



1 ÅéóáãùãÐ

Οι εαβιάνι αδοῦ οἱβææέ οεὸ ἀεάοῖνÝð ἰαὸαίγ οἰῶ FreeBSD ἐάέ οἰῶ Linux þόαἰ ἰÝοἰέ Þ ðñἱ÷ἰñçἰÝñέ ÷ñÞόαὸ οἰῶ Linux ἰά ἰðñἱγἰ ἁñÞἰñἰ ἰά ðñἰόáñἰἰόἰγἰ οὐὸέ ἁάόέÝð Ýñἰεάὸ οἰῶ FreeBSD. Ðñἰēæάόάέ ἁέἰ ἰέἰ ὀἰ÷ἰέέÞ æέόἁἁἁÞ ὀἰ FreeBSD, ἐάέ ἁἰ ἐἰ ἰἰάόἁñἰγἰἰ ὀἰ ὀð÷ἰἰ “ὀέἰἰἰἰἰἰἰÝð” ἀεάοῖνÝð ἰαὸαίγ οἰἰ ἰγἰ ὀόἰἰἰἰἰἰἰ.

Òì èàßiàí áðòù òðìèÝóðáè uðè Ý÷àðá Þäç äæéáðáóðÞóáè òì FreeBSD. Áí äáí Ý÷àðá äæéáðáóðÞóáè òì FreeBSD Þ ÷ñæÝðæáðá àíÞæðáè íà ðçí æéäæéáðá äæéáðáóðáðð òìð, ðñáæææýíà íá æéáðáðá òì èàðÝæáí ÁææééóðÞíðáð òì FreeBSD ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/install.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/install.html)) óòì Áã÷æñßæí òìð FreeBSD.

## 2 Êâëýöç: Ääí õõŮñ÷âé Bash;

[illegible][illegible]

### 3 ĐáêÝòá êáé Ports: ĐñĩòéÝôĩĩòáò ĩĩăéóĩéêũ óôĩ FreeBSD

[illegible]

### 3.1 ĐấêÝôá

Όά θαέΥόά αβίαέ θñĩ-ĩãõãëüõõéõĩΥĩãõ ãõãñĩãΥõ, èã ëΥããĩ õĩ áĩõβõõĩé÷ĩ áéã õĩ FreeBSD õũĩ ãñ÷ãβũĩ .deb õã õõõõΠĩãõã Debian/Ubuntu éãé õũĩ ãñ÷ãβũĩ .rpm õã õõõõΠĩãõã Red Hat/Fedora. Όά θαέΥόά ããéãèβõõãõĩãé ÷ñçõëũĩõĩéΠĩãõã õçĩ áĩõĩéΠ pkg\_add(1). Άéã ðãñÕããéãĩã, ç áëüëĩõèç áĩõĩéΠ ããéãééõÕ õĩĩ **Apache 2.2**:

```
# pkg_add /tmp/apache-2.2.6_2.tbz
```

C ÷ ñPóç ôçð ðáñáíÝôñîï - r íαçääB ôçí pkg\_add(1) íá éάόääÜöåé áðòüìαάó üüöí öí ðáéÝðí, üöí éάé óέð áíáñðPóάέð öîð. éάé íá öí äāēáðáóðPóάé:

```
# pkg_add -r apache22
```

```
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/Latest/apache22.tbz... Do
```

```

Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/All/expat-2.0.0_1.tbz...
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/All/perl-5.8.8_1.tbz... D
[snip]

```

To run apache www server from startup, add `apache22_enable="YES"` in your `/etc/rc.conf`. Extra options can be found in startup script.

