

# İläçãüò ÃñPãĩñçò Âêêßícóçò ôĩö FreeBSD ãéá × ñPóôåò Linux®

John Ferrell

\$FreeBSD: release/8.4.0/el\_GR.ISO8859-7/articles/linux-users/article.xml 39632  
2012-10-01 11:56:00Z gabor \$

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\$FreeBSD: release/8.4.0/el\_GR.ISO8859-7/articles/linux-users/article.xml 39632  
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àìðãĩßãĩĩóãé óã áðôü ôĩ èãßãĩĩ éáé äéá üóãò áðü áðôÝò àìññßãéé ç İİÜää ÁíÜðôðĩçò ôĩö FreeBSD üóé  
áßíáé ðééãĩüĩ íá áßíáé àìðĩñééÜ öýíãĩëá, éã äãßãá Ýíá áðü óã öýíãĩëá: “™” P “®”.

Ôĩ èãßãĩĩ áðôü Ý÷÷äé óéĩðü íá àĩçèPóãé óçç ãñPãĩñç ãñééããßüçç ÷ñçóðþĩ Linux® İÝóĩö / ðñĩ÷÷ñçĩÝĩĩö  
ãðéðÝãĩö İã óéò áãóééÝò Ýíĩĩãò ôĩö FreeBSD

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# 1 ÅéóáãùãƆ

Οι εαβλαίη άόδου οίηβææέ όέδ άεάοιηÝò ιάόάίý οίò FreeBSD έάέ οίò Linux ιόόά ιÝοίε ι öññ÷÷÷ñççìÝñíε ÷ ñιόόάδ οίò  
 Linux ιά ιόññíýí ãñΠαίñä ιά öññóáññιόόίýι όόέδ άάόέέÝò Ýñíεάδ οίò FreeBSD. öññêæέόάέ έέά ιέά όá÷÷÷έέβ æέόάαùáΠ  
 όóι FreeBSD, έάέ άάι έά άίάόáñèñýíá όά όδ÷÷ι “óέέíοίόέέÝò” έάέοιηÝò ιάόάίý όùι άýí όόόόçìÛòùí.

Öi êâñîâñi áóòü òðîëÝóâë üóë Ý÷âòâ Ðäç äâëáóáóóÐóâë ôî FreeBSD. Áí äâí Ý÷âòâ äâëáóáóóÐóâë ôî FreeBSD Ð ÷ñâëÛëáóóâ äîÐëëáë íâ öçî äëääëéáóáâ äâëáóóóóóóóóóó öîð, ðññâëëäëýîíá íá äëááóóóóâ ôî êâóÛëäëí Áâëëëëóóóóóóóóóó ôî 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)) óòî Áâ÷âëñîäëí öîð FreeBSD.

## 2 Êâëýöç: Ääí õďŰñ÷âé Bash;

[illegible][illegible]

### 3 ĐáéÝóá éáé Ports: ĐñĩóèÝóĩĩóáo ãĩãéóĩéêü óoĩ FreeBSD

Ἄεθου ἀδὺ ὄγι θανάτιοεἰεἰβ Ἰεῖται ἡεἰάοῦόοάοοδ εἰεἰεἰεἰεἰ οἰο UNIX® (εἰάῖῖῖῖῖ οἰο δῖῖῖῖῖ εἰεἰεἰεἰεἰ, ἀδῖοἰῖῖῖῖ οἰο ἡἡ ÷ ἡῖῖ, ἡῖῖῖῖῖῖῖῖῖ ἡἡ ἡῖῖῖῖῖῖῖῖῖ), οἰ FreeBSD ῖῖῖῖῖῖῖ ἡἡ ἡῖῖῖῖῖῖῖ ἡῖῖῖῖῖῖ ἡῖῖ ὄγι ἡῖῖῖῖῖῖῖ ὄἡῖῖῖῖῖ: ὄἡ ὄἡῖῖῖ ἡἡ ὄἡ ports. ἡἡ ἡἡ ὄἡῖῖ ὄἡῖῖῖ ὄἡῖῖ ὄἡ ἡῖῖῖῖῖῖῖ ὄἡῖῖῖῖῖ ὄἡῖῖῖῖῖ ὄἡῖῖῖῖῖ ὄἡῖῖῖῖῖ ὄἡῖῖῖῖῖ, ἡῖῖῖῖ ἡῖῖ (<http://www.freebsd.org/ports/master-index.html>).

