



3. [FreeBSD general questions mailing list](#) <sup>2</sup> ÉÉ {6 ú8} >1cF-) ô} ÆsK. 27Xv op 8q< (; D S•; # p< <sup>2</sup> R?Cg" gÀ ÆB ~% |)Z `@;7A 4 5W?@; 27X% ú8} ÉÉ ¿¿- B-® >< óA 4g 5W?@! # ïC; % 3 ~; V 0#î}V •D# v1g >?@.

## 1.2. /01234 5, 67 89:

210 4"È ~; |@46 „Ei Gñ òU {6 FreeBSD "a0 |i F# 56 8q, ú8} G @<sup>2</sup> KH>?@. A7(, "ûúI# R"; < Qi -Ti °»; g †# 5W?@.

1. `õ 27X# FreeBSD-CURRENT<sup>2</sup> J€D 5D ' ĀKj?# \*+@', CLO i -Mo\* N€0<sup>2</sup> P;C6 current. FreeBSD.org # 5W?@Ñ ÉÉ ä# N€0<sup>2</sup> ÷ÜR , D m>0• ûÊ+ uQC' <, R ÆsK.
2. [FreeBSD problem reports mailing list](#) <sup>2</sup> ô} , sK. 27X# èŠ< RĪ 4 5•( RŪ<sup>2</sup> ¾/Rž 4 56 p<; # 5< 4 5W?@. {6 ú8} A>; ê C(<sup>2</sup> ¿¿- DSž 4g 5<sup>8</sup>K.
3. `õ 27X# -CURRENT0•6 DST8` „Ei Gñ# 8U V(|\*- õ 2Æ>g)0g -STABLE0 W`v8 Ū%™A<sup>2</sup> •D 5@', "œĀ0\ XV Y- •Z< , é ÆsK.
4. contributed software<sup>2</sup> =¿ /€V src/contrib F- [ \ ÆsK.
5. src/contrib V =¿ ]i<sup>2</sup> ä# „1- -8G^ ÆsK.
6. /+c ±D \_G<sup>2</sup> `d<sup>1</sup>i a =¿ /€ ({6 A ~Ÿ) P; <sup>2</sup> R , D ±D+ (½(6 ét< 4>R ÆsK.
7. [gets\(\)](#) < STC•( malloc.h < includeC6 Ī deprecateÈ 9: < STC6 i/+ 5F' ±D<sup>2</sup> 4>R ÆsK.
8. 27X# FreeBSD0 bg" RŪi ports0 12c@', A RŪ<sup>2</sup> • 4U0\ , é ÆsK (#μ\ C' A; # @x™b< dG3 ¶ 27X# 3 ~# ef ñgR^ >Đ?@).
9. POSIX` À h% i q \_Í; < N5 , sK. A€D FreeBSD+ A7i \_Í# KHC6 èj0 k@v68 Ī' R , sK. `õ Aμ8 þC@', ÇZ \_ÍV S=C•( lXøi ŸX0•V ±“0, A0 |i PR< , é ÆsK. +mC@', }á\ DŪ68<sup>2</sup> n0• PRO RŪ<sup>2</sup> ïðG^ ÆsK. `õ \_Í# ýþvú@D QoÈ@', RE \_Í< Ñ€C6 ) \*0 pVR , sK.
10. # • "0 /+3 @- ~; < < pR ÆsK!

## 1.3. PR ; ) <=) >0 ? @:

[FreeBSD PR list](#) <sup>6</sup> FreeBSD STU0 VR <dÈ y6 p<à , DÀ &q Sf KŪ< rD 5W?@. PR w#Ā!#¿6 , -Aæè °»ms-, -Aæè °»< yt ïð>?@. PR; < N5, D, uœ-® ># 568 N5 , sK. #; ê ~Ÿ6 ā“ ñ)R• ; J+ N5, D PRO ïðÈ 4> Sf# < | - v} 568` Ī' C' ' ?@. @- >; % ...vwC•(, ú8}6 4> Sf# 0X ïðv8 Ū0 5< 4g 5W?@.

@- ; J++ xD 58 Ū% PRŸĀ G°CsK. `õ @- ; J++ PR< xD 56w 27X# R?3 4 56 >yC , '@', xD 56 S•0\ #z~< , é• 27X# °»Rg %%8 KŪR , sKĪÑA; % #œ ¾¿/|< Ís+ v} 56 RŪ<sup>2</sup> +8D 5•(, 27XmV{3 `i 0#î}<sup>2</sup> +8D 5< 4g 5W?@.

## 1.4. 67AB CD 89:

ï/ |}Ā% ~8# r•vd 56 °»Đ?@. “€6 STU; 0\ STC1 €D, ä# „1- -8v•, , % Ō^V <3U =, /à} 4e=<sup>2</sup> <i CD E}>?@. “€6 # • \_<sup>2</sup> fdC1 QR òñV Gñm<p< òUR gĀĪ S•; # fK>?@.

; H( •23 4 5D, •2C6 9: % 27 +8+ 5W?@. ï/0 12C6 >% , -. /0 ŪŠ+<sup>2</sup> "vJŠ ÆB" >< „6 LMĪ 9: Đ?@. 27X# <sup>3</sup>´Œ56 . 3< nD 568, 0?' s ù6 ... 3 `i ^œU ~•€<sup>2</sup> nD 568 ñ0, “€6 27X# gÀ Ī@' Û†#( 1† >Đ?@!