**Όχι!Βυθός:** Αί ÷ η̇ςοείιι̇τιέα̇βδ̇ά ιέά "α̇δ̇βόςις" Ύέα̇ιός ο̇ι̇ο FreeBSD (6.2, 6.3, 7.0, έ̇ε̇δ̇. δ̇ι̇ο α̇αίέ̇ε̇ϋ̇ ι̇δ̇ι̇η̇α̇βδ̇ά ιά α̇αέ̇α̇δ̇α̇ο̇δ̇ρ̇α̇δ̇α̇ α̇δ̇ϋ̇ CD-ROM) ς̇ α̇ι̇ο̇ι̇ε̇ρ̇ pkg\_add -r ε̇ά ε̇α̇δ̇α̇α̇ϋ̇ο̇ά̇ε̇ δ̇ά δ̇αέ̇Υ̇ο̇ά δ̇ι̇ο ο̇δ̇ε̇ϋ̇÷ο̇ς̇ε̇ά̇ι̇ α̇ε̇ά α̇δ̇ο̇ρ̇ ο̇ς̇ ο̇δ̇α̇ε̇α̇η̇ε̇ι̇Υ̇ίς̇ Ύέ̇α̇ιός. Ο̇ά δ̇αέ̇Υ̇ο̇ά α̇δ̇ο̇ϋ̇ *βούδ̇ α̇αί̇ δ̇α̇η̇έ̇Υ̇÷̇ι̇ο̇ι̇* ο̇ε̇δ̇ δ̇ε̇Υ̇ί̇ι̇ δ̇α̇ε̇α̇δ̇ο̇ά̇βδ̇α̇ α̇ε̇α̇ϋ̇ο̇ά̇ε̇ο̇ ο̇υ̇ι̇ α̇δ̇α̇η̇ι̇α̇ρ̇ι̇. ι̇δ̇ι̇η̇α̇βδ̇ά ιά ÷ η̇ςοείι̇ι̇δ̇ι̇ε̇ρ̇α̇δ̇α̇ ο̇ς̇ι̇ ι̇α̇δ̇α̇α̇ε̇ς̇ο̇ρ̇ δ̇α̇η̇έ̇α̇ϋ̇ε̇ε̇ι̇ο̇ι̇δ̇ο̇ [PACKAGESITE](#) α̇ε̇ά ιά δ̇α̇η̇ά̇ε̇ϋ̇ι̇ο̇ά̇ε̇ α̇δ̇ο̇ρ̇ ο̇ς̇ι̇ δ̇η̇ι̇α̇δ̇ε̇ε̇α̇ι̇Υ̇ίς̇ ο̇δ̇ι̇δ̇α̇η̇έ̇ο̇ι̇η̇ϋ̇. Α̇ε̇ά δ̇α̇η̇ϋ̇α̇α̇ε̇α̇ι̇α̇, ε̇Υ̇ο̇ι̇ι̇ο̇ά̇ ο̇ς̇ι̇ [PACKAGESITE](#) ο̇ό̇ς̇ι̇ ο̇έ̇ι̇ρ̇ <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ε̇ά ε̇α̇δ̇α̇α̇ϋ̇ο̇ά̇ε̇ δ̇ά δ̇ε̇ι̇ δ̇η̇ϋ̇ο̇ά̇ε̇ δ̇αέ̇Υ̇ο̇ά δ̇ι̇ο̇ ο̇δ̇ϋ̇η̇÷̇ι̇ο̇ι̇ α̇ε̇ά ο̇ς̇ ο̇ά̇ε̇η̇ϋ̇ 6.X.

IdinaBda ía áeááUoáda Báneooúoána áea oéo aeáúoáeo oíō FreeBSD oíō Ūñeñi ÁdeéYáñíoaó oç ÓúoP áea ÁoUó êáñóç oíō FreeBSD ([http://www.FreeBSD.org/doc/en\\_US.ISO8859-1/articles/version-guide/](http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/version-guide/)).

Άέά δάνεόουόαηάο δέçññοιηβáο ò÷âôééÛ ìà ôá δαéÝôá, δάηάéαεìγìá áéááÛóôâ ôçì áíüôçóá 4.4 ôòì Åã÷âénβáéì ôìò FreeBSD: ×ñçóéìñðìéπίóáò ôì Óýóôçìá Packages ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/packages-using.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/packages-using.html)).

## 3.2 Ports

Ç ääyöäñç Ýëëäëð äéä öçí ääéäöÜöðäöç äöäññäðí öðí FreeBSD äßíäé ç Óðëëäðä öùí Ports. Ç Óðëëäðä öùí Ports äßíäé Ýíä ðéäßöéí çäëðíðñäçðí ðñö äðñðäéäßöäé äðñ Makefiles éäé äñ÷äßä äéäöññðí (patches) öä íðñßä Ý÷íðí äçíëíðñäçäß äéäéëÜ, þöðä íä äßíäé äññäðç ç ääéäöÜöðäöç äéÜöññí äöäññäðí öðí FreeBSD äðñ öñí ðçääßí ëðäéä öñðð. ¼öäí ääéäéëöðÜöä Ýíä port, öí öýöðçíä éä éäöääÜöäé öñí ðçääßí ëðäéä, éä äöäññíöäé üëäð öéð äðäéöýíäñäð äéäääÝð ÷ñçöñíðñíëðñäð öä patches, éä íäðääëüððöäé öñí ëðäéä, éäé öÝëð éä ääéäöäöðöäé öçí äöäññäð. Éä äëëëðëðöäé öçí ßäéä äéääéäöäéä éäé äéä íðñéääððñöä öð÷üí äñäñðñíäñä ðññäñÜñíäðä.