### 3.1 ĐấêÝôá

Όά θαέΎόά αβίαέ θñĩ-iaóaaèuóóéoiΎíáo áóáñĩāΎó, èá èΎāñāi ôĩ áíóβóóíé÷ĩ áéá ôĩ FreeBSD òuĩ āñ÷āβuĩ .deb óá óóóóβiaóá Debian/Ubuntu éáé òuĩ āñ÷āβuĩ .rpm óá óóóóβiaóá Red Hat/Fedora. Όά θαέΎόά āāēāēβóóáíóáé ÷ñóóēñíēíβíóáo óci áíóēβ pkg\_add(1). Áéá óánŨāāēāiā, ç āēuēĩōèç áíóēβ āāēāēéóóŨ ôĩñ **Apache 2.2**:

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

Ç ÷ ñΠός όçò ðáñáíÝôñîð -r iäçãâß ôçí pkg\_add(1) íá êáóääÜóää áðüüíáðá üüöí ôí ðáéÝðí, üöí êáé óéð áíáñðÞóáéo  
ðîð. êáé íá öí äæêáóáóóðÞóáé:

```
# 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.

**Όγιβαθός:** Άί ÷ ñçóëííðíëáßðá íëá “äðßçíç” Ýëäíóç ôíð FreeBSD (6.2, 6.3, 7.0, ëëð. ðíð äáíëëÛ ìðíñáßðá íá ääëáðáðßðáðá äðÛ CD-ROM) ç áíðíëð pkg\_add -r ëá ëáðäáÛðáë óá äáëÝðá ðíð ððëÛ÷÷çëáí äëá äððß çç ððäëäëñëíÝíç Ýëäíóç. Óá äáëÝðá äððÛ *ßóóð äáí ðäñëÝ÷íí* ðëð ðëÝíí ðäëäððáßðð äëäÛðáëð ðùí äðáñííäíí. ìðíñáßðá íá ÷ ñçóëííðíëáßðáðá ççí íäðáäëçðß ðäñëáÛëëííððð `PACKAGESITE` äëá íá ðäñáëÛíðáðá äððß ççí ðñíäðëëäáíÝíç óðíðäñëóíñÛ. Äëá ðáñÛäáëáíá, ëÝðííðáð ççí `PACKAGESITE` ðóçí ðëíð <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ëá ëáðäáÛðáë óá ðëí ðñüððáðá äáëÝðá ðíð ððÛñ÷÷íí äëá çç óáëñÛ 6.X.

Άέά δάνέοούοάναό δέçñïŕñßå ò÷âôééÛ ìå ôå δåéÝôå, δάνάέάέÿÿå äéååÛôå ôçí åíüôçå 4.4 ôïí Åå÷åñßåéí ôïŕ  
FreeBSD: ×ñçóéíîðéþîåå ôï Óýóôçíå 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 ääýðáñç ÿÿëïäüð äëá öçí ääëáðÛððáðç äðáññïäíð öðí FreeBSD äßíáé ç Óðëëëïäß ðüí Ports. Ç Óðëëëïäß ðüí Ports äßíáé Ýíá ðëáßðëí çäëðíðñäëðí ðñð äñðððäëäßðáé äðð Makefiles éäé äñ÷äßä äëäðíñðí (patches) ðá ïðßßä Ý÷íðí äçíëíðñäçäß äëäëëÛ, þððá íá äßíáé äñíáðß ç ääëáðÛððáðç äëÛíñíñ äðáññïäíð öðí FreeBSD äðð öñí ðççäßß ëðäëëá ðñðð. ¼ðáí ääëäëëððÛðá Ýíá port, ðí óýððçíä éä éäððäÛðáé öñí ðççäßß ëðäëëá, éä äðáññíðáé ùëäð ðëð äðäëðýíñíäð äëëäáÝð ÷ñçóëíððíëðíðäð ðá patches, éä ïäðääëùððßðáé öñí ëðäëëá, éäé ðÝýíð éä ääëáððáðððáé öçí äðáññíäß. Èä äëýíëðßðáé öçí ßäëá äëääëëäðßä éäé äëá ïðíëäáßððíðá ðð÷í ïñáñðíðíä íðñññÛííäðá.

Ἰδιῆνᾱβὼᾱ ἰᾱ ἁῆνᾱβὼᾱ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports (ç ἰῑῖᐅᾱ ἰᾱῆῆῖῖᯚ ὀῖῖᯚ ἰᾱᯚᯚᯚᯚᯚᯚᯚ ῆᾱ ὐᯚ “ᾱῖᯚᯚᯚ ὀὐῖ ports”), ὀᯚῖ ῆᾱᯚᯚᯚᯚ /usr/ports. Ἀᯚᯚ ᾱῖᯚᯚᯚ ὁῖᯚᯚᯚᯚᯚᯚ ὐᯚᯚ ᾱῆᯚᯚᯚᯚᯚᯚᯚᯚ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports ῆᾱᯚ ὀç ῆᯚᯚᯚᯚᯚᯚ ὀçᯚ ᾱῆᯚᯚᯚᯚᯚᯚᯚ ὀᯚᯚ FreeBSD. Ἀῖ ᾱῖ ὀῖ ῖᯚ÷ᯚᯚ ῆᯚᯚᯚᯚᯚ, ἰδιῆνᾱβὼᾱ ἰᾱ ὀçῖ ὁῖᯚᯚᯚᯚᯚᯚᯚ ᾱᯚ ὀῖ CD ᾱῆᯚᯚᯚᯚᯚᯚᯚ ἰᾱ ὀçῖ ᾱῖᐅᯚᯚᯚ ὀᯚᯚ sysinstall(8) ᐅ ἰᾱ ὀçῖ ῆᾱᯚᯚᯚᯚᯚᯚ ᾱᯚ ὀᯚᯚ ᾱᯚᯚᯚᯚᯚᯚᯚᯚ ὀᯚᯚ FreeBSD ÷ᯚᯚᯚᯚᯚᯚᯚᯚᯚ ὀçῖ ᾱᯚᯚᯚᯚᯚᯚᯚᯚᯚ ᐅ ὀçῖ ᾱᯚᯚᯚᯚᯚ portsnap(8). Ἰδιῆνᾱβὼᾱ ἰᾱ ἁῆνᾱβὼᾱ ῆᯚᯚᯚᯚᯚᯚᯚ ἰᯚᯚᯚᯚᯚ ῆᯚᯚ ὀçῖ ᾱῆᯚᯚᯚᯚᯚᯚᯚ ὀçᯚ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports ὀçῖ ᾱᯚᯚᯚᯚᯚ 4.5.1 ([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)) ὀᯚᯚ ᾱᯚ÷ᯚᯚᯚᯚᯚᯚ.

