

Ç ĩñãŨíùóç ôùí Âêäüóãùí ôĩõ FreeBSD

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\$FreeBSD: release/8.4.0/el_GR.ISO8859-7/articles/releng/article.xml 39632

2012-10-01 11:56:00Z gabor \$

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Άδου οĩ Ũñēñĩ ðāñēāñŨōāē ôçĩ áíôēíāðþðēóç ēāē ĩñãŨíùóç ôçð ñŨāāð áíŨððôĩçð ôĩõ FreeBSD, ũōĩí áōĩñŨ óôçĩ ðñĩāðĩēíāóßā ðĩēĩðēēþĩ āēäüóãùí ôĩõ Êāēðĩõñāēēĩý Óðóðßíāðĩõ FreeBSD. Âĩçããß ĩā ēāððñŨñāēā ôçĩ ĩāēĩāĩēĩāßā ðĩõ ÷ñçōēĩĩðĩēāßðāē āēā ðēð āðßóçĩāð āēäüóāēð ôĩõ FreeBSD ēāē ðāñēāñŨōāē óā āñāāēāßā ðĩõ āßíāē āēāēÝōēíā óā ũōĩõð āíāēāōÝñĩíōāē ĩā ðāñŨāĩōĩ ðāñāĩāðñĩðĩēçĩÝĩāð āēäüóāēð ôĩõ FreeBSD āēā āóùðāñēēß ð āĩðĩñēēß ÷ñßóç ēāē áíŨððôĩç ðñĩũĩĩôũĩ.

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1 Âēóāãũāß

Ç áíŨððôĩç ôĩõ FreeBSD āßíāē ĩēā ðĩēý āĩē÷ðß āēāāēēāóßā. Ôĩ FreeBSD áðĩðāēāßðāē áðũ óōĩāēóōĩñÝð ÷ēēēŨāũĩ āĩēñþðũĩ áðũ ũēĩ ôĩĩ ēũōĩĩ. Ç ñŨāā ôĩõ FreeBSD ðāñŨ÷āē ðñũóāāóç ĩÝóũ āĩþĩðĩĩõ CVS[1] óā ũēĩõð, Ýðōē þóðā ĩā ĩðĩñāß ũðĩēĩð ēÝēāē ĩā āāē ĩçýĩāóā log, āēāōĩñÝð (patches) ðĩõ Ý÷ĩõĩ óā āēŨōĩñā development branches, ēāē Ũēēā ÷āñāēðçñēóðēēŨ ðĩõ āĩçēĩýĩ ôçĩ áíŨððôĩç, óā ĩðĩßā ðñĩēýððĩõĩ áðũ ôçĩ ÷ñßóç āĩũð áððóçñĩý óðóðßíāðĩõ āēā÷āßñēóçð ēþāēēā. Áðũ ðñĩōÝēāōā ēāē ôĩĩ ðēĩ ôçĩāíðēēũ ðāñŨāĩōā Ýēĩçð āēā Ýĩā ĩāāŨēĩ āñēēĩũ áðũ óāēāĩðĩý÷ĩõð ðñĩāñāĩĩāðēóðÝð áðũ ũēĩ ôĩĩ ēũōĩĩ óōĩ FreeBSD. Âßíāē ðñĩōāĩÝð, āÝāāēā, ðũð ðĩēý óýĩðñā ēā āß÷ā āßíāē āĩðāēþð ÷āĩðēēß ç ēāðŨóðāóç āĩ āß÷āĩ ũēĩē, áðũ ũēĩ ôĩĩ ēũōĩĩ, ðñũóāāóç ĩā āñŨøĩõĩ óōĩĩ ēþāēēā. Âē' áððũ, ĩũĩĩ

[illegible]

Ίε όα÷ýόάοίε ηόειηβ άίΰδδοίçό όίο FreeBSD άάί άόβήοί έάέ δίεý ÷ññί άέα όί ίάέαέΰñέόίά όίο όόόόβίάόίδ
 άίΰδδοίçό όά ίέα Ύέάίçό ίά δίέυδοά δίό ίά άίβέαέ ίά ÷ñçέόίδίέάβόάέ άοñΎύδ. Άέα ίά έδέαβ άόόυ όί άβέέçίά, ç
 άίΰδδοίç άβίάόάέ άάόόυ÷ññίά όά άόί δάνΰέέçέα ίññδΰόέα. Ί έýñέίδ έίññύδ άίΰδδοίçό άβίάέ í **HEAD** þ **trunk** όόί CVS
 repository ίάδ, άίύόόύδ έάέ ύδ “FreeBSD-CURRENT”, þ “-CURRENT” άί όόίόñβά.

Jáο δέι οόάεανύο έιηνύο οόίογνάβόάε, άνυοόύο ιά οί υννά “FreeBSD-STABLE” η δέι ούύοηά “-STABLE”. Έάε ιέ άοί έιηνύβ άβίάε άδύεçεάοιΥήιέ οόί έύνεί CVS repository, οόçί Έάέέουνήεά, έάε άίόέανÜοήίόάε ιΥόο **CVSup**[2] οά mirrors άάίόιΥ οόή έυοί. Öί FreeBSD-CURRENT[8] άβίάε ç “δñòç οάέñÜ” οçò άíÜðòòιçò οίò FreeBSD έάέòò οά άòóυ άβήήόάε δñòá υέάò ιέ έάέήνύέάò áέέάΥò. Öί FreeBSD-STABLE άβίάε ι έιηνύο άíÜðòòιçò άδυ οή ιδύβι οόέÜ÷ήήόάε ιέ άέαυοάέò. Ιέ áέέάΥò άέóΥñ÷ήήόάε οά άòóυ, οή άáyοάñ έιηνύ άíÜðòòιçò, ιά δέι άñάυ ηέέιυ, άοίΥ δñòá (óýιούήά ιά οçί δύέέóέέ ηάò) άήέέάοóιΥι οόί FreeBSD-CURRENT έάέ Υ÷ήι άήάόάόάβ δύέ έάέÜ.

[illegible][illegible][illegible]

Οι ΌιΠια 2 αϊçããß ìã çãððñÝñãëãð ðã æÛöïñã ðöÜãëã ðçð æëãëëãðßãð ðïò ãñßöëãðãë ðßöü æðu èÜëã Ýëãïðç, ìÝ÷-ñë ëãë ðã ãΠιαðã ðïò ðãçãÿÿ ðöçÿ ìãðããëðöëöç ðïò öööðΠιαðïò ëãë ðï ΌιΠια 3 αϊçããß ðçÿ Òãëã ðç æëãëëãðßã ðçð ìãðããëðöëöçð. Οι ΌιΠια 5 ðãñëãñÜöãë ðïð ðïññãß ðã ðãðëöëãëß ðïò ããöëëü öýöðçìã æðu ðñßðïòð ëãë ðï ΌιΠια 6 ðãñëãñÜöãë èÜðïëã æðu ðã ðñÜãìãðã ðïò ìÜëìã æðu ðçÿ æëãëëãðßã Ýëãïðçð ðïò FreeBSD 4.4. ÕÝëïð, ðï ΌιΠια 7 ðãñïðöëÜãëë èÜðïëãð æðu öëð ëãðãöëÿðëãð ðïò ëÝëïðìã ðã ðÜñãë ç ãÿÜððöïç ööï ìÝëëï.