[illegible]

Ç ääëäôÜóôáôç áüò port äßíäë ääíëëÜ öüóí äðëP uóí ôí íá áéóÝëëäôä öóíí ëäôÜëíäí öíò ëäë íá íäëëíPóäôä ôçí äëäëëëäôßä íäôääëpôðëôçò. Öóí äëüëíôëí ðánÜäëëíä äßíäôäë ääëäôÜóôáôç öíò **Apache 2.2** äðu ôçí ÖðëëíäP öüí Ports:

```
# cd /usr/ports/www/apache22
# make install clean
```

já óçíáíóêéü ðeäííÝéôçíá ôçð ÷ ñÞóçð ports óçí áäeáoÜóóáoç ëíäeóíeéíý áßíáé ç éeáíuôçóá ðñíóáñíäÞð òùí áðeéäÞí  
 áäeáoÜóóáoçð. Áeá ðánÜáäeäíä, uóáí áäeäeéóóÜðá òíí **Apache 2.2** áðu óá ports íðñíáßòá íá áíáñäíðíeÞáoðá ôçí  
 áðeéäÞ **mod\_ldap** èÝóñíóáo áðeÞð òeíÞ óóç íàðáäeçðÞ **WITH\_LDAP** òíð **make(1)**:

```
# cd /usr/ports/www/apache22
# make WITH_LDAP="YES" install clean
```

ἈέάάṪṵṵṵ ὁῖ ἁίṵṵṵṵṵ 4.5 ὁṵ Ἀṵṵṵṵṵṵṵṵ ὁṵ FreeBSD, ×ṵṵṵṵṵṵṵṵṵṵṵ ὁῖ Ports Collection ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/ports-using.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html)), ἁṵ ḁṵṵṵṵṵṵṵṵṵ ḁṵṵṵṵṵṵṵṵṵ ὁṵ Ṫṵṵṵṵṵṵṵṵṵ ṵṵ ὁῖ Ṫṵṵṵṵṵṵṵṵṵ ὁṵ Ports.

### 3.3 Ports Þ ðáéÝôá, ôé ðñÝðáé íá ÷ñçóéìðïéÞòù;

[illegible]

## ĐáêÝôá (Ýôïéìá àêôãëÝóéìá)

- [illegible]

## Ports (őçãáßìò êpäéêáò)

- **Ἐξαιρούμεθα ὁμιλοῦντες** τοὺς ἀδελφεοὺς ἀπὸ τῆς ἐκκλησίας. (Ὁ **Θαεῦ** ὁ **ὁρίσθη** τὸ **ἀπομαρτυρεῖσθαι** τὸ **ὅτι** ὁ **ὁμιλοῦν** τὸν **ἑαυτοῦ**). Ἰὰ οἱ **ports** ἡ **ἐκκλησία** ἡ **ὁμιλοῦν** τὸν **ἑαυτοῦ** ἀπὸ τῆς ἐκκλησίας, **ὡς** ὅτι ἡ **ἐκκλησία** ὁ **ὁμιλοῦν** τὸν **ἑαυτοῦ**, **τὸ** ἀπὸ τῆς ἐκκλησίας ἡ **ἐκκλησία** ὁ **ὁμιλοῦν** τὸν **ἑαυτοῦ**.
- ἡ **ἐκκλησία** ἡ **ἐκκλησία** ὁ **ὁμιλοῦν** τὸν **ἑαυτοῦ** (patches) **αἱ** οἱ **ἐκκλησία**.

Αἱ ἀαὶ Ὡ ÷ ἀοὰ ἀεάειΥδ ἀδαέοΠοάεδ, οὰ δαέΥοὰ δεέαῖυι εὰ οάδ ἐαέγγοῖρ ιεά ÷ ἀνŮ. Αἱ υόουοι ÷ νᾶεŮᾶοάε ιά  
 θηοάηιυοάοα εŮθιεάδ ἀδεείαΥδ, ουοὰ ç ιΎειαρδ ουι ports αβίαέ ç ἐαέγδαηç. (Έάε εοιçεὰΒοά, αἱ ÷ νᾶεŮᾶοάοα  
 θηοάηιαΒ ἀεεŮ θηοιδειŮοά οὰ δαέΥοὰ, ιδιναΒοά ιΥού οçδ οδεείαΒδ ουι ports ιά οδεŮίαοά οὰ ἀεεŮ οάδ  
 θηοάηιυιΎία δαέΥοὰ ÷ ηçοείηδιέπιδάδ οçι αἰοῖρεΒ make package έάε αἰδεάνŮοῖοάδ οὰ δαέΥοὰ διο αἰεῖοῖηΒοάοα  
 οὰ Ůεεά ιç÷ αἱΠιαόά.)

#### 4 Αέεβίçόç ôĩõ ÓóóôΠιάôĩò: Ðĩõ αβίαέ ôά run-levels;

Οι Linux ÷ ηςοείηδιέαβ οι όγούοία âêêβίςοçð SysV, âηρ οι FreeBSD ÷ ηςοείηδιέαβ οι θανάαίόεαêü όγούοία âêêβίςοçð BSD. Όοι όγούοία init(8) όγδῖο BSD, ââί οδÜñ÷ῖοί run-levels, ῖγδâ οι âñ÷âβί /etc/inittab. Αίοβ âέα âοδÜ, ç âêêβίςοç âêŸâ÷âðâέ âδü ῖία script âêêβίςοçð, οι rc(8). Το script /etc/rc âέαâÜæâέ οι âñ÷âβί /etc/defaults/rc.conf êâέ οι âñ÷âβί /etc/rc.conf âέα ίâ êâèηβοâέ διέâð οδçηâðâðð ðηüêâέðâέ ίâ ίâέέηβοίοι. Ιέ οδçηâðâðð âοδŸð ίâέέŸίâ ίâ οçί âêðŸέâοç ðüι âίοβοίε÷÷üι script âêêβίςοçð ðῖο âηβόέηοâέ οδῖðð êâðâêüâῖðð /etc/rc.d/ êâέ /usr/local/etc/rc.d/. Όâ scripts âοδÜ âβίâέ ðâñüüιέâ ίâ οâ scripts ðῖο âηβόέηοâέ οδῖι êâðÜêῖâι /etc/init.d/ óâ óðóðβιâðâ Linux.