ï/ /€<sup>2</sup> ä# „1- -8CD ý Ō°3 4 5g" -8C1 QR 3 4 56 27 ^® 9: ; # 5W?@:

¥ %8•( -Ti =, /à}<sup>2</sup> n0 ï/ <sup>2</sup> `; } ÆsK.

¥ Ñ€U+ 86 i /; # †# 5W?@. Ñ€U+ v} Ñ€v8 Ú6 i /<sup>2</sup> 3<sup>ˆ</sup>81R ÆsK.

¥ `õ 27X# i /<sup>2</sup> `; ú• ( Ñ€C1- f¤¥ú@' , i / Ñ€U<sup>2</sup> Qi go m•0 |R •0 , sK.

¥ Š... <È\ ~€4 56 ~< nD 5@' DeU i /<sup>2</sup> n0éD DÜ1 ÆsK.

## 1.5. Ideas E) F! GH I J A \$K4 LM\$N+

FreeBSD , - . /0 12CD E}C6 S•; % U•ŽSU<sup>2</sup> Qi FreeBSD t•m0#i } . "< N5ž 4 5W?@. # . "% >1cF- Ž#v• , -Aæë °»ms-  
 , -Aæë °»0 |i f• ; # ÷ømđ• <Gv} 5W?@.

## 2. %OP " #? Q GK+

GjÄO 12C6 9: % |& @¤V 5+8 ê i +8 {6 A #, 0 RE' ?@:

### 2.1. R1 STU VWX YZ

%&' ( 1nc ÑûS0 |i 0#i } ( <p% [FreeBSD technical discussions mailing list](#)0 z~< , é, >?@. f•+8-, A7i éT0 Ñû#  
56 (A€D) \*+ z~< ; <' ' €' éû# 56) S•; % [FreeBSD technical discussions mailing list](#)<sup>2</sup> H"C' ' ?@. #À ...l } @- z~"  
€j/0 |i ... †% >, 6 [The FreeBSD Handbook](#)0• n0ž 4 5W?@.

~ 27X# <sup>TM</sup>A<sup>2</sup> n0•• ( Ç×i 4>< <dCDU i@' , [bug submission form](#)< #TR ÆsK. bug reportV o f. < üdC1 QR <BR ÆsK.  
RÜV z1+ 65KB<sup>2</sup> -8 Ú6@' , report0 ý! RÜ<sup>2</sup> -ÿR ÆsK. RÜ+ =j /€0 cTv10 c>C@' reportV synopsis ÝX0 [PATCH]<sup>2</sup> c }  
ÆsK. RÜ<sup>2</sup> -ÿ3 ¶, vS-~2<sup>TM</sup>1<sup>2</sup> #TC' š# i >(space)F- Yœ} cT# 1+mR18 ¶p0 vS-~2<sup>TM</sup>1 9qF- -ÿC' , -. /. RÜ+ 20KB, @ ef  
z@' , »- j C1 o0 ([gzip\(1\)](#)) # ([bzip2\(1\)](#)) Ì< #TC2) •žC6 >< DSR , sK.

report<sup>2</sup> <di #V0, 27X% tracking number+ 56 Î' z~< ]< Ý?@. # p<0 |i „si Sf< »w#/3 4 5g" tracking number<sup>2</sup>  
, ÑR tsK.

%% problem report<sup>2</sup> °dC1 QR•6 # [article](#)< •DCsK.

### 2.2. [ \ Q ] \$ "

p•V g % [FreeBSD documentation project mailing list](#)0 VR Ñ€' ?@. o\*c' 9: 0 |R•6 [FreeBSD Documentation Project Primer](#)<sup>2</sup> •DR ÆsK. @-<sup>TM</sup>A €i /À h% 9: < STR• <d ç g (S=i >#ag °->?@!) éT< , é ÆsK.

### 2.3. " ^ \_> ` a Q ] \$ "

1†V =j ] ; 0 ŨŠ+<sup>2</sup> /+C• ( 4>C6 >% B@-® °»#• 27X# FreeBSD &uV ä# „1-ÿÄ ; f( c€ f }¤ 5¥|0 Ša z\ ~" < ]W?@. GjÄO |R  
`ÖcF- °»C6 &uU; V 27 gV<sup>2</sup> QR ` ; }r "FreeBSD-CURRENT"a6 Ç×i on-going N€0+ 5W?@. FreeBSD-CURRENT<sup>2</sup>  
÷ÜCD STC6 9: 0 |i >, 6 [The FreeBSD Handbook](#)0• n0ž 4 5W?@.

ùæÈ =j- °»C6 >% l•Zg 27XV 4># ÉÉ #œ fk8\ v• ( FreeBSD0 cTv10 }ŠA 4g 5@6 >< Vœ>?@. GjÄV ä# „10 |i {V+ #L}86  
[FreeBSD announcements mailing list](#)À [FreeBSD-CURRENT mailing list](#) €j/<sup>2</sup> H"C' , #7i +md< ä=13 4 5W?@.

Assuming that you can manage to secure fairly up-to-date sources to base your changes on, the next step is to produce a set of diffs to send to the FreeBSD maintainers. #6 [diff\(1\)](#) øk}<sup>2</sup> #TC2 #L} ?@.