2 Ç Äéääéêáóßá Ąçieĩõñãßàò ìéàò êäïóçò

[illegible]

[illegible]

2.1 ěã÷ï Êpäéêá

ὉνεῦΙούδα εἰ Ὑνὰδ δñεί δςί ἀράαφαιλάς εἰαῖνῆςίΒά Ὑεἰρὸς, ἱ ἐπαέεαδ οἰὸ repository ἀεόὙñ÷ἀοάε οἶα ἰεἶα δᾶνβῖαι “εἰαδὸδὸὙñςὸς”. Ἐαδὺ δς ἁεῦñεἰάε ἀδὸβδ ὁςδ δᾶñεῦαῖρ, ὑεἰαδ ἱε ἁεεἰἁἁὙδ ὁδῖρ -STABLE εἰνῖυ δñὙδἰε ἱά Ὑ ÷ῖοῖ δςί Ὑαεñεὸς ὁςδ ἡῦἁἁ ἡἡἁῦςὸς δῖρ Ἀεἰῡδῖρ <re@FreeBSD.org>. Ἱε ἁεεἰἁἁὙδ δῖρ ἰδεὸñὙῖρῖοἰε οἶα ἀδὸβδ ὁςί δᾶνβῖαι δῖρ ἁεἰἡἡἁβ 15 εἰ Ὑνὰδ ἁβῖἱε:

- [illegible]

Ἰαδὺ ὁδὸ δὴπρὸαδ 15 ἰΎῆαδ ἐαεδοόδΎῆςος, ὁδὲ Û÷ἰαδᾶε ἰεᾶ *αἰεῖαῶοδὲP Ἰεᾶρος* ᾶεᾶ ἰᾶ ÷ῆςοεἰῶδιεῖεᾶβ ὀᾶἰ αἰεῖἰP ὁς ὁᾶεεῖP Ἰεᾶρος ὁεᾶ ἰ ἐπαεῖαδ ᾶεῶΎῆ÷ᾶδᾶε ὀᾶ ἰεᾶ δᾶῆβῖᾶἰ “δᾶβᾶῖαδῖο”. ΔεΎἰ ᾶβᾶε δῖεῖ δεἰ ᾶῷοεἰ ἰᾶ ᾶβῖοἰ ἰΎᾶδ ᾶεῖᾶΎδ ὀῶἰ ὅῷόςἰᾶ, ᾶδῶδ ἔε ᾶἰ ᾶεἰῆβῖοἰ ε Ûῶἰεἰ δῖεῖ ὀᾶῆᾶῆ bugP ε Ûῶἰεἰ δῖᾶᾶεῖᾶ ᾶῶῶᾶεᾶδ. Ἐᾶῶ ὁς ᾶε Ûῆεᾶεᾶ ὀἰο δᾶβᾶῖαδῖο ὀἰο ἐπαεῖᾶ, ὀἰοε Û÷εῶῶἰ ἰβᾶ αἰεῖαῶοδὲP Ἰεᾶρος ὁδὲ Û÷ἰαδᾶε ε Ûεᾶ ᾶᾶᾶᾶᾶ, ἰΎ÷ῆε ἰᾶ ᾶβᾶε Ἰῶἰεἰς ς ὁᾶεεῖP Ἰεᾶρος. Ὀδὸ ςἰ Ἰῆᾶδ ᾶεῆεᾶρ δῆεἰ ὁςἰ ὁᾶεεῖP Ἰεᾶρος, ς ῆᾶᾶ ὀἰο ᾶβᾶε ὀδᾶῖεῶἰς ᾶεᾶ ὁδὸ ᾶεᾶῶᾶδ ᾶβᾶε ὀᾶ ὀῶἰᾶ÷P ᾶδῖεἰεἰῆἰβᾶ ἰᾶ ὁςἰ ῆᾶᾶ ᾶῶῶᾶεᾶδ, ὁςἰ ῆᾶᾶ ὀῶἰῶPῆςος ὁς ὁᾶεἰῆῆῆῶς, ἔεᾶ ὁςἰ ῆᾶᾶ ὀῶἰῶPῆςος ὀῶἰ ports, ᾶεᾶ ἰᾶ ᾶᾶᾶεῖεἰἰ δῶδ ῶεᾶ ὀᾶ ᾶδᾶᾶᾶῶςᾶ εἰᾶᾶᾶ ᾶεᾶ ἰεᾶ δεPῆς Ἰεᾶρος ᾶβᾶε ᾶεᾶεἸῶεἰᾶ.

2.2 Ëßóôá ÅěÝã÷ĩõ ôçò ÔăěěêÐò ěăĩóçò

[illegible]

2.2.1 Äçìéĩõñãßá ôĩõ Êĩñĩĩý êäĩóçò

¼ðuò ðáñéāñŨøáíā óóçí áéóāāuāþ, íé ēīñīūß RELENG_X_Y āßíáé íéā ó÷āðéēŨ ÍŸā ðñīóēðēç óóçí íāēīāīēīāßā ðūī āēāuðāþí íāð. Őī ðñþōī āþíā óóçí āçīēīōñāßā āðōīŸ ðīō ēīñīūŸ āßíáé íā āāāāéúēāßōā uðē āīōēāŸāðā íā óçí ðāēāðōāßā Ýēāīóç ðīō ðçāāßīō ēþāēēā āðū ðīī RELENG_X ēīñīū āðū ðūī īðīßī ēā ðōēŨāðā ðī ÍŸī ēīñīū.

```
/usr/src# cvs update -rRELENG_4 -P -d
```

Ôi ãðùiaîi âÞia ábiáé íá açèieõñâÞoãôã íéá *âôééÝôá* (tag) ôôi ôçiaßi âêêßícôçô ôiõ êiñiîý, Þoóá íá iðñiñâôã íá aãßôã
 óéo áéáoïñÝò iã ôçí áñ÷ Þ ôiõ êiñiîý áýêiëá ôôi iÝêeîi iã ôi CVS:

```
/usr/src# cvs rtag -rRELENG_4 RELENG_4_8_BP src
```

Êáé ôüôâ ìďĩñâßôâ íá äçìèĩõñãÞóáôâ ôĩ íÝĩ êĩñü ìâ:

```
/usr/src# cvs rtag -b -rRELENG_4_8_BP RELENG_4_8 src
```

Όχι!Βούρο: *Ἰε ἀδὲέῒΥοᾶδ RELENG_ * ἀβίᾱέ ἀἀόι!ἀδιΥίᾱδ ἀεά ÷-ἡΠόρς ἄδῦ οἰῶδ CVS-meisters ἐάέ οῖφι ἡῚᾱᾱ οὐί ἀῖᾱῡοᾱί.*

Ἰ uniõ “*ἀδελφὸς*” ἀβιάς ι̃νι̃ε̃τ̃α̃β̃α̃ ο̃ιο̃ CVS. Ὁ̃για̃βιάς Ἰ̃ιά ũm̃ã ο̃ιο̃ ἐ̃α̃ε̃ι̃ν̃β̃α̃ε̃ ι̃ε̃α̃ ο̃ο̃α̃ε̃α̃ε̃ν̃ε̃ι̃Ἰ̃γ̃ς Ἰ̃ε̃α̃ι̃ο̃ς ο̃ιο̃ ἐ̃πα̃ε̃ε̃α̃ ο̃ο̃ι̃ ÷ nũfi. × ñç̃õẽĩũd̃ĩẽp̃ĩõãõ ἀδελφὸς ο̃ο̃ι̃ δ̃ç̃ããb̃ĩ ἐ̃πα̃ε̃ε̃α̃ ãr̃ç̃ẽŨĩã ũd̃ĩẽĩ ũõẽŨĩãẽ ο̃ο̃ι̃ Ἰ̃Ỹẽẽĩ ãẽãũõãẽd̃ ο̃ιο̃ FreeBSD ἰ̃ã ãñb̃õẽãẽ ἐ̃ãẽ ἰ̃ã ÷ ñç̃õẽĩũd̃ĩẽãb̃ ãẽñẽãp̃õ ο̃ĩĩ B̃ãẽĩ ἐ̃πα̃ε̃ε̃ã ο̃ιο̃ ÷ ñç̃õẽĩũd̃ĩẽp̃ẽç̃ẽã ãẽã ο̃ẽd̃ ãδ̃b̃õç̃ĩãd̃ ãẽãũõãẽd̃ ο̃ç̃õ ἡ̃Ũããd̃ ο̃ĩõ FreeBSD.