*Ἀεάβοθ ὁδὺν ÷ τῶι αὐτῷ οἰδιρεὰςβὰδ ἀέα ὀα scripts ἀεβεῖςζόφου οὐτ ὁδζῆσἀοέρη; Ὀά scripts θῖρ ἀνβόειήδαέ ὀοίρ εᾶόὔειῖαι /etc/rc.d/ ἀβίαέ ἀέα ἀοάνηιᾶΨὸ θῖρ ἀΠεῖτοῖ ὀοί “ἀαόεϵυ” ὄγοςζιά. (Ἀέα δᾶνὔΑᾶέᾶιά, ὁεδ cron(8), sshd(8), syslog(3), ἐαέ ὔεεᾶδ.) Ὀά scripts θῖρ ἀνβόειήδαέ ὀοίρ εᾶόὔειῖαι /usr/local/etc/rc.d/ ἀβίαέ ἀέα ἀοάνηιᾶΨὸ θῖρ Ὡ ÷ τῶι ἀᾶεᾶὀάὀᾶεᾶβ ἀδύ οἰτῶ ÷ νβῠὀᾶδ, υδύδ ἀέα δᾶνὔΑᾶέᾶιά ἱ **Apache**, οἱ **Squid**, ἐ.ἐ.δ.*

Διέα ἀβιάε ε ἀέαοῖνῦ ἰαόατῶ οῖο “ἀαόέεῦ” οδοόΠιάοῖο ἐαέ οὐὶ ἀοάνῖαῖ ÷ ñPóóç; Õῖ FreeBSD αἰάδῶγῶαόαέ ὑὸ ὕῖα ðēPñāð εαέοῖοῖῇεεῦ ὀγῶόçῖα. ἰᾶ Ὑεεᾶ εὔαεᾶ, ἰ ðñPῖᾶð, ἰε ἀαέεεῖεPεᾶð οῖο οδοόΠιάοῖο, ἰε ἀαόέεῚð αἰῶῖεῚð (userland, ὁᾶ ðñῖᾶñῚῖᾶοᾶ ὑðῖð ὀῖ ls(1), cat(1), cp(1) ἐεð.), αἰάδῶγῶῖῖᾶε ἐαέ ἀçῖῶεᾶῖῖᾶε ἰᾶεB, ὑὸ ὀγῖῖῖ. Ἀόῖῖ αἰᾶῚῖᾶᾶε ἐαέ ὑὸ “ἀαόέεῦ” ὀγῶόçῖα. ἰε ἀοάνῖᾶῚð ὀῖο ἀαέᾶεBόόᾶῖᾶε ᾶῖῖ ὀῖð ÷ ñPóóð, ᾶῖ ᾶῖPεῖῖ ὀῖῖ “ἀαόέεῦ” ὀγῶόçῖα, ἐαέ ὀῚῖᾶᾶ ᾶῖᾶε ᾶεᾶ ðᾶñῚῖᾶεῖᾶ ἰ **Apache**, ὀῖ **X11**, ἰ **Mozilla Firefox**, ἐεð. Ἀόῖῖ ὀῖῖ ᾶῖᾶῖð ἰε ἀοάνῖᾶῚð, ᾶῖᾶῖῚ ᾶᾶεᾶεBόόᾶῖᾶε ἰᾶ ὀç ÷ ñPóç ὀçð Ὀόεῖῖᾶð ÐᾶῚῚῖῖ ἐαέ Ports (article.html#SOFTWARE) ὀῖῖ FreeBSD. Ἀέᾶ ἰᾶ ἰᾶ ÷ ῖᾶῖᾶῖῖ ᾶῖῖ ὀῖ ὀῖῖῖῖῖ “ἀαόέεῦ” ὀγῶόçῖα, ἰε ἀοάνῖᾶῚð ÷ ñPóóç ὀῖῖPεῖð ᾶᾶεᾶεBόόᾶῖᾶε ὀᾶ ὀῖᾶὀᾶὀᾶῖῖð ὀῖῖ /usr/local/. ὀόε ὀᾶ ᾶεὀᾶῚῖᾶ ᰇñῖᾶñῚῖᾶ ὀῖῖ ÷ ñçὀῖᾶ ᾶᾶὀῖῖᾶε ὀῖῖPεῖð ὀῖῖ ἐᾶὀῖᾶῖ /usr/local/bin/, ὀᾶ αἰὀὀῖῖ ÷ ᾶ ᾶñ ÷ ᾶῖᾶ ᾶὀῖὀᾶῖ ὀῖὀ ὀῖῖ ἐᾶὀῖᾶῖ /usr/local/etc/, ἐ.ἰ.ἐ.