RÜ² <dC6 w q@v6 diff(1) (q% di ff -u 0 VR Qdv, C(- a>È dPÐ?@.

```
% di ff -u oldfile newfile
```

{6

```
% di ff -u -r -N olddir newdir
```

6 Æ}r =ç «~ {6 î}-€0 !R C(- a>È diff² Qd3 >Ð?@.

diff(1)0 ... †%>, + 5W?@.

27X# diff «~< `;ú@' (A€D patch(1) øk}- Î' c@'), FreeBSD0 WC1 QR ™A €i/V (qF- <dR, >?@. diff² A' FreeBSD technical discussions mailing list0 , é8 012! A>; % -@^8g yß?@. “€6 27XV <d< Û†#( ØSZ 21D 5W?@` (#>% U•ŽS0 VR #L} ?@!); “€6 Y-1 ¶p0, ¶¶- Y- °»0 °43 4 8< 4g 5W?@. A>% “€+ 3 ¶B8 PR w#Á¼#ç0 PO 5< >Ð?@. <d3 ¶ €i/V synopsis0 [PATCH]< ï ðG^• RÛa6 >< •§ ÆsK.

c>C@D Qov6 ±“0 (X² ;} B «~< /+c•(, 1†V «~< ±c•(, «~V #²< Y³ ±“), A Y³ éT< tar «~ -ÿR ÆsK. shar(1)F- QdÈ 0`#µg \*+W?@.

`õ 27XV 4># ¶^cF- ·Ø3 4 56 Sf< ïðCD 5@', X² ;} óiÀ ÑÒÈ a#qç p<0 !R Î## 86 ±“a', ™A €i/- <dC6 !# } } , core@FreeBSD.org0 ý! , é ÆsK. } } , core@FreeBSD.org% FreeBSD0 !R Ñi †% ~< ã- C6 S•;V °% y´Ð?@. #;% 34 567 ¶p0, ¹ fKi ±“0` z~< , é ÆsK.

]° ç½-0 !R•6 intro(9)À style(9)² •èR ÆsK. 27X# ]j² <dC1 o0 # >, 0 !R ä=i •D 5ú@' “€6 ØS3 >Ð?@.

## 2.4. b0c `a dH e+, f - - g hi F:

» xyV °»0• „Ei 12² C6 ±“0, ¼% FreeBSD0 B¼Ð èKi 1m< /+C6 ±“0, 4>i éT< @- S•# ¼sç3 4 5g" tar «~ (qF- , é•( í/FTP S#/0 »- ç6 >% •V Š< ( fK>?@. `õ 27X# ¼sç3 4 56 í {6 FTP S#/+ 8@', ççi FreeBSD z~” €ç/0 27XV 4>Sf< ©çÀRİ >< KÛCsK.

†% hV ]j0 !R °»3 ¶, 4°Ô0 !i ·Øi Æ< . G Š< ( (¼Á?@. FreeBSD6 BSD {6 ISC (qV ùÁ =ç a#qç² q@>?@. GPLv2À h% ´ÄÄ, / a#Áç . G ÉÉ ÆT' ?@. o\*c' . "% } } , a#qç >³ Ç#80• n0ž 4 5W?@.

## 2.5. j k dH \$al %

“€6 FreeBSD , -. /² uoGÈ1 Qi 1ÿ² ]6 >< ã“ 1~\ 21D 5F•, “€À h# U•ŽS <Ð< 3 ¶0, õñV 1ÿg †% ~< RE 4 5W?@! “€6 ~WcF- fKi es² ý! HÐ3 2~+ 81 ¶p0, 8• +mi es² Î |C1 QR Cj`à}² 1ÿ]6 > . G ã“ èK>?@.

### 2.5.1. mn! "f\$"

FreeBSD ^)% FreeBSD , -. /V . \_² uoGÈ1 QR ÷çÈ s~€ , smsV ) \*Ð?@. 501(c)3V É•F-•, FreeBSD ^)% Colorado Æ =Ès\_` 0?a æ, j 9 =Èsg ' < ]W?@. sms ) \*0 1ÿC6 >% ÉÉ ms !, , j 9 =ÈF-ÿÄ i < ]< 4 5W?@.

1ÿC1 QR•6 @v Æ-- 4\_² , é ÆG' ' ?@:

The FreeBSD Foundation  
3980 Broadway Street  
STE #103-107  
Boulder CO 80304  
USA

FreeBSD ^) % # < Paypal < ai Ěa' 1Ÿg JD 5W?@. 1ŸC1 QR•6, ^) í S# / 2 9pR ĚsK.

FreeBSD ^) 0 | i ... †% >, 6 [The FreeBSD Foundation](#) Ěan Introduction 0• n0ž 4 5W?@. #z~ ^) 0 j ÓCS', [bod@FreeBSDFoundation.org](mailto:bod@FreeBSDFoundation.org) < #TCsK.

### 2.5.2. \$al % " f \$"

FreeBSD , -. /6 -TC \ STĪ 4 56 C; à } V 1Ÿ2 1 - \ ] 0; #D 5W?@. ~ 27X# C; à } 1Ÿ0 Ńû# 5@', [Donations Liaison Office](#) 0 j ÓR ĚsK.