2.2.2 ÁóîÛííîáò ôíí Áñéèü êäïóçò

Ἐνῆι ἰθαῖ ἡ ἀοέεΥόα, ἰαοάαεουοοεοοάβ ἑαῖ ἀοιείαοοάβ ἡ οάεεῒβ Υέαιόρ, ὃνΥθαῖ ἰά ἀβῖῖόῖ ἀεῖάαΥό οοά ὃανάεῘοῦ
 ἁν÷ἁβἁ ἁεἁ ἰά ὃἁἁεΥ÷ῖῖόῖ ὀῖῖ οῦοοῦ ἁἁεῖῦῖ Υέαιόρὃ ἁεἁ ὀῖ FreeBSD:

- doc/en_US.ISO8859-1/books/handbook/mirrors/chapter.xml
- doc/en_US.ISO8859-1/books/porters-handbook/book.xml
- doc/share/xml/freebsd.ent
- src/Makefile.incl
- src/UPDATING
- src/gnu/usr.bin/groff/tmac/mdoc.local
- src/release/Makefile
- src/release/doc/en_US.ISO8859-1/share/xml/release.dsl
- src/release/doc/share/examples/Makefile.relnotesng
- src/release/doc/share/xml/release.ent
- src/share/examples/cvsup/standard-supfile
- src/sys/conf/newvers.sh
- src/sys/sys/param.h
- src/usr.sbin/pkg_install/add/main.c
- www/en/docs.xml
- www/en/cgi/ports.cgi
- ports/Tools/scripts/release/config

[illegible]

- `src/release/doc/en_US.ISO8859-1/relnotes/common/new.xml`
- `src/release/doc/en_US.ISO8859-1/errata/article.xml`

Ç äöäññīāP **sysinstall** ðñÝðäē äðßöçò íá áíçíāññēāß íā ôīī ōúóôū āñēēìù òùī ports éáē ôī ÷ pñī ôīō āßóēīō ðīō äðäēóäßóäē áēá ôçī ÓōēēīāP òùī Ports. ÁōōÝō íē ðēçñīōīñßāð òðŨñ÷īōī ôōī āñ÷āßī
src/release/sysinstall/dist.c.

Άσπυ ιεῖρεεεχνδεάβ ς δνιαιδιείαοβά οςδ ιΥάο αδΒοίοςδ Υέαιροςδ, δñΥθάε ίά αιçiανþρóaòà ιλñέêÛ añ÷άΒ áέα ίά αιçiανþρóaòà οιι έυοιι áέα ός ιΥά Υέαιρός οιθ FreeBSD.

- `www/en/includes.xsl`
- `www/en/includes.xml`
- `www/es/includes.xml`
- `www/en/releases/*`
- `src/share/misc/bsd-family-tree`

2.2.3 Äçìéĩõñãßá ôùí Âôéêâôþí ôçò êäïóçò

1/40áí ç ôãëêêP Ýêäiöç åßiáé Ýôieîç, ç ðãñáéÜòù áíôieîP èá àçieiññãPóáé ôçí âôêêÝôá RELENG_4_8_0_RELEASE.

```
/usr/src# cvs rtag -rRELENG_4_8 RELENG_4_8_0_RELEASE src
```

RELEASE_4_8_0 óóá éáóÜëëçä äÝíóñá ðçāāβíø ēpāēēá.

ΙαάεεΥδ οινΥδ, ιδινάβ ιά ÷ ηαέαοοάβ ιά αβιθι εÜθρεάδ αέαάΥδ οάεαδoαβá οόεαιβ ιαδÜ οçí οιθρεΥόçος ουι αοέαοορι. ΆαίρεÜ, ααρ άβιάε άγoεieri ιά αβιάε eÜοε öÝοieri αοιγ öi CVS αδεονΥθαε ιά ιαοαεεíβoαε eÜθιεri οεó αοέεΥoαó ιά ιάθιεΥδ uδuδ cvs tag -d tagname filename. Άβιάε θιεγ οçíαιóεeü uδuδ αδoΥδ ιέ αέαάΥδ οçó οάεαδoαβáο οόεαιβδ ιά οçíαιεuεiγi ιά οεó ουoóΥδ αοέεΥoαó αέα οçí οoαεαεieiΥίç Υέαιoç. Ιε αδβoçíαó αεαüοάεó öi FreeBSD θηΥθαε ιά άβιάε δÜíóá άγeieri ιά ιάíαθáñ÷εiγi. ÖiθέεΥδ αέαάΥδ οóι θáñεÜÜεeü öi ιç÷ιέεiγ ουι αεαüοáυι ααρ αδεονΥθιíοáε.

3 ðàáãëþôôéóç ôçò ëäïóçò

Ιε "aeauaaeo" oio FreeBSD ioiniia ia laaaaeuooeooiia adu ioieiaaioia Y ÷ ae Yia o ÷ aeaeU aaPaiia ic ÷ Uicia eae dnuaaaoc ooi repository oio dcaabio epaeaa. (4eie Y ÷ ioi aooP oc aioiaouocoa, aoiy aanY ÷ ioia dnuaaaoc iYou aipioio CVS! AaBoa oi Aa ÷ aenbaei oio FreeBSD aeaa daneaouoanaa eadoninaeaa.) C iuic aeaeep adabococ abiaa ia oou ÷ ae oiooPneic ooi dnoPia oao aeaa oci ooeaop vn(4). (Ooi -CURRENT, aooP c ooeaop Y ÷ ae aioeaaaoaaeb adu oci iYia ooeaop aboeio aaoeoiYio oa iipic md(4). Ai c ooeaop aai abiaa aioiaouuYic ooi dnoPia oao, ouoa i eaoUeeceio iacaud ea oionueab adouiaa uoa aeaaeaaooab c aioieP vnconfig(8) eaoU oc aeUnea ea oc oUocd aioiaaoba oio iYio aeebicocd. 4ea oa anaeeaba oio ÷ naeUaioae aeaa ia laaaaeuooBoaa iea Yeaoc abiaa aeaeYoeia oa iioP dcaabio epaeaa ooi eaoUeia src/release. AooU oa anaeeaba Y ÷ ioi uo oeidu ia aanY ÷ ioi uoe ÷ naeUaioae aeaa ia ÷ obaioae ie aeauaaeo oio FreeBSD ia Yia oiaop eae oaeaeeneiYi onou. Iea dePncd Yeaoc ioinaa ia laaaaeuooeooab ÷ nceioieioa adou oa anaeeaba ia iea eae iui aioieP, oioaneaiaaiaYic eae oc aieioinaa adu ISO an ÷ abio eaoUeecei aeaa ia eaa oa CDROM, ie aeoeYooa aeebicocd, eaeb eae i eaoUeeceio aeaaouoaaoc iYou FTP. AooP c aioieP abiaa ooeep c make release.