[illegible]

Όι άέυήρηήι άδύοδάοία άδύ όι άñ÷÷ßι /etc/rc.conf άίάññήδیهآß όçι όδçñάόßά sshd(8) έάέ όήι **Apache 2.2**. Άδβόçό έάέññßάέ ύόέ ι **Apache** έά ήάέήßόάέ ή άίάññήδیهçι Ýίç όç άόήάόύόçά SSL.

```
# enable SSHD
sshd_enable="YES"
# enable Apache with SSL
apache22_enable="YES"
apache22_flags="-DSSL"
```

Ἄδῡ ὁϙ ὀόεἰἵP ḑiō iéá ὀḑᑕñáḑá áíáñáñḑiēéçéḑḑ ὀḑi áñ÷ḑḑi /etc/rc.conf, ḑḑiñḑḑḑ iá ὁϙi íáééíPḑḑḑḑ ḑḑḑḑḑḑḑ  
 ḑḑῡ ὁϙ ḑñḑḑḑP ḑiḑḑḑḑ (÷ḑñḑḑ iá ÷ñḑḑÛḑḑḑ iá ḑḑḑḑḑḑḑḑPḑḑḑḑ ḑi ὀýḑḑḑḑḑ ḑḑḑ):

```
# /etc/rc.d/sshd start
```

Áí íéá òðçñáòßá ááí Ý ÷ áé áíáññäíðíéçéáß óóí áñ ÷ áßí áóòü, ìðíñáßòá íá áíáíááéÚóáòá ôçí áêêßíçòç ôçò áðü ôçí áñáñíP áíòíèþí ìá ôçí áðééñäP forcestart:

```
# /etc/rc.d/sshd forcestart
```

## 5 Ñýèìéóç Äéeôýĩõ

### 5.1 ÄéåđáöÝò Äéeêôýĩõ

Άϊόβ άέα ôï ääíέü äíaáññéóóéëü öýðĩö ethX ðĩö ÷ñçöéíðíεάß ôï Linux áέα öçí äíaáññéóc íεáo äέαðáòÐò äéeôýĩö, ôï FreeBSD ÷ñçöéíðíεάß üò äíaáññéóóéëü ôï üññá öĩö ðññāñÜñäöĩö íāÞαçöçð äεíεíöεíýāñ äüü Ýía āñέèü. Ç äεúεíöεç Ýññäö äüü öçí äíöĩεß ifconfig(8) äāß÷íáε äýí ÊÜñöåð äéeôýĩö Intel® Pro 1000 (ñā äíaáññéóóéëÜ em0 and em1):

```
% ifconfig
em0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=b<RXCSUM, TXCSUM, VLAN_MTU>
    inet 10.10.10.100 netmask 0xffffffff broadcast 10.10.10.255
    ether 00:50:56:a7:70:b2
    media: Ethernet autoselect (1000baseTX <full-duplex>)
    status: active
em1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=b<RXCSUM, TXCSUM, VLAN_MTU>
    inet 192.168.10.222 netmask 0xffffffff broadcast 192.168.10.255
    ether 00:50:56:a7:03:2b
    media: Ethernet autoselect (1000baseTX <full-duplex>)
    status: active
```

## 5.2 Ἡὐὲβόαὲ Ἀεὶὲγίόαὶ IP

Ἰὸνῆβόα ἰά ἰάεῖ ὕοαὶ ἰεά ἡεῖὲδίοç IP ὡ ἰεά ἡεῖὲδίοç ἡεὲὲγίὸ ἰά ὅç ÷ ἡΠόç ὅç ἰὸ ἰὸ ἰὸ ifconfig(8). Ἀεὶ ἰά ἡβίᾶ ἡεὲὲ ὡδὲὲ ἡδὲβ ç ἡεῖᾶᾶ, ἡεὶ ἰά ἰç ÷ ὕἰᾶᾶ ὡ ἡῖᾶ ἡδῖᾶἡεβίç, ἡ ἡἡῖᾶ ἰά ὅç ἡἡῖᾶᾶᾶ ὡ ἡ ἡ ÷ ἡἡ /etc/rc.conf. Ὅἰ ἡεὲὲἰ ἡἡᾶᾶ ὡβίᾶᾶ ç ἡᾶᾶ ÷ ἡἡç ἡἡ ἡἡῖᾶᾶᾶᾶ ὡ ἡ ἡἡ ὡ ἡἡῖᾶᾶᾶ (hostname), ὅç ἡεῖὲδίοç IP, ἡἡᾶ ἡἡ ὅç ἡἡᾶᾶᾶᾶᾶ ὕç ἡῖç (defaultrouter):

```
hostname="server1.example.com"
ifconfig_em0="inet 10.10.10.100 netmask 255.255.255.0"
defaultrouter="10.10.10.1"
```