## 3. CD! " # \$"

### 3.1. opqF rH CD4 stF"

#### 3.1.1. opqF rH CD LMS"

ŃĚv8 Ú6 ĩ / 2 3 ' 86 > % • 2C10 % % 9: Đ?@. ŃĚv8 Ú6 ĩ / 6 ; J++ U•ŽS- ° » 3 ¶ 0` » w# / vD DS ?@. ŃĚv8 Ú6 ĩ / 6 † # 5W?@. 27X# > 1cF- STC6 ĩ / 2 3 ' 86 > ŸĀ G°R , ' % < > Đ?@.

ŃĚv8 Ú6 ĩ / 6 A MAINTAINER# [ports@FreeBSD.org](mailto:ports@FreeBSD.org) - † > v } 5W?@. ŃĚv8 Ú6 ĩ / À A > ; V Í ^ p < à ç problem reports 0 | i . "% [Ports Monitoring System](#) 0• n0ž 4 5W?@.

} š ĩ / 6 A V † d Ńt ¶ p 0 @ - † % ĩ / 0 - - < œĪ 4 5W?@. ~ WcF-, "€6 S•; # A7i ĩ / 2 ŃĚC1 o0 ðñV ± Ī < Rž > < • > ?@.

INDEX aD # 2 ~ 2r ĩ / V £ ĵ Ā ' Đ ĵ 2 N5, ' ĩ / V V † d Ńt 2 « Ń3 4 5W?@. (« - V # 2 % FreeBSDV N€00 Ša @ 2 4 5W?@; X 2 ; }, INDEX-8.) ~ Ÿ ĩ / 6 10 INDEX P; 06 ĩ ðv8 Ú6 Ÿ + c' V † d Ńt 2 + 8D 5W?@. "€6 27X# @ - ĩ / V Makefile < N50F-Ó #7i ĩ / 2 n0€4 51 2 1 | > ?@.

#### 3.1.2. CD4 stFH uv

"q ĩ / ŃĚU 2 Qi go m 0 | R ø Ī Z #RR, > ?@. { [PorterĚ Handbook](#) < ô } , sK. 89: ; <, # = / > ) ?@ ABC DEFF GHI J2K LM /.

27X% • i @' ŃĚv8 Ú6 ĩ / V ŃĚ Ői < Š < 68 KŪ3 4 5W?@. A' MAINTAINER < 27XV #z~ Ě - † > CD RE éT < PR(Problem Report) - , é ĚsK. ĩ / 0 P; 07+ 5 • ( » w# / + fKC@', h% PR0 A7i 4 > éT < ĩ ðRg %W?@. † % "œĀ; % FreeBSD0 PŐ Őc# 86 ; J+0 \ ŃĚ Ői < Ÿ2CD E } C8 Ú1 ¶ p 0, #6 g%# v6 • Ő ~ > Đ?@. P; ù Ě 2 DŪ • ( ĩ / 2 » w# / C6 PR < < dC6 > % #7i Őc < P16 + e % % 9: Đ?@.

27XV PR < [ports](#) ' 3D€Ā change-request Őæ ĵ - † > i a < dR ĚsK. "œĀ+ 27XV PR < 2 - CD, 4 > Sf < " > CD, £0é PR < ĚŪGŪ > Đ?@. # m > % ĚĚ Gñ# ŪN 4g 5W?@ ("œĀ; . G U•ŽSU; Đ?@: ).

## 3.2. CD opw4 5, ' k xy

# f.% i/+ ÑÉv}, C6 #¬ ç i/ ÑÉUV ³´0 |R ÷øRĪ >Đ?@.

### 3.2.1. CDz op- \*+, ) {

i/² `j6 ~% ~Éd °»Đ?@. i/+ ä# „1' 8, A€D Pj ç ``•# p<8# v68² Î' C6 ~% 8bc' Ñ€ <P# fK>?@. ÑÉU6 A; V Gñ ê ~Ý² # · \_² fdC6 w òUC6 S•; Đ?@.

i/0 Ñ€+ fKi +e ÆKi #-6 FreeBSD ”•?-0 ä#V †% 3rd party =, /à}² <iC1 QđĐ?@. /+c' ·\_6 ooV i/; # 8bcF- &qv}g tb i/ |}Â , Ä´Üz p0• Ö°3 4 5g" -8GÈ1 QđĐ?@.

ÑÉU-•, 27X% @αV go mk ; < rE3 fK+ 5W?@:

¥ b0c \_/Dl % Rk | 9; ) D. iÀÈ =, /à}0 |R•6 Š<68 B-®™om»w#/+ 5< 4 5D, ä#V =, /à}² <iC1 QR• #; % i/ |}ÂÖ iđĪ fK+ 5W?@.

¥ }~• CD- Q] q€• , f. 27XV i/0 ÉbÈ i/+ z\ 4>vú< ±“, 27XV i/ . G ÝYË\ Ö°C1 QR »w#/v}, 3 4 5W?@.

¥ }~• CD! „...• †gH Q] †I: . `~ 27X# Ñ€C6 i/0 @-i/+ V†CD 5@, 27X% 27XV i/² 4>C1 QR @- ÑÉU; miÖ °»< R, 3 4g 5W?@.

¥ ^%₀ †Šw, opw | < ĞwUz \_•. ÑÉU-•V .3 ê C(6 8•UV .3Đ?@. ~Wc' 8•< <iR, 3 fK6 8W?@ (27X# Aμ\ i@' “€6 °-3 >Đ?@). 27X# <iR, C6 >% FreeBSD °±0• 27XV i/0 (½(6 Ç>i p<; V R?0 g%‰ ÆB >Đ?@.

