

## NAME

Devel::PPort - Perl/Pollution/Portability

## SYNOPSIS

```
Devel::PPort::WriteFile();    # defaults to ./ppport.h
Devel::PPort::WriteFile('someheader.h');
```

## DESCRIPTION

Perl's API has changed over time, gaining new features, new functions, increasing its flexibility, and reducing the impact on the C namespace environment (reduced pollution). The header file written by this module, typically *ppport.h*, attempts to bring some of the newer Perl API features to older versions of Perl, so that you can worry less about keeping track of old releases, but users can still reap the benefit.

Devel::PPort contains a single function, called `WriteFile`. Its only purpose is to write the *ppport.h* C header file. This file contains a series of macros and, if explicitly requested, functions that allow XS modules to be built using older versions of Perl. Currently, Perl versions from 5.003 to 5.10.0 are supported.

This module is used by `h2xs` to write the file *ppport.h*.

### Why use *ppport.h*?

You should use *ppport.h* in modern code so that your code will work with the widest range of Perl interpreters possible, without significant additional work.

You should attempt older code to fully use *ppport.h*, because the reduced pollution of newer Perl versions is an important thing. It's so important that the old polluting ways of original Perl modules will not be supported very far into the future, and your module will almost certainly break! By adapting to it now, you'll gain compatibility and a sense of having done the electronic ecology some good.

### How to use *ppport.h*

Don't direct the users of your module to download `Devel::PPort`. They are most probably no XS writers. Also, don't make *ppport.h* optional. Rather, just take the most recent copy of *ppport.h* that you can find (e.g. by generating it with the latest `Devel::PPort` release from CPAN), copy it into your project, adjust your project to use it, and distribute the header along with your module.

### Running *ppport.h*

But *ppport.h* is more than just a C header. It's also a Perl script that can check your source code. It will suggest hints and portability notes, and can even make suggestions on how to change your code. You can run it like any other Perl program:

```
perl ppport.h [options] [files]
```

It also has embedded documentation, so you can use

```
perldoc ppport.h
```

to find out more about how to use it.

## FUNCTIONS

### WriteFile

`WriteFile` takes one optional argument. When called with one argument, it expects to be passed a filename. When called with no arguments, it defaults to the filename *ppport.h*.

The function returns a true value if the file was written successfully. Otherwise it returns a false value.

## COMPATIBILITY

*ppport.h* supports Perl versions from 5.003 to 5.10.0 in threaded and non-threaded configurations.

### Provided Perl compatibility API

The header file written by this module, typically *ppport.h*, provides access to the following elements of the Perl API that is not available in older Perl releases:

```
_aMY_CXT
_pMY_CXT
aMY_CXT
aMY_CXT_
aTHX
aTHX_
aTHXR
aTHXR_
AvFILLp
boolSV
call_argv
call_method
call_pv
call_sv
ckWARN
CopFILE
CopFILE_set
CopFILEAV
CopFILEGV
CopFILEGV_set
CopFILESV
CopSTASH
CopSTASH_eq
CopSTASH_set
CopSTASHPV
CopSTASHPV_set
CopyD
CPERLscope
dAX
dAXMARK
DEFSV
DEFSV_set
dITEMS
dMY_CXT
dMY_CXT_SV
dNOOP
dTHR
dTHX
dTHXa
dTHXoa
dTHXR
dUNDERBAR
dVAR
dXCPT
dXSTARG
END_EXTERN_C
ERRSV
eval_pv
eval_sv
```

EXTERN\_C  
G\_METHOD  
get\_av  
get\_cv  
get\_hv  
get\_sv  
grok\_bin  
grok\_hex  
grok\_number  
GROK\_NUMERIC\_RADIX  
grok\_numeric\_radix  
grok\_oct  
gv\_fetchpvn\_flags  
gv\_fetchpvs  
gv\_stashpvn  
gv\_stashpvs  
GvSVn  
hv\_fetchs  
hv\_stores  
HvNAME\_get  
HvNAMELEN\_get  
IN\_LOCALE  
IN\_LOCALE\_COMPILETIME  
IN\_LOCALE\_RUNTIME  
IN\_PERL\_COMPILETIME  
INT2PTR  
IS\_NUMBER\_GREATER\_THAN\_UV\_MAX  
IS\_NUMBER\_IN\_UV  
IS\_NUMBER\_INFINITY  
IS\_NUMBER\_NAN  
IS\_NUMBER\_NEG  
IS\_NUMBER\_NOT\_INT  
isALNUMC  
isASCII  
isBLANK  
isCNTRL  
isGRAPH  
isGV\_with\_GP  
isPRINT  
isPSXSPC  
isPUNCT  
isXDIGIT  
IVdf  
IVSIZE  
IVTYPE  
load\_module  
memEQ  
memNE  
MoveD  
mPUSHi  
mPUSHn  
mPUSHp  
mPUSHs  
mPUSHu  
mXPUSHi  
mXPUSHn