× ἡçὲἡἡἡᾶᾶ ὅç ἡεὲἡᾶç ἡᾶᾶ ÷ ἡἡç ἡᾶ ἰά ἡἡἡᾶᾶ ὡ ἡ ἡᾶ ἡᾶᾶᾶ ἡᾶᾶ ἡᾶᾶᾶ ἡᾶᾶ DHCP:

```
hostname="server1.example.com"
ifconfig_em0="DHCP"
```

## 6 Firewall

Ὅἰ Linux ÷ ἡçὲἡἡᾶᾶ ὡ **IPTABLES** ὡ ἡἡἡ ἡἡᾶ ÷ ἡ ὅçἡᾶᾶᾶ firewall ὡ ἡᾶᾶᾶ ἡἡᾶᾶ. Ὅἰ FreeBSD ἡἡᾶ ÷ ἡ ἡᾶᾶ firewall ἡᾶᾶ ὡ ἡἡᾶᾶ. Ἀεὶ ὅç ἡἡᾶᾶ, ὡ FreeBSD ἡἡᾶ ÷ ἡ ὡᾶᾶ firewalls:

- IPFIREWALL ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/firewalls-ipfw.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/firewalls-ipfw.html))
- IPFILTER ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/firewalls-ipf.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/firewalls-ipf.html))
- PF ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/firewalls-pf.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/firewalls-pf.html))

Ὅἰ **IPFIREWALL** ἡ **IPFW** (ç ἡἡᾶ ÷ ἡἡᾶᾶ ὡ ἡᾶᾶ ὡ **IPFW** ἡᾶᾶ ç ipfw(8)) ἡᾶᾶ ὡ firewall ἡᾶ ὕ ÷ ἡ ἡᾶᾶ ÷ ἡᾶ ἡᾶ ὡἡᾶᾶ ἡᾶ ὅç ἡᾶ ἡᾶᾶᾶ ὡ FreeBSD. Ὅἰ **IPFW** ἡᾶᾶ ἰά ὡἡᾶᾶᾶ ἡ ὡ dummynet(4) ἡᾶ ἰά ἡᾶᾶ ÷ ἡ ἡᾶᾶᾶᾶ ἡᾶᾶᾶᾶ ὅç ἡᾶᾶ ἡᾶᾶᾶ (traffic shaping) ἡᾶ ἰά ἡᾶᾶᾶ ἡᾶᾶᾶᾶ ὅç ὡᾶᾶ ὡᾶᾶ ἡᾶᾶᾶ.

ἡᾶᾶᾶ ἡᾶ ἡᾶᾶ ὡ **IPFW** ἡᾶ ἡᾶᾶᾶ ἡᾶᾶ ÷ ἡᾶᾶ ἡᾶᾶ ἡᾶ ἡᾶ ὅç ὅçἡᾶᾶ **SSH**:

```
ipfw add allow tcp from any to me 22 in via $ext_if
```

Ôi **IPFILTER** áßíáé íéá áóáñííß firewall ðíó áíáððýóóáðáé áðú ôíí Darren Reed. Äáí Ý÷-áé ööéá÷-ðáß áéáéêÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáññéáß éáé óá Üëéá éáéðíõñáéêÜ, óðíðáñééäíááííÝíúí ôúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàlà áíüò éáíuíá áéá ôi **IPFILTER** ðĩõ ãðéõñÝðäé áéóãñ÷:üìáíá áããñÝíá ðñĩò ôçí òðçñãóá **SSH**:

```
pass in on $ext_if proto tcp from any to any port = 22
```

Ç òàèãòòàáá àòàñìràP firewall, òì **PF**, áíáðóýòóòáé áðü òì OpenBSD project. Ôì **PF** açìéròñãPèçèà ùò áíòèéáòáóòÜòçò òìò **IPFILTER**, èáé Ýòóé ç óýíòáç òìò **PF** áñíáé àñèàòÜ ðañüüíèá íá áóòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óóíáòáóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáóáò òýðìò QoS.

ĐánÜäåēāiā êáíuíá ôiō **PF** ðiō ãðéônÝðäé áéóãñ÷ùìáíá äääñÝíá ðñiò ôçí òðçñáóßá **SSH**:

```
pass in on $ext_if inet proto tcp from any to ($ext_if) port 22
```

## 7 Άίαâáèìβæïïôáò ôï FreeBSD

ÖðÜñ÷ïïï ññáéð ìÝëïäïë áéá ôçï áíááÜëïéóç áñuò óóóóPiáðïrò FreeBSD: ÌÝòù òïò ðçááßïrò êþäééá, ìÝòù Ýðïëèìì (binary) áíáááèìßóáñì, êäé ìÝòù òùì CD äãêäóÜóóáóçð.