¥ R1 ŽXS". i/6 FreeBSD °±0• Ç>C\ (½(6 ™AV -¨< ]< 4g 5W?@. 27X% A7i ™A; # <, vú< ¶ ěSCD, n0ÉD, #; < DS, >?@. i/ |}ÂÖ ™1 o0 i/² o\*cF- ¾/R, 6 >% ...\$ %W?@.

¥ CDz " W | |sz Q] ¶¶- i/À RÈ8² PjC6 w STv6 G;Äš »w#/v•( A 1W0 -¨< œÛ6 B-® <p# (ù1g >?@. 27X% 27XV i/+ -¨< ]0 »w#/² fK- C\ Ī ±“² QR #7i P¹0 |R •D 5} , >?@.

¥ =) > •>•z Q] . FreeBSD6 8bcF- &uvD 5W?@. =, /à}, a#μ7€, ”a {6 ú8} >³# Yœ' i/ . G Uj ĵB\ 4># fKR^ 4 5W?@.

### 3.2.2. opw0\z st

#### 3.2.2.1. #' ' z CD4 “ ” •-0 {FŠN+

# f.% 27XV i/² ä# „1- -8GÈ1 Qi m>< ÷øCD 5W?@.

#>% &àc' éTĐ?@. i/² »AÄ#jC6 >0 |i ... Usi >, 6 [Porter's Handbook](#)• n0ž 4 5W?@.

1. »w#/ 8^, 1

=, /à}V B-®™b, »w#/ A€D , p 4> Sf< QR upstream vendor² ÆGCsK. #² QR• announcement z~” €j/ {6 áj í Ç#8+ g%# Ī >Đ?@. STU; # ÉÉ 27X0\j ÓR• 27XV i/+ Š< »w#/Ī >' 80 |R pV3 4 5W?@. `ö 27X# @-#- Y~•( 8â »w#/3 4 86 }š #¬+ 5@, A; 0\ »w#/ <d< gÀĪ 4 568 KÛR , sK.

27X% {i [FreeBSD Ports Version Check](#) -ÝÄ 27XV i/0 |i B ™bV distfile# ST +mC@6 UÖ #z~< ]< 4g 5W?@. A G;ÄÖ |i (ãF-V #z~< A` ]6 9:< iđi) ... †% >, 6 RE zG80 <iĪ >Đ?@.

2. 4> Sf< cTGÈ1

P± Sf# ST +mR8', i/0 cTG^ ÆsK. •0 i/À »w#/È i/ S#V RÛ² Qd3 4 5} , 3 >Đ?@.

### 3. 2-ç ¾/C1

27XV 4> Sf o\*² 2-CD ¾/R, sK:

ä +mi †% äæçm0Èèy0• 27XV i/² Pj, ÷Ü A€D ¾/R, sK. C(V µéÜ ¼% äæç0• ý °ÖCê i/+ @- è0• RC6 >% ip ~# 0i?@.

ä 27XV i/V V‡d Nt+ üoi8 à2R ÆsK. Ôev6 9:% 27XV i/² tinderbox - ÷ÜR , 6 >Ð?@. ... Usi >,² QR•6 i/ ÑÈUÀ 12U² Qi UÜ² •èR ÆsK.

ä Rí €¿/+ ä# „1' 8 Î' CsK. #6 B-® «~ ç î}-€² /+C6 ~mStv8 Ú6 éT< <•C6 ~< ið>?@.

ä portlint(1)² #TC2 27XV i/² 2-CsK. portlint ² STC6 9:0 |i èKi Sf< QR•6 i/ ÑÈUÀ 12U² Qi UÜ² •èCsK.

ä 27XV i/0 |i 4> Sf# @- i/² Deé6 ~# 5<80 |R DSR ÆsK. `ö Aî +md# 56 ±“06, RE i/V ÑÈUÀ 4> éT< èiR ÆsK. #6 27XV »w#/+ shared libraryV™b0 4>< +C6 ±“0 ÇZ êK>?@; # ±“, c}g, ÉbÈ i/6 PORTREVISION bump² ð} • portmaster {6 portupgrade(1)À h% UÜ¹È gHO VR UÖF- »w#/Ì 4 5g" 3 fK+ 5W?@.

### 4. 4> éT <dC1

4> Sf0 |i ÷ø ç •0m 4>0 S#V P± é. < iði RÜ² r% PR< ¢R 27XV »w#/² , é ÆsK. %% PR< °dC6 9:0 |i éT% Writing FreeBSD Problem Reports² •èR ÆsK.



i/ o\*0 |i shar(1) 0´#µ² <dC86 HO ÆsK; A |#0, diff(1) -ruN ² STR ÆsK. #µ\ C´ , >ÎZ Ûñ# 4>vú68 "œÃ; # ef €\ «Ñ3 4 5W?@. PorterÕ Handbook0 56 Upgrading f. 0• ... †% >,² n0ž 4 5W?@.

### 5. 1@€1

¶+ v´ "œÃ+ 27XV PR< rE3 >Ð?@. #6 « X, {6 « Æ+ =KÌ 4 5W?@Ñ9A7ò- AÖp 1@S ÆsK.

