## From ssizetype.U:

This variable defines ssizetype 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).

## startperl

## From startperI.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+s@)' if \$running\_under\_some\_shell; to guarantee perl startup should the shell execute the script. Note that this magic incatation 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 \_iob, \_\_iob, 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 a plain " 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.

## t

## tail

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

#### tar

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

## targetarch

## From Cross.U:

If cross-compiling, this variable contains the target architecture. If not, this will be empty.

## tbl

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

#### tee

## From *Loc.U*:

This variable is defined but not used by Configure. The value is a plain " 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 012 and n. This is needed for EBCDIC systems where newline is not necessarily 012.

#### troff

From Loc.U:

This variable is defined but not used by Configure. The value is a plain " 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

## ul6size

From perlxv.U:

This variable is the size of an U16 in bytes.

#### ul6type

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 usethreads.U:

This variable conditionally defines the USE\_5005THREADS symbol, and indicates that Perl should be built to use the 5.005-based threading implementation.

# 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  $\tt USE\_CROSS\_COMPILE$  symbol, and indicates that Perl has been cross-compiled.

#### usedl

## From *dlsrc.U*:

This variable indicates if the system supports dynamic loading of some sort. See also dlsrc and dlobj.

## 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.

## uselargefiles

## From uselfs.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  $\tt USE\_LONG\_DOUBLE$  symbol, and indicates that long doubles should be used when available.

## usemallocwrap

## From *mallocsrc.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 mallocsrc.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 effiency, but such versions are often less portable. See also mallocsrc and mallocobj. If this is  $_{Y}$ , then -Imalloc is removed from \$libs.

#### usenm

## From usenm.U:

This variable contains true or false depending whether the nm extraction is wanted or not.

#### 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 PerIIO 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.

#### usesfio

## From *d\_sfio.U*:

This variable is set to true when the user agrees to use sfio. It is set to false when sfio is not available or when the user explicitly requests not to use sfio. It is here primarily so that command-line settings can override the auto-detection of d\_sfio without running into a "WHOA THERE".

#### useshrplib

## From *libperl.U*:

This variable is set to true if the user wishes to build a shared libperl, and false otherwise.

#### 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.

### 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.

#### uuname

## From Loc.U:

This variable is defined but not used by Configure. The value is a plain " and is not useful.

## uvoformat

## From perlxvf.U:

This variable contains the format string used for printing a Perl  $\ensuremath{\mathbb{UV}}$  as an unsigned octal integer.

#### uvsize

From *perlxv.U*:

This variable is the size of a UV in bytes.

#### uvtype

From *perlxv.U*:

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

## uvuformat

## From perlxvf.U:

This variable contains the format string used for printing a Perl  ${\scriptstyle\rm UV}$  as an unsigned decimal integer.

uvxformat

## From *perlxvf.U*:

This variable contains the format string used for printing a Perl UV as an unsigned hexadecimal integer in lowercase abcdef.

## uvXUformat

## From *perlxvf.U*:

This variable contains the format string used for printing a Perl UV as an unsigned hexadecimal integer in uppercase ABCDEF.

#### V

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 vendorhtml1dir.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.

## vendorhtmlldirexp

## 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.

## vendormanldir

## 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.

#### vendormanldirexp

#### 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 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 a plain " and is not useful.

## voidflags

#### From *voidflags.U*:

This variable contains the eventual value of the VOIDFLAGS symbol, which indicates how much support of the void type is given by this compiler. See VOIDFLAGS for more info.

# 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.

## у

# 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 a plain " 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.

# 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.