Ç ääëäóÜóóäóç äíüò port äßíäë ääíëëÜ öüüí äðëP üüí öí íá áéóÝëëäöä öüüí ëäöÜëíäí öüüí ëäë íá íäëëíPóäöä öçí äëäëëëäöä íäöääëpöóëöçö. Öüí äëüëíöëí äänÜäëäíä äßíäöäë ääëäóÜóóäóç öüüí **Apache 2.2** äüü öçí ÖðëëíäP öüüí Ports:

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

Já óçíáíóééü ðéäñÝéðçíá òçð ÷ ñÞóçð ports óòçí áäéáðÜóóáóç ëñäéóíééñý áñíáé ç ééáíuòçóá ðññóáññüäÞð òùí áðééëäÞí  
 áäéáðÜóóáóçð. Áéá ðáñÜáäéäñíá, üóáí áäéáééóóðÜóá òñí **Apache 2.2** áðü óá ports ðñññáßòá íá áñáññüðñéÞóáòá óçí  
 áðééëäÞ **mod\_ldap** èÝññíóáó áðéðÞ òéñÞ óóç íàðáäéçðÞ **WITH\_LDAP** òñð **make(1)**:

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

ÀéááÜôâ ôçí áíúôçôá 4.5 ôïð Åã÷ãéñéãßïð ôïð FreeBSD, ×ñçóéïïðíéðíôáð ôçí 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)), áéá ðãñéóóúôãñãð ðëçñïïñßãð ó÷ãóéêÛ ïá ôç Óôëëïãß ðùí Ports.

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

[illegible]

## ĐáêÝôá (Ýôïëíà àêôãëÝóéíà)

- Δεί ἀνῆλθῆς ἀπὸ τοῦ ὁδοῦ (ὃ ἀπὸ τοῦ ἀνὰ τὸ ὄριον ἵδῃς ἵνα ἀπὸ τοῦ ὄριον ἀνέλθῃς ἡμεῖς).
- Ἄλλο ÷ ἡμεῖς ἀπὸ τοῦ ὁδοῦ ἵνα ἀνὰ τὸ ὄριον ἵδῃς ἵνα ἀπὸ τοῦ ὁδοῦ οἱ τοῦ ὁδοῦ οἱ.
- Ἄλλο ÷ ἡμεῖς ἀπὸ τοῦ ἀπὸ τοῦ ὁδοῦ ἵνα ἀπὸ τοῦ ὁδοῦ οἱ τοῦ ὁδοῦ οἱ.

## Ports (őçãáßïò êpäéêáò)

- **Έξαιρούσθε τὸν ἀνθρώπου τοῦτον ἀπὸ τοῦ λαοῦ.** (Ὁ θεὸς λέγει ὅτι οὗτος ὁ ἀνθρώπος ἐστὶν ὁ ἐκείναι ὁ ὅστις ἐστὶν ὁ λαός σου). Ἡ δὲ ἡ πόλις ἡ ἐκείνη ἐστὶν ἡ πόλις ἡ ἐκείνη, οὐδὲν ὅτι ἡ πόλις ἐκείνη ἐστὶν ὁ λαός σου, ὁ ἀνθρώπος ἐκείναι ὁ ὅστις ἐστὶν ὁ λαός σου, ὁ ἀνθρώπος ἐκείναι ὁ ὅστις ἐστὶν ὁ λαός σου.
- **Ὁ ἀνθρώπος ἐστὶν ὁ λαός σου.** Ὁ ἀνθρώπος ἐστὶν ὁ λαός σου (patches) ἀπὸ τοῦ ἀνθρώπου ἐκείνου.

[illegible]

#### 4 ΑέεΒίçç ôĩõ ÓóóôΠιάôĩò: Ðĩõ áΒιάέ ôá run-levels;

Οι Linux ÷ ηςοείηδιέαβ οι όύοόγια âêêβίςοςδ SysV, âηρ οι FreeBSD ÷ ηςοείηδιέαβ οι δάνάαιόεαεη όύοόγια âêêβίςοςδ BSD. Οι όύοόγια init(8) όύδιθ BSD, ââι όδÜñ÷ιθι run-levels, ιýðâ οι âñ÷âβι /etc/inittab. Αίθβ âέα äððÜ, ç âêêβίςος âeYâ÷âðáε äðü Ýíâ script âêêβίςοςδ, οι rc(8). Το script /etc/rc âέαÜÜæáε οι âñ÷âβι /etc/defaults/rc.conf êáε οι âñ÷âβι /etc/rc.conf âέα íá êáειñβθáε διέâð ðδçñâðâð ðñùεâéðáε íá íâêειθιθι. Íε ðδçñâðâð äððÝð íâêειÜíá íâ ðçí âêðÝέâος ðùι áíθβθιθι÷÷ι script âêêβίςοςδ θιθ âñβέηθóáε óθιθð êáðáεüñθðð /etc/rc.d/ êáε /usr/local/etc/rc.d/. Óá scripts äððÜ âβíáé δάνüñíέα íâ óá scripts θιθ âñβέηθóáε óθιí êáðÜêειñ /etc/init.d/ óâ óðóðβιáðá Linux.