### 6. Æj >C1

`ö "œÃ+ 27XV 4> Sf0• p<á< n0é´ , A;% |\*- 27X0\ @G •ŠÍ >Ð?@. #bi óP% 27XV PR# ô€ "xv6 w g%# vD, |š p<² R?CDU 3 ¶ |¹V ö²< -8C6 w0g %W?@.

### 7. A€D £8öF-

27XV 4> Sf# "xvD 27XV i/+ »w#/Ì >Ð?@. A÷ @α PR% "œÃ0 VR øù >Ð?@. A>F- ~Ð?@!

### 3.2.2.2. #´ ' z CD- F~X-0 ~™SP > aqHF4 œB• eN+

# f. % i/+ ÝYË\ Pjv8 |Cg" C6 p<² n0éD DÜ6 9:0 |i >Ð?@.

FreeBSD6 i/ |}Â# -STABLE +80• Ö°C6 >`< , e>?@. FreeBSD6 i/ |}Â# -STABLE +80• Ö°C6 >`< , e>?@.

FreeBSD ÷Ü0V |ÝX% (i 386 0ÈèyaD l€6) PC-©° 1É0• Ö°C1 ¶p0, “€6 27X# i/² A 0Èèy0• Ö°Cg" °»3 >< 1|>?@. i/+ amd64 0Èèy0• ú#-µ- Ö°i@´ ...S %W?@. `ö 27X# #7i 1É< +8D 58 Ú@´ |£68 g%« KÜRg \*+W?@.



x86 #úV eÜ0•V Pj `RO |i |ÝXV #-6 , -Au °dU+, X² ;}, i' Á² int - +>c•(, {6 „|cF- uæÈ gcc ý«~7+ STÈ ±“Ð?@. áà ... †% , -Au °dU; % #7i +>< <•C1 QR A; V |j0 |R ^°»< CD 5W?@Ñ9A7( °dU+

A; V ]i<sup>2</sup> cpcF- -8, 4C8 Ú6@', 27X% žž- # ~< R, 3 4g 5W?@.

27XV i/+ di cF- Pj Ĩ 4 5g" C1 QR 27X% @V o»< R, >?@:

1. Pj "R AĜC1

Pj 0 "RC• ( ùæÈ i/+ 568 N5, 1 QR pkg-fallout@FreeBSD.org Ā distfiles scanner-ÿÄV z~< Ĩ' R AĚsK.

2. >, yF1

27X# p<á< ' qC', A>< DÜ6 w g%# v6 >, <sup>2</sup> yFsK. 27X# p<á< ' qC', A>< DÜ6 w g%# v6 >, <sup>2</sup> yFsK. `õ A7i Pj "R+ STU0 VR 27X0\ , Dvú@', p<á< r) C6 w g%# Ĩ 4 56 @mh% >, <sup>2</sup> KÚCsK:

ä Pj -A

ä i/<sup>2</sup> Pj C6 w STv6 øk} ç ŸÄ; (/etc/make.conf 0 sÄÈ ŸÄ; < i ð)

ä pkg\_info(1)<sup>2</sup> aR , 286, A; V GžÄ0 ±ÜÈ RÈ8; V . "

ä uname(1) -a < aR , 286, A; V Í^ FreeBSDV ™o

ä A; V i/ |}Ä# f8öF- »w#/È ¶

ä A; V i/ /€À INDEX + f8öF- »w#/È ¶

3. p<á< èSCD R?<sup>3</sup>< n0, 1

l•Zg #<sup>2</sup> Qi ñ) i , -sž6 8W?@. Aµ8` , 1!CsK: " + ý p I#@', g%K KÚCsK! FreeBSD i/ z~" €ž/6 G°C10 %% è#D, „ŸV &uU; % |& |) Z ý gÀS?@.

4. 4> éT <dC1

i/<sup>2</sup> »w#/3 ¶Ä f•+8-, 27X% #< 4> Sf< cTCD, 2-CD ¾ž/CD, PR- 4> Sf< <dCD, fKC@' Äj>< <iR, >?@.

5. „ŸV 4U0\ RÜ , éÆI

Ç>i ±“0, 27X% i/+ FreeBSD0• Ö°Cg" C1 QR RÜ<sup>2</sup> `; } , >?@. ~Ÿ (A7( yt6 0i) „ŸV °dU; % @N €00 A7i RÜ<sup>2</sup> A; V ]i 0 W'3 >Đ?@. Aµ\ v', #6 @- BSD 1WGžÄ STU; 0\ g%# Ĩ \_` 0? a êvÈ o»< 3 <Ĥ< žöRĪ 4g 5W?@. cT +mi RÜ<sup>2</sup> °dU0\ , é AĚ ©V<sup>2</sup> ¼%6 > < DŞR , sK.

3.2.2.3. # ' z CD! ož• R1 STU PR• Ÿ SN+

# f.% ™A<sup>2</sup> n0éD DÜ6 9: 0 |i >Đ?@.

FreeBSD0 Ç>i ™A6 ~WcF- FreeBSD06 cTv8 Ú6 Pj ç ±½' °±< +>C1 ¶p0 ~}Á?@. 27X# #± -(V p<<sup>2</sup> fÆC\ Ĩ +md% &8` , #>% ...æ' i p<#• n0é1 }ŠA 4 5W?@.