3.1 Ç áíôïëþ make release

Ἄέα ἰά ἱὰόἀα̃εὐὸδβόἀὸἀ ἀδεὸδ÷-ò ἱέα Ῥέαιός, ὄñÝðäē ðñþὸά ἰά ὀðŨñ÷-īōί ὁά ἐáoÜëççéá áñ÷-åßá ἰÝὸά ὀοίí ἐáoUειταῖ
/usr/obj. Ἰðññâðâ ἰά ὁά æçìèrõñâÞὸἀὸἀ åßὸά ἰæ ὀçí αἰóτēÞ make world Þ äðĚŨ make buildworld. Ἀέα ἰά

ðáðý÷-áé áðßóçð ç ìáðááëðððéóç òçð Ýêáîóçð ðñÝðáé íá äðáððá ðéð éáðÛëëçéäð ðéíÝð éáé ðá ðÛðíéäð ìáðááëçðÝð:

- CHROOTDIR - Ì éáðÛëíáðð ðîõ éá ÷ ñçóéíðíéçéáß ðáí ðáñéáÛëëí chroot áéá üëç òçí ìáðááëðððéóç òçð Ýêáîóçð.
- BUILDNAME - Õî üíñá òçð Ýêáîóçð ðîõ éá ìáðááëüðððáððá.
- CVSROOT - Ì éáðÛëíáðð ðóñí ððíßí áñßðéáðáé òí CVS repository.
- RELEASETAG - Ç áðééÝðá CVS ðîõ áíðéóðíé÷÷ áß ðóçí Ýêáîóç òçí ððíßá ðÝéáðá íá ìáðááëüðððáððá.

Áí ááí Ý÷-áðá ðäç ðñüóááóç ðá ðÛðíéí ðíðéëü CVS repository ìá ðñí ððáééá ðîõ FreeBSD, ððíñáððá ðÛíðá íá ððéÛíáððá òí áéëü óáð ðíðéëü CVS mirror ìá òí CVSup (http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook/synching.html#CVSUP). ÕðÛñ÷-áé Ýíá supfile, ððí áñ÷-áßí /usr/share/examples/cvsup/cvs-supfile, òí ððíßí ððíñáððá íá ÷ ñçóéíðíéçéáððá áéá íá áíðéáñÛððá òí CVS repository ðîõ FreeBSD ððí áéëü óáð ðíðéëü mirror.

Áí ðáñáëáßððá òçí áðééÝðá RELEASETAG, ðððá éá ìáðááëüðððéóðáß íéá ðëðñçð Ýêáîóç áðü òçí éíñðð ðîõ HEAD (äç. ðîõ -CURRENT) éíñíý. Ìé áêüüóáéð ðîõ ððéÛ÷ñíðáé áðü áððüí òñ éíñü, ððíðèðð áíáðÝñíðáé ðáí “-CURRENT snapshots”.

ÕðÛñ÷-íðí éáé ððééÝð Ûëëäð ìáðááëçðÝð ðîõ ððíñíý íá ÷ ñçóéíðíéçééý íá íá ðáñáíáððíðíéçéáððá òçí Ýêáîóç óáð. Ìé ðéí ððééÝð áðü áððÝð ðéð ìáðááëçðÝð ðáñéáñÛíðíðáé ðóçí éíñðð ðîõ áñ÷-áßíð src/release/Makefile. Ç áêñéáðð áíðíð ðîõ ÷ ñçóéíðíéçéáððá áéá íá ððéá÷-ðáß ç áðßóçç Ýêáîóç 4.7 ðîõ FreeBSD (x86 ðéáððüññá) ððáí:

```
make release CHROOTDIR=/local3/release \
    BUILDNAME=4.7-RELEASE \
    CVSROOT=/host/cvs/usr/home/ncvs \
    RELEASETAG=RELENG_4_7_0_RELEASE
```

Õí Makefile ðîõ ÷ ñçóéíðíéçéáððáé áéá íá ìáðááëüðððáíðáé ìé áêüüóáéð ððíñáß íá ÷ ññéóðáß ðá áñéáðÛ ìá÷-ññéóðÛ ìáðáíý ðîõð áðíáðá.

- Äçíðíðñáß áñüð éáéáñíý ðáñéáÛëëíððð ðá íéá ìá÷-ññéóðð éáñáñ÷-ßá éáðáëüüí ìá òçí áíðíðð “make installworld”.
- Áíáñüáß áðü òí CVS ìéáð éáéñýñéáð Ýêáîóçð ðîõ ðçááßíð ððáééá ðîõ ðððððíáððð, òçð ðáêñññüóçð éáé òñí ports ìÝðá ðóçí éáñáñ÷-ßá éáðáëüüí ìáðááëðððéóçð òçð Ýêáîóçð.
- Ñðéíðáéð òñí áñ÷-áßí ððíñ éáðÛëíá /etc éáé /dev ìÝðá ððí ðáñéáÛëëí chroot.
- ÁéðÝéáóç òçð áíðíðð chroot ìÝðá ðóçí éáñáñ÷-ßá éáðáëüüí ðîõ áðíéíÛððçéá, áéá íá ìçí ððíñáß òí áñüðáñéëü ðáñéáÛëëí íá áðçñáÛðáé òç ìáðááëðððéóçð òçð Ýêáîóçð.
- ÁéðÝéáóç òçð áíðíðð make world ìÝðá ððí ðáñéáÛëëí chroot.
- Ìáðááëðððéóç òñí áêðáëÝóéíð ðîõ áßíáé ð÷-áðééÛ ìá òí óýóççíá Kerberos.
- Ìáðááëðððéóç ðîõ ððñðíá GENERIC.
- Äçíðíðñáß áñüð ðáéééíý éáðáëüüíð ððíñ ððíßí éá ìáðááëüðððéóðíý éáé éá áðíèçéáððéíý ìé áêðáëÝóéíð ìñðÝð òñí ðáéééðí ðáéÝðð.
- Ìáðááëðððéóç éáé ááéáðÛððáóç òñí áñááéáßíð ðîõ ÷ ñáéÛáíðáé áéá òçí ðñíáðíéíáððá òçð Ýêáîóçð éáé òç ìáðáðñíðð òçð ðáêñññüóçð áðü òñí ðçááßíð ððáééá (SGML) ðá html éáé áñ÷-áßá éáéíÝñð ðîõ éá ððñááýíðí òçí Ýêáîóçð.
- Ìáðáðñíðð éáé ááéáðÛððáóç òçð ðáêñññüóçð (áá÷-áéñßáéá ÷ ñððóç, áéóáñüáééÛ éáßíáíá, óçíáëðáéð Ýêáîóçð, éßððáð ððíááðððçðáðð ðéééíý, éëð.)

- ĩāóāāēpôóéóc òuĩ “òõĩðéáõĩŸĩũĩ” (crunched) āēðāēŸóēĩũĩ ðĩō éā ÷ ñçóēĩĩðĩēçēĩŸĩ óóēð āéóēŸóðāð āāēáðŨóóáócò.
- Āçĩēĩōñābā òuĩ ðāēŸóũĩ òçð āāēáðŨóóáócò éāē òuĩ ðāēŸóũĩ ðçāābĩō ēpāēēā.
- Āçĩēĩōñābā òuĩ ĩŸóũĩ āēēbĩçóçð éāē òçð āéóēŸóðāð “fixit”.
- Āçĩēĩōñābā òçð éāñāñ÷bāð éāóāēüũĩ āēā òçĩ āāēáðŨóóáóc ĩŸóũĩ FTP.
- (ðñĩíéñāôēēŸ) Āçĩēĩōñābā òuĩ ISO āñ÷ābũĩ āēā ĩŸóā CDROM/DVD media.