Ãéáôβ òðÛñ÷ïôí äÿí ôïðìèãóβãò ãéá óá scripts ãêêβίϗόϗò ôùí òðçñãóêñí; Óá scripts ðïò ãñβóêñíóáé óóñí éáðÛêññ /etc/rc.d/ ãβíáé ãéá ãóãñññãÝð ðïò áñPêñíóí óóñí “ãáóéêü” óýóóϗíá. (Ãéá ðãñÛããéãñá, ðéð cron(8), sshd(8), syslog(3), éáé Ûêêãð.) Óá scripts ðïò ãñβóêñíóáé óóñí éáðÛêññ /usr/local/etc/rc.d/ ãβíáé ãéá ãóãñññãÝð ðïò Ý÷ïí ããéãáðáðáêëã ãðü òïð ÷ñPóðãò, ùðüð ãéá ðãñÛããéãñá ï **Apache**, òñ **Squid**, ê.ê.ð.

Ðñéá ãβíáé ϗ ãéãóññÛ ïãðãñý òïò “ãáóéêññ” òðóðPíáðïð éáé òùí ãóãñññãñí ÷ñPóðϗ; Òñ FreeBSD áíãððýóóãðáé ùð Ýíá ðêPñãð êãéóñòñãéêü óýóóϗíá. ïã Ûêêã ãüãéá, ï ðòñPíáð, ïé ãéãéêñêPêãð ðïò óóðóPíáðïð, ïé ãáóéêÝð áíðñéÝð (userland, óá ðñññãÛñíáðá ùðüð òñ ls(1), cat(1), cp(1) êêð.), áíãððýóóñíóáé éáé ãçñíóéãññíóáé ïãêβ, ùð óýñññ. Ãðüü áíãðÝññáðáé éáé ùð “ãáóéêü” óýóóϗíá. ïé ãóãñññãÝð ðïò ããéãêβóðáíóáé ãðü òïð ÷ñPóðãò, ããñ áñPêñíóí óóñí “ãáóéêü” óýóóϗíá, éáé òÝðñéãð ãβíáé ãéá ðãñÛããéãñá ï **Apache**, òñ **X11**, ï **Mozilla Firefox**, êêð. Ãðññý òïò ãβãñðð ïé ãóãñññãÝð, ããñéêÛ ããéãêβóðáíóáé ïã òϗ ÷ñPóϗ òϗð Óðêññãðð ÐãêÝðñí éáé Ports (article.html#SOFTWARE) òïò FreeBSD. Æéá ïá ïã÷ññêñíóí ãðü òñ ððñéêñðñ “ãáóéêü” óýóóϗíá, ïé ãóãñññãÝð ÷ñPóðϗ óóñPêñð ããéãêβóðáíóáé óã òðñéãáðéññãñð òïò /usr/local/.ðóé óá ãéðãéÝóéíá ðñññãÛñíáðá òùí ÷ñϗóðññ ãñβóêñíóáé óóñPêñð óóñí éáðÛêññ /usr/local/bin/, óá áíðβóðñé÷á ãñ÷ãñá ãðêñβóãññí òïò óóñí éáðÛêññ /usr/local/etc/, ê.ñ.ê.

ïé òðçñãóβãò áñãñññðñéññíóáé ïã òϗñ ðññíðêPêç ïéãð ãããñããðð òýðññ ãñññãðððçñããðãð\_enable="YES" óóñí ãñ÷ãññ /etc/rc.conf (rc.conf(5)). Ñβñðã ïéá ïáðéÛ óóñí ãñ÷ãññ /etc/defaults/rc.conf ãéá ïá ããβðã ðéð ðñññãðéññãÝð òïò óóðóPíáðïð. ïé ãðêñβóãéð ðïò êÛññññá óóñí ãñ÷ãññ /etc/rc.conf ððãñéó÷ññññ Ýñññðé òùí ðñññãðéññãññ ãððññ. Æðβóϗð, éáðÛ òϗñ ããéãáðÛóðáóϗ ðñññóéãðññ ãóãñññãññ, ããããéññãðã ùðé ãéããÛóáðã òϗñ áíðβóðñé÷ϗ ðãêñññññòϗ ãéá ïá ãñãñðã ðüð ïá áñãñññðñéPóãðã òð÷ññ ó÷ãðéêÝð òðçñãóβãò.

Òñ ãéññññññ ãðüððáíóá ãðü òñ ãñ÷ãññ /etc/rc.conf áñãñññðñéãñ òϗñ òðçñãóβã ãssh(8) éáé òññ **Apache 2.2**. Æðβóϗð éãéññêãéê ùðé ï **Apache** éá ïãééñPóãé ïã áñãñññðñéϗñññ òϗ ãñññññðçðã SSL.