mXPUSHp  
mXPUSHs  
mXPUSHu  
MY\_CXT  
MY\_CXT\_CLONE  
MY\_CXT\_INIT  
my\_snprintf  
my\_sprintf  
my\_strlcat  
my\_strlcpy  
newCONSTSUB  
newRV\_inc  
newRV\_noinc  
newSV\_type  
newSVpvn  
newSVpvn\_flags  
newSVpvn\_share  
newSVpvn\_utf8  
newSVpvs  
newSVpvs\_flags  
newSVuv  
Newx  
Newxc  
Newxz  
NOOP  
NUM2PTR  
NVef  
NVff  
NVgf  
NVTYPE  
packWARN  
PERL\_ABS  
PERL\_BCDVERSION  
PERL\_GCC\_BRACE\_GROUPS\_FORBIDDEN  
PERL\_HASH  
PERL\_INT\_MAX  
PERL\_INT\_MIN  
PERL\_LONG\_MAX  
PERL\_LONG\_MIN  
PERL\_MAGIC\_arylen  
PERL\_MAGIC\_backref  
PERL\_MAGIC\_bm  
PERL\_MAGIC\_collxfrm  
PERL\_MAGIC\_dbfile  
PERL\_MAGIC\_dbline  
PERL\_MAGIC\_defelem  
PERL\_MAGIC\_env  
PERL\_MAGIC\_envelem  
PERL\_MAGIC\_ext  
PERL\_MAGIC\_fm  
PERL\_MAGIC\_glob  
PERL\_MAGIC\_isa  
PERL\_MAGIC\_isaelem  
PERL\_MAGIC\_mutex  
PERL\_MAGIC\_nkeys  
PERL\_MAGIC\_overload

PERL\_MAGIC\_overload\_elem  
PERL\_MAGIC\_overload\_table  
PERL\_MAGIC\_pos  
PERL\_MAGIC\_qr  
PERL\_MAGIC\_regdata  
PERL\_MAGIC\_regdatum  
PERL\_MAGIC\_regex\_global  
PERL\_MAGIC\_shared  
PERL\_MAGIC\_shared\_scalar  
PERL\_MAGIC\_sig  
PERL\_MAGIC\_sigelem  
PERL\_MAGIC\_substr  
PERL\_MAGIC\_sv  
PERL\_MAGIC\_taint  
PERL\_MAGIC\_tied  
PERL\_MAGIC\_tiedelem  
PERL\_MAGIC\_tiedscalar  
PERL\_MAGIC\_utf8  
PERL\_MAGIC\_uvar  
PERL\_MAGIC\_uvar\_elem  
PERL\_MAGIC\_vec  
PERL\_MAGIC\_vstring  
PERL\_PV\_ESCAPE\_ALL  
PERL\_PV\_ESCAPE\_FIRSTCHAR  
PERL\_PV\_ESCAPE\_NOBACKSLASH  
PERL\_PV\_ESCAPE\_NOCLEAR  
PERL\_PV\_ESCAPE\_QUOTE  
PERL\_PV\_ESCAPE\_RE  
PERL\_PV\_ESCAPE\_UNI  
PERL\_PV\_ESCAPE\_UNI\_DETECT  
PERL\_PV\_PRETTY\_DUMP  
PERL\_PV\_PRETTY\_ELLIPSES  
PERL\_PV\_PRETTY\_LTGT  
PERL\_PV\_PRETTY\_NOCLEAR  
PERL\_PV\_PRETTY\_QUOTE  
PERL\_PV\_PRETTY\_REGPROP  
PERL\_QUAD\_MAX  
PERL\_QUAD\_MIN  
PERL\_REVISION  
PERL\_SCAN\_ALLOW\_UNDERSCORES  
PERL\_SCAN\_DISALLOW\_PREFIX  
PERL\_SCAN\_GREATER\_THAN\_UV\_MAX  
PERL\_SCAN\_SILENT\_ILLDIGIT  
PERL\_SHORT\_MAX  
PERL\_SHORT\_MIN  
PERL\_SIGNALS\_UNSAFE\_FLAG  
PERL\_SUBVERSION  
PERL\_UCHAR\_MAX  
PERL\_UCHAR\_MIN  
PERL\_UINT\_MAX  
PERL\_UINT\_MIN  
PERL\_ULONG\_MAX  
PERL\_ULONG\_MIN  
PERL\_UNUSED\_ARG  
PERL\_UNUSED\_CONTEXT  
PERL\_UNUSED\_DECL