Āēā ðāñéóóũðāñāð ðēçñĩōĩñbāð ó÷āðēēŸ ĩā òçĩ āēāēēāóbā āçĩēĩōñābāð ĩēāð Ÿēāĩóçð, āābōā òçĩ óāēbāā òāēĩçñbũòçð release(7).

3.2 ĩāóāāēpôóéóc òuĩ XFree86

Ōĩ āñāóēēũ ðāñēāŨēēĩ **XFree86** ābĩāē Ÿĩā óçĩāĩóēēũ ēñĩŨðē ēŨēā Ÿēāĩóçð āēā ðĩēēĩŸð ÷ ñpóóāð ðĩō ēŸēĩōĩ òĩ FreeBSD āēā óóāēĩŸð āñāóāð. ðñēĩ òçĩ Ÿēāĩóç 4.6-RELEASE òĩō FreeBSD, ĩē āðbóçĩāð āēüüóāēð òĩō FreeBSD ÷ ñçóēĩĩðĩēĩŸóāĩ òçĩ Ÿēāĩóç 3.x òuĩ **XFree86**. Ĩ ðēĩ āŸēĩēĩð ðñũðĩð ĩā ĩāóāēũððóðāðā āóðŸð òēð āēüüóāēð ābĩāē ĩā ÷ ñçóēĩĩðĩēĩŸóāĩ òĩ ðñũāñāĩā `src/release/scripts/X11/build_x.sh`. Áðũũ òĩ ðñũāñāĩā āðāēðāb ĩā ābĩāē pāç óçĩŸĩā òĩ óŸóçĩŨ óáð òũĩ òĩ ðāñēāŨēēĩ XFree86 üĩ ēāē ç āēpóóā Tcl/Tk. ĩāðŨ òçĩ ĩāóāāēpôóéóc òuĩ éāðŨēēçēũ X servers, òĩ ðñũāñāĩā éā ðāēāðŨñāē üēā óā āñ÷ābā óā óðēēĩāŸð āñ÷ābũĩ ðĩō ðāñēĩŸĩāē ĩā āñāē òĩ `sysinstall(8)` ĩŸóā óõĩ ēāðŨēēĩāĩ `XF86336` óõĩ ĩŸóĩ āāēáðŨóóáócò.

ĩāēēĩpĩóáð ĩā òçĩ Ÿēāĩóç 4.6-RELEASE òĩō FreeBSD, òĩ `sysinstall(8)` āāēāēéóðŨ òçĩ Ÿēāĩóç 4.x òuĩ XFree86, óāĩ ēāñĩēēŨ ðāēŸóā. ÁððŨ ĩðĩñāb ĩā ābĩāē ābōā óā ðāēŸóā ðĩō āçĩēĩŸñāçõā òĩ cluster òuĩ ports p ĩðĩēāāðĩðā Ũēēā ðāēŸóā ðĩō Ÿ÷ĩōĩ āçĩēĩōñāçēāb āðũ Ÿĩā ports tree ĩā òçĩ ēāðŨēēçç āðēēŸóā.

Óçĩābũóc: Ābĩāē ðĩēŸ óçĩāĩóēēũ ĩā áðāēñŸóðāðā āðũ òĩ āñ÷ābĩ `/etc/make.conf` ĩðĩēāóāpðĩðā òĩðēēŸð ñōēĩbóāēð Ÿ÷āðā ēŨĩāē. Āēā ðāñŨāāēāĩā, āāĩ ābĩāē ēāēp ēāŸā ĩā āēāĩŸĩāðā āēðāēŸóēĩā ðĩō Ÿ÷ĩōĩ ĩāóāēũððéóðāb óā ēŨðĩēĩ óðāēāēñēĩŸĩĩ óŸóçĩā ĩā ĩñēóĩŸĩç òçĩ óēĩp òçð ĩāóāāēçðpð `CPUTYPE` āēā āāēðéóõĩðĩbçóç òuĩ āēðāēŸóēĩũĩ āēā ēŨðĩēĩ óðāēāēñēĩŸĩĩ āðāĩāñāóðp.

3.3 ðñĩāñŨĩāóā Ōñbōũĩ (“ports”)

Ç Óðēēĩāp òuĩ Ports òĩō FreeBSD (<http://www.FreeBSD.org/ports>) ābĩāē ĩēā óðēēĩāp ĩā ðāñéóóũðāñā āðũ 24,000 ðñĩāñŨĩāóā āðũ òñbōĩðð, ðĩō ābĩāē āēāēŸóēĩā āēā FreeBSD. ĩē ĩŨāā Āēā÷ābñéóçð òuĩ Ports `<portmgr@FreeBSD.org>` ābĩāē òðāŸððĩēē āēā òçĩ óõĩðpñçóç āĩũð āŸĩóñĩō āðũ ðçāābĩ ēpāēēā āēā óā ports, ðĩō ĩðĩñāb ĩā ÷ ñçóēĩĩðĩēçēāb āēā ĩā āçĩēĩōñāçēĩŸĩĩ óā ðāēŸóā ĩā óā ðñĩāñŨĩāóā ðĩō óðñāŸĩōĩ òēð āðbóçĩāð āēüüóāēð òĩō FreeBSD.

Ç āēāāēēāóbā óõĩðpñçóçð òçð óðēēĩāpð òuĩ ports ābĩāē ēŨðē ðĩō āāĩ ĩðĩñĩŸĩā ĩā ēāēŸõĩðĩā āāp. ĩā ĩā÷ũñéóðũ Ũñēñĩ, ĩā òbōēĩ Ç ĨñāŨtūóc ēāĩóçð òuĩ ðāēŸóũĩ ĒĩāēóĩēēŸ āðũ Ōñbōĩðð ([./releng-packages/article.html](http://releng-packages/article.html)), ēāēŸðāē āðũ òĩ ēŸĩā.

3.4 Āñ÷ābā ISO òçð ēāĩóçð

ĩāēēĩpĩóáð ĩā òçĩ Ÿēāĩóç 4.4 òĩō FreeBSD, ç ĩŨāā ĀĩŨðððĩçð òĩō FreeBSD āðĩōŨóēóā ĩā āēāĩŸĩāē ēāē óā òŸóóāñā ISO āñ÷ābā ðĩō ðñpóā ðĩōēĩŸóāĩ ĩē āðāēñābāð *BSDi/Wind River Systems/FreeBSD Mall* óóēð “āðbóçĩāð” āēāmŸð CDROM ðĩō Ÿēāĩāĩ. ēŨēā Ÿĩā āðũ óā òŸóóāñā ISO āñ÷ābā ðñŸðāē ĩā ðāñēŸ÷āē Ÿĩā āñ÷ābĩ `README.TXT` ðĩō