```
# enable SSHD
sshd_enable="YES"
# enable Apache with SSL
apache2_enable="YES"
apache2_flags="-DSSL"
```

Ãðü òϗ óóéãñP ðïò ïéá òðçñãóβã áñãñññðñéϗêã òóñí ãñ÷ãññ /etc/rc.conf, ïðññãðã ïá òϗñ ïãééñPóãðã ãðãðéããðð ãðü òϗ ãñãññP áíðñéPññ (÷ñññð ïá ÷ñãéÛãéãðáé ïá ãðãññññññPóãðã òñ óýóóϗíá óáð):

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

Ãñ ïéá òðçñãóβã ããñ Ý÷ãé áñãñññðñéϗêã òóñí ãñ÷ãññ ãððñ, ïðññãðã ïá áñññãéÛóáðã òϗñ ãéêβίϗόϗò òϗð ãðü òϗñ ãñãññP áíðñéPññ ïã òϗñ ãðéêññãP forcestart:

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

## 5 Ñýéìéóϗ Æéêôýññ

### 5.1 ÆéãðãóÝò Æéêôýññ

Ãíðβ ãéá òñ ããñéêü áñãñññññóðéêü òýðññ *ethX* ðïò ÷ñϗóéññðñéãñ òñ Linux ãéá òϗñ áñãññññéóϗ ïéãð ãéãðããðð ãéêôýññ, òñ FreeBSD ÷ñϗóéññðñéãñ ùð áñãñññññóðéêü òñ ùññá òïò ðñññãÛñíáðïð ïãPãϗóϗð ãéññññññññññ ãðü Ýñá ãñéêññ. ϗ ãéññññññññññ ãðü òϗñ áññññP ifconfig(8) ããβ÷ñãé äÿí êÛññãð ãéêôýññ Intel® Pro 1000 (ïã áñãññññññññññ 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 0xffffffff00 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 0xffffffff00 broadcast 192.168.10.255
    ether 00:50:56:a7:03:2b
    media: Ethernet autoselect (1000baseTX <full-duplex>)
    status: active
```