PERL\_UNUSED\_VAR  
PERL\_UQUAD\_MAX  
PERL\_UQUAD\_MIN  
PERL\_USE\_GCC\_BRACE\_GROUPS  
PERL\_USHORT\_MAX  
PERL\_USHORT\_MIN  
PERL\_VERSION  
Perl\_warner  
Perl\_warner\_nocontext  
PERLIO\_FUNCS\_CAST  
PERLIO\_FUNCS\_DECL  
PL\_bufend  
PL\_bufptr  
PL\_compiling  
PL\_copline  
PL\_curcop  
PL\_curstash  
PL\_DBsignal  
PL\_DBsingle  
PL\_DBsub  
PL\_DBtrace  
PL\_debstash  
PL\_defgv  
PL\_diehook  
PL\_dirty  
PL\_dowarn  
PL\_errgv  
PL\_error\_count  
PL\_expect  
PL\_hexdigit  
PL\_hints  
PL\_in\_my  
PL\_in\_my\_stash  
PL\_laststatval  
PL\_lex\_state  
PL\_lex\_stuff  
PL\_linestr  
PL\_na  
PL\_no\_modify  
PL\_parser  
PL\_perl\_destruct\_level  
PL\_perldb  
PL\_ppaddr  
PL\_rsfp  
PL\_rsfp\_filters  
PL\_signals  
PL\_stack\_base  
PL\_stack\_sp  
PL\_statcache  
PL\_stdingv  
PL\_Sv  
PL\_sv\_arenaroot  
PL\_sv\_no  
PL\_sv\_undef  
PL\_sv\_yes  
PL\_tainted

PL\_tainting  
PL\_tokenbuf  
pMY\_CXT  
pMY\_CXT\_  
Poison  
PoisonFree  
PoisonNew  
PoisonWith  
pTHX  
pTHX\_  
PTR2IV  
PTR2nat  
PTR2NV  
PTR2ul  
PTR2UV  
PTRV  
PUSHmortal  
PUSHu  
pv\_display  
pv\_escape  
pv\_pretty  
SAVE\_DEFSV  
START\_EXTERN\_C  
START\_MY\_CXT  
STMT\_END  
STMT\_START  
STR\_WITH\_LEN  
sv\_2pv\_flags  
sv\_2pv\_nolen  
sv\_2pvbyte  
sv\_2pvbyte\_nolen  
sv\_2uv  
sv\_catpv\_mg  
sv\_catpvf\_mg  
sv\_catpvf\_mg\_nocontext  
sv\_catpvn\_mg  
sv\_catpvn\_nomg  
sv\_catpvs  
sv\_catsv\_mg  
sv\_catsv\_nomg  
SV\_CONST\_RETURN  
SV\_COW\_DROP\_PV  
SV\_COW\_SHARED\_HASH\_KEYS  
SV\_GMAGIC  
SV\_HAS\_TRAILING\_NUL  
SV\_IMMEDIATE\_UNREF  
sv\_magic\_portable  
SV\_MUTABLE\_RETURN  
SV\_NOSTEAL  
sv\_pvn\_force\_flags  
sv\_pvn\_nomg  
sv\_setiv\_mg  
sv\_setnv\_mg  
sv\_setpv\_mg  
sv\_setpvf\_mg  
sv\_setpvf\_mg\_nocontext