ðǎñéǎñÛöǎé óǎ ðǎñéǎ÷ìíǎíǎ òîõ ǎßóèîõ, êé Ýíǎ ǎñ÷ǎßí CDROM.INF ðîõ ðǎñéÝ÷ǎé ìǎðǎ-ðéçñîîññǎð ǎéǎ íǎ ìðññǎß òî ðñüǎñǎìǎ sysinstall(8) íǎ ǎéÝǎñǎé éǎé íǎ ÷ñçóéîîðîéðóǎé áðòü òî ǎßóèî, éǎèð òé Ýíǎ ǎñ÷ǎßí filename.txt ðîõ ðǎñÝ÷ǎé íéǎ èßóðǎ ǎñ÷ǎßüí òîõ CDROM. Áðòð ç èßóðǎ ìðññǎß íǎ ǎçîéîñǎçèǎß ðîéý áðéÛ, ùð ǎñðò:

```
/stage/cdrom# find . -type f | sed -e 's/^\.\\/' | sort > filename.txt
```

Íé óðǎéǎèñéíÝíǎð áðǎéððóǎéð ǎéǎ èÛèǎ Ýíǎ áðü áðòÛ óǎ CD ðǎñéǎñÛîîíóǎé ðǎñǎéÛòü:

3.4.1 Áßóèîò 1

Í ðñðòîð ǎßóèîð ǎßíǎé ó÷ǎǎüí áðîééǎéóóééÛ áðîðÝéǎóíǎ òçð ǎíóîéðð make release. Íé ìüíǎð ǎééǎǎÝð ðîõ ðñÝðǎé íǎ ǎßíóîí óóîí éǎðÛéîǎñ disc1 ǎßíǎé ç ðñîíèðèç ðîõ éǎðÛéîǎñ tools, òüí XFree86, éǎé üóî òî ǎóíǎðüí ðǎñéóóüðǎñüí ðǎéÝòüí ìðññíý íǎ ÷ñÝóíóîí óóîí ǎßóèî. Í éǎðÛéîǎñ tools ðǎñéÝ÷ǎé ǎñǎǎéǎßǎ ðîõ áðéòñÝðîíóí óǎ ÷ñðóðǎð Ûéèüí éǎéðîñǎéèðí óðóðçîÛòüí íǎ òðéÛîñí òéð ǎéóéÝððǎð ǎéèßçóçð. Áðòüð ì ðñðòîð ǎßóèîð ðñÝðǎé íǎ òðéÛ÷ǎðǎé bootable Ýðóé ðóðǎ íǎ ìðññíý íé ÷ñðóðǎð òüí ìüðÝññüí ððîéíǎéóððí íǎ áðîðǎýǎíóîí òî óðÛǎéí ǎçîéîñǎßǎð òüí ǎéóéǎððí ǎéèßçóçð.

Áí íéǎ ǎéǎóîñǎðéèð Ýéǎíóç òüí XFree86 éǎ ǎéǎíÝíǎðǎé ìǎ òçí Ýéǎíóç áðòð, ðñÝðǎé íǎ ǎçîñǎñèèǎß òî ðñüǎñǎìǎ sysinstall(8) ǎéǎ òçí íÝǎ èÝóç éǎé íé ñǎçǎßǎð ǎǎéǎðÛóðǎóçð. Í ó÷ǎðéèüð èðǎééǎð òðÛñ÷ǎé óóîí éǎðÛéîǎñ src/release/sysinstall óóîí -STABLE èññü ð óóîí éǎðÛéîǎñ src/usr.sbin/sysinstall óóîí -CURRENT èññü. ÓðǎéǎèñéíÝíǎ, óǎ ǎñ÷ǎßǎ dist.c, menus.c, éǎé config.c éǎ ÷ñǎéǎóðǎß íǎ ǎçîñǎñèéýí.

3.4.2 Áßóèîò 2

Í ǎǎýðǎñîð ǎßóèîð ǎßíǎé áðßóçð áðîðÝéǎóíǎ òçð ǎíóîéðð make release éǎðÛ Ýíǎ ìǎǎÛéí ìÝñîð. Áðòüð ì ǎßóèîð ðǎñéÝ÷ǎé Ýíǎ “live filesystem” ðîõ ìðññǎß íǎ ÷ñçóéîîðîéçèǎß áðü òî sysinstall(8) ǎéǎ íǎ ǎñǎðǎóóíýí ðññǎèðíǎðǎ óǎ íéǎ ǎǎéǎðÛóðǎóç òîõ FreeBSD. Èé áðòüð ì ǎßóèîð ðñÝðǎé íǎ ǎßíǎé bootable. Èǎ ðñÝðǎé áðßóçð íǎ ðǎñéÝ÷ǎé Ýíǎ óóîíðéǎóíÝíí ǎíðßǎñǎóîí òîõ CVS repository óóîí éǎðÛéîǎñ CVSROOT éǎé ǎßǎìǎðǎ áðü ǎðññééÛ ðññǎñÛñǎðǎ óóîí éǎðÛéîǎñ commerce.

3.4.3 Áßóèîé 3 éǎé 4

Íé òðüéîéðîé ǎðí ǎßóèîé ðǎñéÝ÷ǎéí ǎðéðñüóéǎðǎ ðǎéÝóǎ èíǎéóíééý ǎéǎ òî FreeBSD. Óǎ ðǎéÝóǎ éǎ ðñÝðǎé íǎ ǎßíǎé ñǎǎíðîéçíÝíǎ, Ýðóé ðóðǎ èÛèǎ ðǎéÝðîí íǎ ǎßíǎé óóîí ðǎéí ǎßóèí ìǎ üéǎ óǎ ðǎéÝóǎ áðü óǎ ñðíǎ ǎñǎñðÛóǎé ǎéǎ íǎ ǎǎéǎðǎóðǎéǎß éǎé íǎ òñÝíǎé. ðǎñéóóüðǎñǎð ðéçñîîññǎð ǎéǎ òçí ǎçîéîñǎßǎ áðòðí òüí ǎßóèüí ǎíǎóÝññíóǎé óóîí Ûñèññ Ç ÎñãÛîùόç èǎíóçð òüí ðǎéÝòüí Èíǎéóíééý áðü Òñßðîðð (../releng-packages/article.html).

4 Áéǎíñð òüí Áêäüüóàùí

4.1 ÁîððçñǎðçðÝð FTP

¼ðǎí ç Ýéǎíóç ǎßíǎé Ýóîéîç, Ý÷ǎé ǎñééíǎóðǎß ǎéðǎñðð, éǎé Ý÷ǎé ðǎéǎðǎñéóðǎß ǎéǎ ǎéǎíñð, ì éýñéîð FTP ǎñððçñǎðçðð ðñÝðǎé íǎ ǎçîñǎñèèǎß. Íé áðßóçíéé ǎñððçñǎðçðÝð FTP òîõ FreeBSD ǎßíǎé üéîé mirrors ǎñüð éýñéîð ǎñððçñǎðçðð óóîí ñðíñí Ý÷ǎéí ðññóǎǎóç ìüí Ûéèéé FTP ǎñððçñǎðçðÝð. Áðòüð ì ǎñððçñǎðçðð ǎßíǎé ǎñüðüð ùð ftp-master. ¼ðǎí ç Ýéǎíóç ǎßíǎé Ýóîéîç, ðñÝðǎé íǎ ǎçîñǎñèéýí óǎ ðǎñǎéÛòü ǎñ÷ǎßǎ óóîí ftp-master:

5.1 Äçĭēĭōñāßá ÐñĭóáñĭōĭÝĭñĭ Āéóēāōōþĭ Āēēßĭçóçð.