27XV i/+ Vgi |- tb Ö°Cg" C1 QR 27X% @V o»;< R, >?@:

1. ™A , DO (óC1

™A6 Problem Report database<sup>2</sup> ai #z~- 27X0\ , DĪ >Đ?@. ™A6 {i STU; 0 VR 27X0\ ý! cF- , DĪ 4g 5W?@.

27X% PR ç @- , DO |R 14~ #é- (óR, >?@, Aμ\ ùæ Ú€86 Úg" <PR ÆsK. )8 27X# RE PRO |R °»C1B8 Gñ# ... fKC@6 óe`#ag, +mi i ô€ (ó3 4 5g" <PR ÆsK.

`õ 27X# 14~# 8(g" (óC8 Ú)@' , @- "œÃ6 maintainer-timeout < aR 27X# (óC8 Ú% PR-ÿÃ "×3 4 5W?@.

2. >, yF1

`õ TMA² , Di S•# 4> Sf< <iC8 Ú)@' , 27X% A 4>< C1 Qi >, ² y< fK+ 5W?@.

`õ TMA² ^Í3 4 5@' , 27X% fKi >, V |ÿX< ¿¿- y< 4 5W?@. Aμ8 Ú@' , TMA² , Di S•0\ @œmh% >, ; < y0Ï >< KÛCsK:

ä A; V •Ö0 |i Usi ÷ø, X,,cê , -AüV •Öm " < •Ö

ä TMA² uQGÈ1 QR ĐPcê w#ÁV vS0

ä A; V Pj ç "• °±0 |i >, 9Ñ9² ; }, ÷ÛÈ RÈ8; V · "menv(1)V dP\*

ä Core dumps

ä Stack traces

3. ýpÈ , D² ó<C1

~ÿ TMA <, 6 ýpvú< 4g 5W?@. X² ; }, STU+ )YZ , -Aü< ýp STc< 4 5W?@; {6 A; # ÷Ûi RÈ8+ ùævúD »w#/?² fK- C6 ±~ 4g 5W?@. ÉÉ <, È TMA6 FreeBSD0 , iv6 ># 0+ 4g 5W?@. # ±"06 upstream &uU0\ TMA² <, R ÆsK. `õ 27X# DÎ 4 5< `i TMAa' , @œ upstream N€0+ óiv1 o0 27X# ý! i /² RÛR• 4> Sf< cTG^g ' ?@.

4. R?³<n0, 1

Pj ùÈÀ fÆ @' , 27X% p< à0 |i R? 9p< n0ž fK+ 5< >Đ?@. @G i - -èC@W?@, "+ ý p I#@' g%œ KÛCsK!

5. 4> Sf< <dC•( . ' C1

ï /² »w#/3 ¶À f•+8-, 27X% #< 4> Sf< cTGÈD, 2- ç ¾¿/² 4•CD, A éT< PR- <d({6 RE p< à0 |R #œ †^C6 PRO follow-up< <d)R, >?@. @- STU+ #œ PR- Đ± Sf< <dc@' , 27X% A Đ± Sf0 |i . ' 2ÿ² HC6 follow-up< , € 4g 5W?@.

3.2.2.4. Fj • yç • eN+

Ñ€U- •V . 3 ê C(6 8•< <iC6 >Đ?@9Ñ9#6 =, /à} U\*0 |i ~Wc' 8•# 0?a9Ñ9 / A€D FreeBSD0 Ç>i Ç# Sfmp< à0 |i 8•< Vœ>?@. STU; % ^p, <p, p< à A€D RÛ0 |R• 27X0\ j Ó3 4 5W?@. |ÿXV ±" A7i j Ó; % FreeBSD0 Ç>i éT; ~ >Đ?@.

ÉÉ 27X% ù/c 4ü< uOR•, ~Wc' 8•< n6 S•; 0\ c¿i €=¿² •§ Æ} , >?@. #, @6 1 UÆ 56 ~#8` , 27X% RPM # 2 ä# „1+ 0i8 {6 =, /à}² 0Û& €3¿0 }á\ "•GÈ680 |R 46 S•m fÆÏ 4g 5W?@. A; 0\ 27XV ï/+ ä# „1' < •€D(56, Aî ±"0'K!), A; 0\ FreeBSD² STRž >< ÔC6 1É² w0 , sK.

ÉÉ STUÀ &uU; % 27X< (27XV Gñ< 7èZ 216) Y8 S•F- 21D 27X< QR òñV ~< RÏ 4g 5W?@. X² ; }, A; % @œmh% ~; < RÏ 4g 5W?@:

¥ 27XV ï /² »w#/C6 PR< <dC•( RÛ² , éÆ6 ~,

¥ èSCD 0fg PRO D" éT< <iC6 ~, {6

¥ 0?' 27XV ï/0 |i 4> Sf< <dC6 ~.

#7i ±“0 27XV ÆK VÙ6 c¿i ¶0 (óC6 >Ð?@. @G i- -è>?@, ÑËUV Ù(ó0 |i <i Gñ% 14~Ð?@. # 1ñ# 8f' 4> Sf% œ. ' „1(unapproved)- ”×Ì >Ð?@. A;% 27X< QR # ~< C6 4D² cW?@; A7ð- ä=i #bC\ óP3 4 5g" <ÐR ÆsK. A€D (• +9c ô€ #² 2-CD, . ' CD, A; mð• 4> Sf< @: •( #0 |R {VR ÆsK.