sv\_setpvn\_mg  
sv\_setpvs  
sv\_setsv\_mg  
sv\_setsv\_nomg  
sv\_setuv  
sv\_setuv\_mg  
SV\_SMAGIC  
sv\_usepvn\_mg  
SV\_UTF8\_NO\_ENCODING  
sv\_uv  
sv\_vcatpvf  
sv\_vcatpvf\_mg  
sv\_vsetpvf  
sv\_vsetpvf\_mg  
SVf  
SVf\_UTF8  
SVfARG  
SvGETMAGIC  
SvIV\_nomg  
SvMAGIC\_set  
SvPV\_const  
SvPV\_flags  
SvPV\_flags\_const  
SvPV\_flags\_const\_nolen  
SvPV\_flags\_mutable  
SvPV\_force  
SvPV\_force\_flags  
SvPV\_force\_flags\_mutable  
SvPV\_force\_flags\_nolen  
SvPV\_force\_mutable  
SvPV\_force\_nolen  
SvPV\_force\_nomg  
SvPV\_force\_nomg\_nolen  
SvPV\_mutable  
SvPV\_nolen  
SvPV\_nolen\_const  
SvPV\_nomg  
SvPV\_nomg\_const  
SvPV\_nomg\_const\_nolen  
SvPV\_renew  
SvPVbyte  
SvPVX\_const  
SvPVX\_mutable  
SvREFCNT\_inc  
SvREFCNT\_inc\_NN  
SvREFCNT\_inc\_simple  
SvREFCNT\_inc\_simple\_NN  
SvREFCNT\_inc\_simple\_void  
SvREFCNT\_inc\_simple\_void\_NN  
SvREFCNT\_inc\_void  
SvREFCNT\_inc\_void\_NN  
SvRV\_set  
SvSHARED\_HASH  
SvSTASH\_set  
SvUOK  
SvUV

SvUV\_nomg  
SvUV\_set  
SvUVX  
SvUVx  
SvUVXx  
SvVSTRING\_mg  
UNDERBAR  
UTF8\_MAXBYTES  
UVof  
UVSIZE  
UVTYPE  
UVuf  
UVxf  
UVxf  
vload\_module  
vnewSVpvf  
WARN\_ALL  
WARN\_AMBIGUOUS  
WARN\_ASSERTIONS  
WARN\_BAREWORD  
WARN\_CLOSED  
WARN\_CLOSURE  
WARN\_DEBUGGING  
WARN\_DEPRECATED  
WARN\_DIGIT  
WARN\_EXEC  
WARN\_EXITING  
WARN\_GLOB  
WARN\_INPLACE  
WARN\_INTERNAL  
WARN\_IO  
WARN\_LAYER  
WARN\_MALLOC  
WARN\_MISC  
WARN\_NEWLINE  
WARN\_NUMERIC  
WARN\_ONCE  
WARN\_OVERFLOW  
WARN\_PACK  
WARN\_PARENTHESES  
WARN\_PIPE  
WARN\_PORTABLE  
WARN\_PRECEDENCE  
WARN\_PRINTF  
WARN\_PROTOTYPE  
WARN\_QW  
WARN\_RECURSION  
WARN\_REDEFINE  
WARN\_REGEXP  
WARN\_RESERVED  
WARN\_SEMICOLON  
WARN\_SEVERE  
WARN\_SIGNAL  
WARN\_SUBSTR  
WARN\_SYNTAX  
WARN\_TAINT

```
WARN_THREADS
WARN_UNINITIALIZED
WARN_UNOPENED
WARN_UNPACK
WARN_UNTIE
WARN_UTF8
WARN_VOID
warner
XCPT_CATCH
XCPT_RETHROW
XCPT_TRY_END
XCPT_TRY_START
XPUSHmortal
XPUSHu
XSperePUSH
XSPROTO
XSRETURN
XSRETURN_UV
XST_mUV
ZeroD
```

### Perl API not supported by ppport.h

There is still a big part of the API not supported by *ppport.h*. Either because it doesn't make sense to back-port that part of the API, or simply because it hasn't been implemented yet. Patches welcome!