ÐĭēēÝð āēēāóáóōŨóāēð Ý÷ĭōĭ ðĭēýðēĭēāð áðāēðþóāēð ðĭō ĭðĭñāß ĭā òç óāēñŨ òĭōð ĭá áðāēðĭýĭ òçĭ ðñĭóēþēç ðñāēóóóūðāñĭ ĭāçāþĭ Þ āñāāēāßñĭ ÷ñþóçç òóēð āēóēÝððāð āāēāðŨóóáçðð. Ĩ “ĭðāēŨēēēĭð” òññðĭð ĭá òĭ ēŨĭāðā áððū āßĭáē ĭá ēŨĭāðā òēð āēēāāÝð óāð òñĭ ēāðŨēĭāĭ ðĭō Ý÷āē äðĭēĭŨóāē ĭāðŨ òĭ òÝēĭð òçð ç āēāāēēāóßá make release:

- ÐāñŨóðā òā patches óāð Þ ðñĭóēÝððā òā āðēðēÝĭñ āñ÷āß ĭÝóā òñĭ ēāðŨēĭāĭ chroot òçð Ýēāĭóçð.
- `rm ${CHROOTDIR}/usr/obj/usr/src/release/release.[59]`
- ĭāðāāēñððóðā ðŨēē òĭ sysinstall(8), òĭ ðñþĭá, Þ ũðĭēā Ũēēā ðñĭāñŨñāðā Ý÷ĭō āðçñāāóðāß áðū òēð āēēāāÝð óāð.
- `chroot ${CHROOTDIR} ./mk floppies`

ĭē ĭÝāð āēóēÝððāð āāēāðŨóóáçðð ēā äçĭēĭōñāçēĭýĭ òñĭ ēāðŨēĭāĭ \${CHROOTDIR}/R/stage/floppies.

ĀĭāēēāēðēēŨ, ĭðĭñāßðā ĭá ÷ñçóēĭðĭēþóāðā òĭ make target boot.flp, Þ ĭðĭñāßðā ĭá òñÝĭāðā áðāðēāßāð òĭ script ðĭō äçĭēĭōñāßá òā òðððþĭāðā āñ÷āßñĭ src/release/scripts/doFS.sh.

ĭðĭñāßðā āðßóçð ĭá ēāñĭßóðāð þóðā āēēÝð óāð āēēāāÝð ĭá ðñāāóðĭýĭ ĭā ĭññðþ patch òçĭ Ýēāĭóç ũððð ēā òðēŨ÷ĭāðāē, āßñĭðāð òēĭþ òçĭ ĭāðāāēçðþ LOCAL_PATCH ũðāĭ òñÝĭāðā òçĭ āĭðĭēþ make release.

5.2 Ðñĭāñāĭāðßæĭĭóāð òĭ sysinstall

Ōĭ āñāāēāßĭ āāēāðŨóóáçðð ēāē ñýēĭóçðð òĭō FreeBSD, òĭ sysinstall(8), ĭðĭñāß ĭá ðñĭāñāĭāðēóðāß āēā ĭá ēŨĭāē ðēĭ āýēĭēāð òēð áððñāðĭðĭēçĭÝĭāð āāēāðáóðŨóāēð òā ðĭēēŨ ĭç÷āĭþĭāðā. Áððū òĭ ÷āñāēðçñēóðēēñ òĭō ðñĭāñŨñāðĭð ĭðĭñāß ĭá ÷ñçóēĭðĭēçēāß òā òñĭāðāóĭñ ĭā òĭ PXE[13] òçð Intel āēā ĭá ĭāēēĭþóāē ç āāēāðŨóóáçðð áðū òĭ āßēððĭ, Þ òā òñĭāðāóĭñ ĭā ðñĭóáñĭōĭÝĭāð āēóēÝððāð āēēßĭçóçðð ēē Ýĭā sysinstall script. ĭá ðāñŨāāēāĭā áðū òÝðĭēĭ sysinstall script ĭðĭñāßðā ĭá āñāßðā òðĭ āñ÷āßñĭ src/release/sysinstall/install.cfg.

6 ĭāēþĭāðā ðĭō Ðþñāĭā áðū òçĭ êäĭóç 4.4 òĭō FreeBSD

Ç āēāāēēāóßá āðĭēĭāðāð òçð Ýēāĭóçð 4.4 òĭō FreeBSD ĭāēßĭçóçā āðßóçĭā òçĭ ĭç Áðāĭýóðĭð 2001. ĭāðŨ áðū áððþ òçĭ çĭāññĭçĭá, ũēāð ĭē āēēāāÝð òñĭ ēĭñĭñ RELENG_4 òĭō FreeBSD Ýðñāðā ĭá Ý÷ĭōĭ Ýāēñēóç áðū òçĭ ĨŨāā ĨñāŨñóçð òñĭ Āēäüóäñĭ <re@FreeBSD.org>. Ç ðñþðç āĭēēĭāóðēēþ Ýēāĭóç āēā òçĭ āñ÷ēðāēðĭēēþ x86 Ýāēĭā āēāēÝóēĭç òóēð 16 Áðāĭýóðĭð, ēē āēĭēĭðēþēçēā áðū 4 áēñĭā āĭēēĭāóðēēÝð āēäñóāēð ðĭō ĭāþāçóāĭ òçĭ òāēēēþ Ýēāĭóç òóēð 18 òĭō ÓāððÝĭāñç. Ĩ òðāýēðñð áóðŨēāēāð Ýðāēĭā òçĭāĭðēēñ ññēĭ ēāðŨ òçĭ āēŨñēāēā òçð òāēāððāßāð āāāñŨāāð ēāēþð ēŨðĭēā ðñĭāēþĭāðā áóðŨēāēāð āñÝēçēāĭ òā ðñĭçāĭýĭāĭāð, āĭēēĭāóðēēÝð āēäñóāēð. ÓññēēēŨ, ðŨĭñ áðū 500 email òðŨēēçēāĭ òçĭ ĨŨāā ĨñāŨñóçð òñĭ Āēäüóäñĭ <re@FreeBSD.org> òā āēŨóçĭā ĭēēññðāñĭ áðū Ýĭā ĭþĭā.

Ç ēĭēĭñðçðā òñĭ ÷ñçóðþĭ ĭāð Ýēāĭā óāðÝð ũðē ç áóðŨēāēā ēāē ç óðāēāñññðçðā ĭēāð Ýēāĭóçð āāĭ ēŨ 'ðñāðā ĭá ēððēŨæāðāē āēā ēāĭāñð āßāĭð ðñĭēāðĭßāð Þ çĭāññĭçĭáðð ðĭō Ý÷ĭōĭ òāēāß óāĭ òðū ÷ĭē áðū ðñēĭ. Ōĭ FreeBSD Ý÷āē ĭāāāēþóāē āñāĭāðēēŨ ēāðŨ òç āēŨñēāēā òçð æððð òĭō óāĭ óýóççĭā, ēāē ç āĭŨāēç āēā óðāēāēñēĭÝĭç ðĭēðēēþ ēāē ĭñāŨñóçç āēā òçĭ äçĭēĭōñāßá ĭÝñĭ āēäñóäñĭ āßĭāē ðēÝĭñ óāĭāñþ ðñāēóóóūðāñĭ áðū ðĭōÝ. Áððþ ç āĭŨāēç ēā āßĭāē áēñĭā ðēĭ çĭāĭðēēþ ēāēþð òĭ FreeBSD ēā āñ÷āßāē ĭá ĭāðāýŨñāðāē òā ĭÝāð ðēāððññāð.