Ç äæäðÛððáðç ìÝóù òìð ðçäâìð òðäéä äâìäé ç ðér ðìèýðèìèç, äæÛ ðñìòóÝñäé éäé òç ìääæýðäñç äðìäðP äðäéèìâä. Ç äéääéäðâä äððP ðäñééäìäÛìäé òì òðä÷ñìéòìù òìð òìðéèèý áìðéäñÛìòì òìð ðçäâìð òðäéä òìð FreeBSD ìä òìí òðäéä òìð FreeBSD ðìò äñâðéäðäé òóìòð äìððçñäðçÝð CVS (Concurrent Versioning System). Äðù òç òðéäìP ðìò òì òìðéèù áìðâñäðì ðçäâìð òðäéä äâìäé äìäìäùÝñ, ìðñâðâä ìä ìäðäæùðððâðäðä ìÝäð äæäùäæð òìò ððñPìä éäé òùì ääðéèP ðñìäñäìÛðùì. Äéä ðäñéòóùðäñäð ðççñìòìñâðð ò÷÷äðéÛ ìä òì òýððçìä äìääÛèìèðçð ìÝóù ðçäâìð òðäéä, äâððä òì èäðÛèäéì ÄìçìÝñòùç éäé ÄìääÛèìèðç ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/updating-upgrading.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html)) òòì Ää÷äéñâäéì òìò FreeBSD.

Ίε Υόιειάο (binary) αίαάειβόάεο, αβίαέ δάνυιρέαο ιά ος ÷ñΠός οςο αίοιρέΠο yum P apt-get αέα οςι αίαάΥειέος αίυο  
 οόοόΠιάοιò Linux. Ç αίοιρέP freebsd-update(8) έα έαόάΥόάε οέο αίαάειβόάεο έαέ έα οέο αάεάοάοόΠόάέ. Ιδιñαβόα ιά  
 έάειñβόάόα οςι αόδύιáος, αίΥ όάέδΥ έάέάοΠιάόά άέοΥέάος οςό, ιά ος ÷ñΠός οίò cron(8).

**Όγιὰβυός:** Άί ðñüêääéáé íá ÷ ñçóéíïðíéPóáðâ ðí cron(8) äéá ðñĩãñáííäðéóíÝíäð áíááäèíßóáéð, ääääéüèäßðâ üðé ÷ ñçóéíïðíéäßðâ òçí áíðíêP `frebsd-update cron` ððí äñ÷:äßí crontab(1) äéá íá äéä÷éððíðíêçèäß ç ðééáíüðçðâ íá äßíäðáé áíáÝüòç òçí ßäéä òðéäìP äðu Ýíá íäâÜêí äñèèü ïç÷:áíçÜðüí.

```
0 3 * * * root /usr/sbin/freebsd-update cron
```

Ç 0âæã0ôáßá äðéeĩāP áíááÛèíéóçð, ìÝòù òùì CD âæáoÛóóáoçð, âßíáé áñêáoÛ íæèÛeáñç. Áðèðò æêééìPóðâ áðü òì  
 CD âæáoÛóóáoçð éáé äðéeÝíòâ òçì áíòßòíé÷ç äðéeĩāP áíááÛèíéóçð (upgrade).

**8 procfs: ĐăñáóìÝĩ áëëÜ ü÷é Îă÷áóìÝĩ**

Ói Linux, á ÷ñááóâá íá áââôá ôi /proc/sys/net/ipv4/ip\_forward áéá íá éâéññóáôá áí áíáíé áíáññíðéííÍí c ðñíðécó IP (IP forwarding). Ói FreeBSD á ðñÝðáé íá ÷ñcéííðéíóáôá ôi sysctl(8) áéá íá áââôá

ἄοδP εᾶε Ὑεῖσὸ νῶειβόᾱέδ οἷο ὀόόδPἰᾱίϑιδ, ἐᾶερδ οἱ procfs(5) ἐαυῆᾱβόᾱε δᾱῆν÷çìYñ ὁᾱ δῆνυόᾱόᾱδ ᾱεᾱυόᾱέδ οἷῶ  
εᾶεοἰῆᾱεῖρ. (Αῖ εᾶε ç αἴῶιeP<sub>sysctl</sub> Ἀβῖᾱε Ἀδβόçð ἡᾶεYῶεç εᾶε ὀῶῖ Linux).

Όι δανÜäæäia ðð ðñìðèçð IP, èä ÷ñçðèñðìèýóäia ðçì äèùèðèç äìðìèP äèä íä èäèññóìòia äí ç äðíaðùðçä äððP äñíäè äíäññðìèçìÝíç ää Ýía FreeBSD óýóðçia:

```
% sysctl net.inet.ip.forwarding
net.inet.ip.forwarding: 0
```

Ç ãđéëĩãP -a ÷ñçóéĩđĩéãßôáé ãéá íá đŨñĩõĩã iéá ëßóóá iã üëàò ôéò ñõèĩßóáéò ôĩõ óõóôPĩáôĩò:

```
% sysctl -a
kern.ostype: FreeBSD
kern.osrelease: 6.2-RELEASE-p9
kern.osrevision: 199506
kern.version: FreeBSD 6.2-RELEASE-p9 #0: Thu Nov 29 04:07:33 UTC 2007
        root@i386-builder.daemonology.net:/usr/obj/usr/src/sys/GENERIC

kern.maxvnodes: 17517
kern.maxproc: 1988
kern.maxfiles: 3976
kern.argmax: 262144
kern.securelevel: -1
kern.hostname: server1
kern.hostid: 0
kern.clockrate: { hz = 1000, tick = 1000, profhz = 666, stathz = 133 }
kern.posix1version: 200112
...
```

Όχι!Βούο: ÊÜðíεάò áðü öéo öéíÝò ðĩö äãß÷íáé ç áíôîÊP<sub>sysctl</sub> áßíáé ìüñ äéá áíÜáíüóç.