## 5.2 ÑõèìΒóåéò Äéåðëýíóåùì IP

[illegible]

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

×ñçóëiïðíéΠóôâ ôçí áêüëiðèç êáôá÷þñçóç áéá íá êáèiñßóáôâ üôé iéá äéáðáöÞ éá éáíâÛiáé ññèißóáèð iÝòù DHCP:

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

## 6 Firewall

Όλοι Linux → ηνζοείνιείάβθαάε οι **IPTABLES** οι ιδιβι θάνΥ → άε οδζηάοβθο firewall οά άδβθάάι δθνΠρά. Οι FreeBSD θάνΥ → άε άδβθόδ firewall ιΥού οιο δθνΠρά. Άέα όγι άέηβάάέα, οι FreeBSD θάνΥ → άε οηβά 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))

[illegible]

**DánÜäëàìá áúò éáíuíá ôïð IPFW ðïð aðëônÝðäé áéoãñ÷ùìáíá äääñÝía ðñïð ôçí òðçñáoßá SSH:**

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

Ôi **IPFILTER** áðíáé íéá áóáñíáP firewall ðíó áíáððýóóáðáé áðú ôíí Darren Reed. Äáí Ý÷-áé ööéá÷-ðáß áéáéÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáññéáß éáé óá Üëéá éáéðíõñáéÜ, óðíðãñééáíááííÝíúí ðúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàíà áíüò êáíuíá ãéá ôí **IPFILTER** ðĩõ ãđéõñÝđăé áéóăñ÷:ùìáíá áăăñÝíá ðñĩò ôçí òđçñăóóă **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 áòòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óòíáòáóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáòáò òýðìò QoS.

ĐánÜäåēāiā êáíuíá ôiō **PF** ðiō ãđéônÝđăé áéoăñ÷ùiăiá äăăiñÝiá đñiò ôçí òđçñăóăá **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 êpåééá, ìÝòù Ýðïëïùì  
(binary) áíáááèìßóáùì, êéé ìÝòù òùì CD äãêäðÜóóáóçð.