7 ÎäëííîëéÝò Êáôãðëýíóáëò

Ãßíáë æùðëéðò óçíáóßáð ïé ðñáëðëéÝò éáé ç ïñÃÛíùç òçð ãéááëéáóßáð äçíëíðñáð òùí Æëüüóàùí íáð íá óðíááßæííí ïá òçí óðíá÷ð ðóíáíííííç ÆÛòç òùí ÷ñçóðíí íáð. Ìá ÆÛòç áððð òç óéÝðç ãñááæííáóðá ðëëçñÛ áéá íá ðáëíçñéðóíðíá òçí ãéááëéáóßá ðáñááùñðò òùí Æëüüóàùí òíò FreeBSD.

- *ÐáñÛëëççç áëðÝéáóç* - ÌáñéëÛ ïÝñç òçð ïáðáãéðððëéçðò ïéáð ÆáëáðÛóðáóçð ïðñíýí íá Æííííí “ðñéý ðáñÛëëçççá”. Óá ðëí ðñëÛ áðù óá óðÛáéá Æßíáë I/O intensive, ïðùðá ç ýðáñíç ðñëëí ððççðð-ðá÷-ýðçðáð Æßóëùí Æßíáë ðëí óçíáíðëéð áðù òçíí ÷ñðç ðñëëí Æðáíñááóðíí áéá íá áðëóá÷ðíëáß ëÛðùð ç ãéááëéáóßá ðíò make release. Áí Æáóíñáðëëëß Æßóëíë ÷ñçóëíðñéççýíí áéá ðíðíáðá òçð éáñáñ÷ðáð ðíò chroot(2) ðáñéáÛëëíðòð, òùðá ðí CVS checkout òùí éáðáëüüíí ports éáé doc ïðñíáß íá Æßíáë óáðòù÷ñííá ïá òçí áñííëð make world óðíí Ûëëí Æßóëí. ×ñçóëíðñéçççç ïéá RAID ëýóç (hardware ð software) ïðñíáß íá ïáëðóáë ãñáóóëëÛ ðíí óðñíëëëù ÷ññíí ðíò ÷ñáëÛæáðáë íá ïáðáëüðððëóóáß ïéá ðëðñçð Ýëáíóç.
- *Ïáðáãéðððëéçç Æëüüóàùí áéá ÆéáðñáðëéÝò áñ÷éðáëðñíëéÝò* - ÈÝëáðá íá ïáðáëüðððáðá ïéá Ýëáíóç áéá IA-64 ð Alpha óá ëÛðñííí x86 áðáíñááóðð? make TARGET=ia64 release.
- *ÃñëëíÝð áéá ëÛëç* - ×ñáëáæííáóðá éáëýðáñá ãñááëéáßá áéá áðòùíáðíí Ýëáã÷í ïñëüðçðáð óðíí FreeBSD.
- *Ãñááëáßá ÆáëáðÛóðáóçð* - Õí ðñüãñáíÛ íáð áéá òçí ÆáëáðÛóðáóç òíò FreeBSD Ý÷áë ïáðáñÛóáë ðñí ðñëëýí ðíí áíáíáíííí ÷ññíí æùðò ðíò. ÕðÛñ÷ííí ÆÛóíñáð ïñÛáð ðíò ãñáÛëííóáë áéá íá ðëíðñéðóíðíí ëÛðñíí Ûëëí, ðëí ïñóÝñíí íç÷áíëóíí ÆáëáðÛóðáóçð. Ìéá áðù ðëð ðëí ððíó÷ííáíáð, Æßíáë ç ïñÛáá libh[5] ðíò óðíí÷áýáë óðçí ðëíðñéçççç áíüð Ýíððñíò, íÝíò ðñüðíò ðáëáðáñðóíáðíò ëñáéóíëéý éáé áíüð GUI ðñíáñÛíáðíò ÆáëáðÛóðáóçð.

8 Æó÷áñéóóßáð

Èá ðëáéá íá áð÷áñéóððóù ðíí Jordan Hubbard, ðíò ïíò Ýäüóá òçí ððëáëñßá íá ðÛññ ëÛðñíá áðù òçí áðëýíç òçð Ýëáíóçð 4.4 ðíò FreeBSD, éáëðò éáë áéá ïëç òçí ãñóëáëÛ ðíò Ý÷áë ëÛíáë Æáë ÷ññíéá áéá íá Æßíáë ðí FreeBSD áðòù ðíò Æßíáë óðíáñá. ÕóóëëÛ, ç Ýëáíóç Æáí éá ðóáí ðíðÝ äðíáðíí íá ïëíëççññëáß ÷ññßð ïëç òçí ó÷áðëéð ïá òçí Ýëáíóç ãñóëáëÛ ðíò Ýéáíáí ïé Satoshi Asami <asami@FreeBSD.org>, Steve Price <steve@FreeBSD.org>, Bruce A. Mah <bmah@FreeBSD.org>, Nik Clayton <nik@FreeBSD.org>, David O’Brien <obrien@FreeBSD.org>, Kris Kennaway <kris@FreeBSD.org>, John Baldwin <jhb@FreeBSD.org> éáé ïëíé ïé ððñíëéðñé ðíò áð÷ñéýíóáë ïá òçí áñÛððóíç ðíò FreeBSD. ÈÝëù áðßóçð íá áð÷áñéóððóù ðíòð Rodney Grimes <rgrimes@FreeBSD.org>, Poul-Henning Kamp <phk@FreeBSD.org>, éáé ïëíðð ðíòð Ûëëíðð ðíò ãñáÛóççáí áéá íá ððëÛíííí óá ãñááëéáßá áéá ðëð Æëüüóáëð óóëð ðñðáð ïÝñáð òçð äçíëíðñáð ðíò FreeBSD. Áðòù ðí Ûñëñí Ý÷áë áðçñááóðáß áðù éáßíáíá ó÷áðëéÛ ïá òçí ïñÃÛíùç òùí Æëüüóàùí áðù ðí CSRG[14], òçí ïñÛáá ðíò NetBSD[11], éáé òçí ðñüðáóç áéá íéá ãéááëéáóßá ïñÃÛíùçð òùí Æëüüóàùí ðíò John Baldwin[12].

9 ÁíáðñíÝò

[1] CVS - Concurrent Versions System <http://www.cvshome.org>

[2] CVSup - The CVS-Optimized General Purpose Network File Distribution System
<http://www.polstra.com/projects/freeware/CVSup>

[3] <http://bento.FreeBSD.org>

[4] FreeBSD Ports Collection <http://www.FreeBSD.org/ports>

[5] The libh Project <http://www.FreeBSD.org/projects/libh.html>

- [6] FreeBSD Committers
http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/contributors/staff-committers.html
- [7] FreeBSD Core-Team http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/contributors/staff-core.html
- [8] FreeBSD Handbook http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook
- [9] GNATS: The GNU Bug Tracking System <http://www.gnu.org/software/gnats>
- [10] FreeBSD PR Statistics <http://www.FreeBSD.org/prstats/index.html>
- [11] NetBSD Developer Documentation: Release Engineering <http://www.NetBSD.org/developers/releng/index.html>
- [12] John Baldwin's FreeBSD Release Engineering Proposal <http://people.FreeBSD.org/~jhb/docs/releng.txt>
- [13] PXE Jumpstart Guide http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/pxe/index.html
- [14] Marshall Kirk McKusick, Michael J. Karels, and Keith Bostic: *The Release Engineering of 4.3BSD*
(<http://docs.FreeBSD.org/44doc/papers/releng.html>)