Here's a list of the currently unsupported API, and also the version of Perl below which it is unsupported:

perl 5.11.0

```
HeUTF8
MULTICALL
PERL_SYS_TERM
POP_MULTICALL
PUSH_MULTICALL
SvOOK_offset
av_iter_p
croak_xs_usage
fetch_cop_label
gv_fetchmethod_flags
hv_assert
mro_get_from_name
mro_get_private_data
mro_register
mro_set_mro
mro_set_private_data
pad_sv
pregfree2
ref
save_adelete
save_helem_flags
save_padsv_and_mortalize
save_pushptr
stashpv_hvname_match
sv_insert_flags
sv_utf8_upgrade_flags_grow
```

## perl 5.10.0

- hv\_common
- hv\_common\_key\_len
- sv\_destroyable
- sys\_init
- sys\_init3
- sys\_term

## perl 5.9.5

- Perl\_signbit
- SvRX
- SvRXOK
- av\_create\_and\_push
- av\_create\_and\_unshift\_one
- get\_cvn\_flags
- gv\_fetchfile\_flags
- mro\_get\_linear\_isa
- mro\_method\_changed\_in
- my\_dirfd
- pregcomp
- ptr\_table\_clear
- ptr\_table\_fetch
- ptr\_table\_free
- ptr\_table\_new
- ptr\_table\_split
- ptr\_table\_store
- re\_compile
- re\_intuit\_start
- reg\_named\_buff\_all
- reg\_named\_buff\_exists
- reg\_named\_buff\_fetch
- reg\_named\_buff\_firstkey
- reg\_named\_buff\_nextkey
- reg\_named\_buff\_scalar
- regfree\_internal
- savesharedpvn
- scan\_vstring
- upg\_version

## perl 5.9.4

- PerlIO\_context\_layers
- gv\_name\_set
- my\_vsnprintf
- newXS\_flags
- regclass\_swash
- sv\_does
- sv\_usepvn\_flags

## perl 5.9.3

- av\_arylen\_p
- ckwarn
- ckwarn\_d
- csighandler
- dMULTICALL

doref  
gv\_const\_sv  
hv\_eiter\_p  
hv\_eiter\_set  
hv\_name\_set  
hv\_placeholders\_get  
hv\_placeholders\_p  
hv\_placeholders\_set  
hv\_riter\_p  
hv\_riter\_set  
is\_utf8\_string\_loclen  
newGIVENOP  
newSVhek  
newSVpvs\_share  
newWHENOP  
newWHILEOP  
savepvs  
sortsv\_flags  
vverify

#### perl 5.9.2

SvPVbyte\_force  
find\_rundefsvoffset  
gv\_fetchsv  
op\_refcnt\_lock  
op\_refcnt\_unlock  
savesvpv  
vnormal

#### perl 5.9.1

hv\_clear\_placeholders  
hv\_scalar  
scan\_version  
sv\_2iv\_flags  
sv\_2uv\_flags

#### perl 5.9.0

new\_version  
save\_set\_svflags  
vcmp  
vnumify  
vstringify

#### perl 5.8.3

SvIsCOW  
SvIsCOW\_shared\_hash

#### perl 5.8.1

SvVOK  
doing\_taint  
find\_runcv  
is\_utf8\_string\_loc  
packlist

```
save_bool
savestack_grow_cnt
seed
sv_cat_decode
sv_compile_2op
sv_setpviv
sv_setpviv_mg
unpackstring
```

#### perl 5.8.0

```
hv_iternext_flags
hv_store_flags
is_utf8_idcont
nothreadhook
```

#### perl 5.7.3

```
PerlIO_clearerr
PerlIO_close
PerlIO_eof
PerlIO_error
PerlIO_fileno
PerlIO_fill
PerlIO_flush
PerlIO_get_base
PerlIO_get_bufsiz
PerlIO_get_cnt
PerlIO_get_ptr
PerlIO_read
PerlIO_seek
PerlIO_set_cnt
PerlIO_set_ptrcnt
PerlIO_setlinebuf
PerlIO_stderr
PerlIO_stdin
PerlIO_stdout
PerlIO_tell
PerlIO_unread
PerlIO_write
SvLOCK
SvSHARE
SvUNLOCK
atfork_lock
atfork_unlock
custom_op_desc
custom_op_name
deb
debstack
debstackptrs
gv_fetchmeth_autoload
ibcmp_utf8
my_fork
my_socketpair
pack_cat
perl_destruct
pv_uni_display
```

```
save_shared_pvref
savesharedpv
sortsv
sv_copypv
sv_magicext
sv_nolocking
sv_nosharing
sv_recode_to_utf8
sv_uni_display
to_uni_fold
to_uni_lower
to_uni_title
to_uni_upper
to_utf8_case
to_utf8_fold
to_utf8_lower
to_utf8_title
to_utf8_upper
unpack_str
uvchr_to_utf8_flags
uvuni_to_utf8_flags
vdeb
```