`õ 27X# A; V 120 ÆS² \_i@' (56 Aæ, >?@`) ãF- A; # 27X< QR ... †% ~< RĪ 4g 5< >Ð?@ :-).

### 3.3. T£¤ CD4 ¥ | \$T Tg"

Ñù# fKi ï /² n0, 10 >H %% t &V e+= 5W?@.

27X% R?v8 Ú% PR; < n0, 1 QR Problem Report w#Ã¼#¿V í ' ĀÇ#¿² ST3 4 5W?@. ï / PRV |ÝX% »w#/#8`, KõÈ éT< èà` ;}, ' 27X% uœ-® ~•€² n< 4 5< >Ð?@ (sw-bug Öæ¿6 G°C10 %% e=Ð?@).

@- e=6 [FreeBSD Ports Monitoring System](#)Ð?@. P; ùÊ+ 5D ÑËv8 Ú6 ï /À BROKEN #aD \_GÈ ï /0 ÇZ -VR• N5 , sK. #œ ÑËvD 56 ï /0 |i 4> Sf< <dC6 >g \*+8`, ÑËU+ #œ h% p<0 |R °»CD 568 5} , 0, i@6 >< 1!R ÆsK.

27X# ¯MA (p<á< u' c@' , >, ² yFD, X<i a DS , sK! #œ PR# †^i@' , h# ÝPCsK. Aµ8 Ú@' B-® PR< QdCsK. 27XV 4> Sf% 2-vD (•, `õ y6 ># \*+@' , ”×Ì >Ð?@.

### 3.4. 1 ·· ©%ª ? «

27XV uœÀ „=# Þð0 \$a, 27X% 27XV ï /0 |i ~Ý (¿6 y6) 12² tb3 Gñ# 8< 4g 5W?@. \*+W?@! `õ 27X# ...# , ï /² STC8 Ú• ( òU3 Gñ# 8•( ÑËU- •V uœ² >ú@' “€0\ •\$ ÆsK. A7' “€6 ~< r•C' • 27XV óP< 1@€8 ÚD ï /V p< ; 0 @- S•; # °»Cg" ÆÓ3 4 5W?@. 1!CsK, FreeBSD6 U•ŽSU; 0 Vi , - . /Ð?@, A7ð- ï /² ÑËC6 ~# #< ^œ8@' , @- ; J+0\ -\Ī ¶Ð?@!

}¥ ±“068, 27X# ~> 1ñÖp 27XV ï /² `ÖcF- ÑËC8 Ú)@' ï / ÑË , (portmgr)% 27XV ÑË Ôi < !1¹GÚ Ôi < +8D 5W?@. (Í^ , # 1ñ% 3&?- >R¤ 5W?@.) #>%, # 1ñÖp R?v8 Ú% p< ( œL}r »w#/+ 5@6 >< Vœ>?@.

### 3.5. CD opwU " #w4 5, w¬

[Porter's Handbook](#)% ï / G¿Ä< 2•C6 ZÜC#”² Qi pé•Ð?@. @0 tD UÆN5 , sK!

[Writing FreeBSD Problem Reports](#)% LM PR< °dCD <dC6 9:0 |R• ÷ø>?@. 2005A06 11000& #, V ï / PR# <dvúW?@! # \$< \$aC6 >% 27XV PR< @L6 w fKi Gñ< ¿ör Í@6 á0• » g%# ' ?@.

[Problem Report database.](#)

[FreeBSD Ports Monitoring System](#)% P; 07 {6 problem reportÀ h# ï /0 |i „© •è >, ² , 2Ī 4 5W?@. 27X# ÑËUa' #7i >, ² 27XV ï /V P; „1² Ī' C6 w ST3 4 5W?@. contributor- • 27X% <|- Ö°C8 ÚD ÑËv8 Ú0• DS^ fK+ 56 ï /² n0, 6 w ST3 4 5W?@.

[FreeBSD Ports distfile scanner](#)6 distfiles² @@- ; 3 4 86 ï /² , 2S?@. 27X% #² 27XV ï /² Ī' R , •( MASTER\_SITES # »w# /Ī fK+ 56 ï /² n0, 6 w ST3 4 5W?@.

[ports-mgmt/poudriere](#) 6 ï /V ÷Û, RÈB, A€D <•B8V o m>< o\*cF- ¾/Rž 4 56 9:Ð?@. ÑÒÈ p•6 [poudriere home page](#)0• n0ž 4 5W?@.

[portlint\(1\)](#)6 27XV ï /+ †% êKi û(c A€D 1mc 80< Í4CD 568² 2CC6 w STv6 Dà€E#ĀÐ?@. portlint( 6 ) Yi F€¿G Dà€E#Ā#1 ¶p0, 27X% #² NOF! PI QR STR, >?@. `õ portlint + >€c#8 Ú0 , #6 4<> <pi@' , [Porter's Handbook](#)² •DC•( g%œ

KŪCsK.

[FreeBSD ports mailing list](#) 6 i/À Ñ0È ~Wc' {V+ #L}86 ëD?@. 216 g%κ KŪC10 %% e=D?@. 27X% H“C•(, €¿/ 0´#μ²  
ô}, D 2öRž 4 5W?@. [FreeBSD ports bugs mailing list](#)À [FreeBSD CVS ports commit list](#)V 0´#μ² ô}, 6 >g uœ-A  
4 5W?@.