Ὁ ὁὔν ÷ τοῖς ἀναεδοροαέοις ὑδρὸς ἀδαέαδισαέας οἱ procfs, ὑδρὸς αέας δανῦΑαέαια ὑδρὰς ἀεοάειβόας δαέευοἀνι εἰαείοιέυ, οἱ ἰδῖβι εὔῖαέ ÷ πῶος ὅος ἀίοῖεβδ truss(1) αέας ὀγί ἀίβ ÷ ἰαῶος οὐί ἐεβόαῖις ὁῶοδῖαῖοῖδ, έας αέας ὀγί Ὀοῖααῶουῶοῶα ἰα ἈεοάεΎοεία οῖο Linux ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/linuxemu.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html)). (Άί έας γ Ὀοῖααῶουῶοῶα ἰα ἈεοάεΎοεία οῖο Linux ÷ η̇οείιθῖέιβ οἱ αέέυ ὅος procfs, οἱ linprocfs(5)). Άί ÷ η̇αέṲαῶαέ ἰα θηῖοἀνδῖοῶα οἱ procfs, ἰθῖηβῖα ἰα θηῖοέΎοῶα ὀγί αέυεῖοε̇ αᾶᾶᾦαῶ βῶι ᾦñ ÷ ᾦβι /etc/fstab:

```
proc          /proc          procfs  rw,noauto          0          0
```

**Ὁγιαβυός:** Ὁ ἀδελφεῖς <sup>no</sup>auto ἐὰ ἀιδιῖαβόαε ὁγί ἀδιδιῖαδός δῆιόῤῥῥῥῥῥῥ /<sup>proc</sup> ἐὰδῖ ὁγί ἀελβίγος δῖο  
 ὁδῶδῖαδῖο.

ĐñiáoãñôPóoã éáôuđéí ôcí procfs ÷ñcôëiüđiépíôáò ôcí áéuëiüôëç áíôieP:

```
# mount /proc
```



## 9 ÓôίϗέέôìÝíâò ÁíôïēÝò

### 9.1 Äéá÷âβñέόϗ ÐáēÝòùí

ÁíôïēP ôïò Linux (Red Hat/Debian)	Áíôβóôïē÷ç áíôïēP FreeBSD	Óêïðüò
<code>yum install package / apt-get install package</code>	<code>pkg_add -r package</code>	ÄãéáôÜóóáόϗ ÐáēÝòïò áðü áðñáēñòôìÝíí áïòðçñáòçòP
<code>rpm -ivh package / dpkg -i package</code>	<code>pkg_add -v package</code>	ÄãéáôÜóóáόϗ ÐáēÝòïò
<code>rpm -qa / dpkg -l</code>	<code>pkg_info</code>	Ëβóóá äãéáôáóóçìÝííüí ÐáēÝòùí

### 9.2 Äéá÷âβñέόϗ ÓóóôPíáôïò

ÁíôïēP Linux	Áíôβóôïē÷ç áíôïēP FreeBSD	Óêïðüò
<code>lspci</code>	<code>pciconf</code>	Ëβóóá óóóêãðí PCI
<code>lsmod</code>	<code>kldstat</code>	Ëβóóá ôñòòùìÝííüí áñēññìÜòùí ðññPíá
<code>modprobe</code>	<code>kldload / kldunload</code>	Öññòòóϗ/Áðñüññòòóϗ áñēññìÜòùí ðññPíá
<code>strace</code>	<code>truss</code>	Áíβ÷íãóóϗ êēPóáüí óóóôPíáôïò

## 10 ÓôìðãñÜóíáóá

Äóãēðéóôíγíä üòé áòòü ôì êãβíãñí óáò ðãññã÷ã áñēãòÝò ðççñññññãò ãéá íá íãééíPóáôã íä ôì FreeBSD. Äéá ðãñéóóüðãñãò éáé ðēí êãðññãñãò ðççñññññãò, ðãñáééáéγíä íá äéáãÜóáôã ôì Äã÷ãēñβãēí ôïò FreeBSD ([http://www.FreeBSD.org/doc/el\\_GR.ISO8859-7/books/handbook/index.html](http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/index.html)) ôì ïðññí áðβόçò ðãñéÝ÷ãé éáé ðñēÜ èÝíáóá ðñò äãí éáéγóèçéáí éáēüēïò óôì ðãññüí êãβíãñí.