#### perl 5.7.2

```
calloc
getcwd_sv
init_tm
malloc
mfree
mini_mktime
my_atof2
my_strftime
op_null
realloc
sv_catpv_n_flags
sv_catsv_flags
sv_setsv_flags
sv_utf8_upgrade_flags
sv_utf8_upgrade_nomg
swash_fetch
```

#### perl 5.7.1

```
POPpbytex
bytes_from_utf8
despatch_signals
do_openn
gv_handler
is_lvalue_sub
my_popen_list
save_mortalizesv
scan_num
sv_force_normal_flags
sv_setref_uv
sv_unref_flags
sv_utf8_upgrade
```

```
utf8_length
utf8_to_uvchr
utf8_to_uvuni
utf8n_to_uvuni
uvuni_to_utf8
```

#### perl 5.6.1

```
SvGAMAGIC
apply_attrs_string
bytes_to_utf8
gv_efullname4
gv_fullname4
is_utf8_string
save_generic_pvref
utf16_to_utf8
utf16_to_utf8_reversed
utf8_to_bytes
```

#### perl 5.6.0

```
PERL_SYS_INIT3
SvIOK_UV
SvIOK_notUV
SvIOK_only_UV
SvPOK_only_UTF8
SvPVbyte_nolen
SvPVbytex
SvPVbytex_force
SvPVutf8
SvPVutf8_force
SvPVutf8_nolen
SvPVutf8x
SvPVutf8x_force
SvUOK
SvUTF8
SvUTF8_off
SvUTF8_on
av_delete
av_exists
call_atexit
cast_i32
cast_iv
cast_ulong
cast_uv
do_gv_dump
do_gvgv_dump
do_hv_dump
do_magic_dump
do_op_dump
do_open9
do_pmop_dump
do_sv_dump
dump_all
dump_eval
dump_form
dump_indent
```

dump\_packsubs  
dump\_sub  
dump\_vindent  
get\_context  
get\_ppaddr  
gv\_dump  
init\_i18nl10n  
init\_i18nl14n  
is\_uni\_alnum  
is\_uni\_alnum\_lc  
is\_uni\_alnumc  
is\_uni\_alnumc\_lc  
is\_uni\_alpha  
is\_uni\_alpha\_lc  
is\_uni\_ascii  
is\_uni\_ascii\_lc  
is\_uni\_cntrl  
is\_uni\_cntrl\_lc  
is\_uni\_digit  
is\_uni\_digit\_lc  
is\_uni\_graph  
is\_uni\_graph\_lc  
is\_uni\_idfirst  
is\_uni\_idfirst\_lc  
is\_uni\_lower  
is\_uni\_lower\_lc  
is\_uni\_print  
is\_uni\_print\_lc  
is\_uni\_punct  
is\_uni\_punct\_lc  
is\_uni\_space  
is\_uni\_space\_lc  
is\_uni\_upper  
is\_uni\_upper\_lc  
is\_uni\_xdigit  
is\_uni\_xdigit\_lc  
is\_utf8\_alnum  
is\_utf8\_alnumc  
is\_utf8\_alpha  
is\_utf8\_ascii  
is\_utf8\_char  
is\_utf8\_cntrl  
is\_utf8\_digit  
is\_utf8\_graph  
is\_utf8\_idfirst  
is\_utf8\_lower  
is\_utf8\_mark  
is\_utf8\_print  
is\_utf8\_punct  
is\_utf8\_space  
is\_utf8\_upper  
is\_utf8\_xdigit  
magic\_dump  
mess  
my\_atof  
my\_fflush\_all

newANONATTRSUB  
newATTRSUB  
newXS  
newXSproto  
new\_collate  
new\_ctype  
new\_numeric  
op\_dump  
perl\_parse  
pmop\_dump  
re\_intuit\_string  
reginitcolors  
require\_pv  
safesyscalloc  
safesysfree  
safesysmalloc  
safesysrealloc  
save\_I8  
save\_alloc  
save\_destructor  
save\_destructor\_x  
save\_re\_context  
save\_vptr  
scan\_bin  
set\_context  
set\_numeric\_local  
set\_numeric\_radix  
set\_numeric\_standard  
str\_to\_version  
sv\_2pvutf8  
sv\_2pvutf8\_nolen  
sv\_force\_normal  
sv\_len\_utf8  
sv\_pos\_b2u  
sv\_pos\_u2b  
sv\_pv  
sv\_pvbyte  
sv\_pvbyten  
sv\_pvbyten\_force  
sv\_pvutf8  
sv\_pvutf8n  
sv\_pvutf8n\_force  
sv\_rvweaken  
sv\_utf8\_decode  
sv\_utf8\_downgrade  
sv\_utf8\_encode  
swash\_init  
tmps\_grow  
to\_uni\_lower\_lc  
to\_uni\_title\_lc  
to\_uni\_upper\_lc  
utf8\_distance  
utf8\_hop  
vcroak  
vform  
vmess

vwarn  
vwarner

#### perl 5.005\_03

POPpx  
get\_vtbl  
save\_generic\_svref

#### perl 5.005

PL\_modglobal  
cx\_dump  
debop  
debprofdump  
fbm\_compile  
fbm\_instr  
get\_op\_descs  
get\_op\_names  
init\_stacks  
mg\_length  
mg\_size  
newHVhv  
new\_stackinfo  
regdump  
regexec\_flags  
regnext  
runops\_debug  
runops\_standard  
save\_iv  
screaminstr  
sv\_iv  
sv\_nv  
sv\_peek  
sv\_pvn  
sv\_pvn\_nomg  
sv\_true

#### perl 5.004\_05

do\_binmode  
save\_aelem  
save\_helem

#### perl 5.004

GIMME\_V  
G\_VOID  
HEf\_SVKEY  
HeHASH  
HeKEY  
HeKLEN  
HePV  
HeSVKEY  
HeSVKEY\_force  
HeSVKEY\_set  
HeVAL

SvSetMagicSV  
SvSetMagicSV\_nosteal  
SvSetSV\_nosteal  
SvTAINTED  
SvTAINTED\_off  
SvTAINTED\_on  
block\_gimme  
call\_list  
cv\_const\_sv  
delimcpy  
do\_open  
form  
gv\_autoload4  
gv\_efullname3  
gv\_fetchmethod\_autoload  
gv\_fullname3  
hv\_delayfree\_ent  
hv\_delete\_ent  
hv\_exists\_ent  
hv\_fetch\_ent  
hv\_free\_ent  
hv\_iterkeysv  
hv\_ksplit  
hv\_store\_ent  
ibcmp\_locale  
my\_failure\_exit  
my\_memcmp  
my\_pclose  
my\_popen  
newSVpvf  
rsignal  
rsignal\_state  
save\_I16  
save\_gp  
share\_hek  
start\_subparse  
sv\_catpvf  
sv\_catpvf\_mg  
sv\_cmp\_locale  
sv\_derived\_from  
sv\_gets  
sv\_magic\_portable  
sv\_setpvf  
sv\_setpvf\_mg  
sv\_taint  
sv\_tainted  
sv\_untaint  
sv\_vcatpvf  
sv\_vcatpvf\_mg  
sv\_vcatpvfn  
sv\_vsetpvf  
sv\_vsetpvf\_mg  
sv\_vsetpvfn  
unsharepvn  
vnewSVpvf  
warner

## BUGS

If you find any bugs, `Devel::PPort` doesn't seem to build on your system or any of its tests fail, please use the CPAN Request Tracker at <http://rt.cpan.org/> to create a ticket for the module.

## AUTHORS

- Version 1.x of `Devel::PPort` was written by Kenneth Albanowski.
- Version 2.x was ported to the Perl core by Paul Marquess.
- Version 3.x was ported back to CPAN by Marcus Holland-Moritz.

## COPYRIGHT

Version 3.x, Copyright (C) 2004-2009, Marcus Holland-Moritz.

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## SEE ALSO

See *h2xs*, *ppport.h*.