Ç ääëäðÛððáðç ìÝóù òìð ðçäáßìð ëðäëä äßìäé ç ðér ðìëýðèìëç, äëëÛ ðñìòóÝñäé éäé ðç ìäääëýðäñç äðìäðß äðäëéßßä. Ç äéääëéäðßä äððß ðäñéëäìäÛìäé òì ððä÷ñìíéðìù òìð òìðéëéý áìðéäñÛìòì òìð ðçäáßìð ëðäëä òìð FreeBSD ìä òìí ëðäëä òìð FreeBSD ðìò äñßðéäðäé ðóìðð äìððçñäððçÝð CVS (Concurrent Versioning System). Äðù ðç ðóéäìß ðìò òì òìðéëù áìðßäñäðì ðçäáßìð ëðäëä äßìäé äìäíäùìÝñì, ìðñìäßðä ìä ìäðääëùððßðäðä ìÝäð äëäùäðäëð òìò ððñßìä éäé ðùì ääðéëþì ðñìäñäìÛðùì. Äéä ðäñéðóóùðäñäðð ðççñìòìñßäð ð÷äðéëÛ ìä òì óýððçìä äìääÛëìéððð ìÝóù ðçäáßìð ëðäëä, ääßðä òì éäðÛëäéì ÄìçìÝñùðç éäé ÄìääÛëìéðç ([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)) ðóì Ää÷äëñäëì òìò FreeBSD.

Ίε Υόιειάο (binary) αίαάειβόαέο, αβίαέ δάνυιρέαο ιά ος ÷ñΠός οςο αίοιρέΠο yum P apt-get αέα οςι αίαάΥειέος αΐυο  
 οόοόΠιάοιò Linux. Ç αίοιρέP freebsd-update(8) έα έαόάΥΌαέ οέο αίαάειβόαέο έαέ έα οέο αάεάοάοόΠόαέ. Ιδιñαβόα ίά  
 έαειñβόαόα οςι αόδυίαός, αΐΥ όαέοΥ έέαόόΠιάό αέοΥέαός οςό, ιά ος ÷ñΠός οιο cron(8).

**Όγιὰβυός:** Αί δñüēάέόάέ íá ÷ ñçóέíïðíéΠάάðά ðí cron(8) áέά ðñĩāñáíìáðέóíÝíàð áíáááèìßóáέó, ááááέüèáßðá üóé ÷ ñçóέíïðíéáßðá όγι áíðíēΠ freebsd-update cron όðí áñ÷:áßí crontab(1) áέά íá áέá÷:έóóíðíéçέáß ç ðέéáíüðçóá íá áßíáóáέ áíáÝýóç όγι Βάέά óóέáìΠ áóü Ýíá íääÜēí áñέèü ïç÷:áíçÜòüí.

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

Ç 0âæã0ôââá áðéeĩāP áíââÛèíéçò, ìÝòù òùì CD âæáoÛóóáoçò, ââíáé áñêâÛ íæèÛeánç. Áðèðò âêêéìPóðâ áðü òì  
 CD âæáoÛóóáoçò éáé áðéeÝíòâ òçì áíòâóðíé÷ç áðéeĩāP áíââÛèíéçò (upgrade).

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

Óôî Linux, èà ÷ñàéáóââß íá äâßôâ ôî /proc/sys/net/ipv4/ip\_forward áéá íá êàèññóáôâ áí âßíáé áíâññôíðéçíÝíc ç ðñîèèçóç IP (IP forwarding). Óôî FreeBSD èà ðñÝðáé íá ÷ñçóéíðíéÞóáôâ ôî sysctl(8) áéá íá äâßôâ

ἀόδῖ ἐὰς Ὑεῖαδὸ ἡδὲβόαέδ οἷο ὁδὸδῖαδῖο, ἐὰεῖδὸ οἷ procfs(5) ἐὰῦἡἡβόαέ δᾶἡῦ÷çìÝîí ὁᾶ δἡῦὁᾶᾶδὸᾶ ἀέᾶῦὁᾶέδ οἷο ἐᾶέδῖῶἡᾶέῖ. (Αἷ ἐὰς ç ἰῖῖῖῖῖ sysctl ἡβῖᾶέ ἡδῖβόçδ ἀέᾶέÝῖῖῖ ἐὰς ὁἷ Linux).

Ὀἷ δᾶἡὙᾶῖᾶ ὁçδ δἡἡῖῖῖῖῖ IP, ἐὰ ÷ἡçῖῖῖῖῖῖῖῖῖ ὁçῖ ἡῖῖῖῖῖῖ ἰῖῖῖῖῖ ἡῖ ἡᾶῖἡῖῖῖῖῖ ἰῖ ç ἡῖῖῖῖῖῖῖῖ ἡῖῖῖ ἡβῖᾶέ ἰῖᾶἡἡἡῖῖῖῖῖῖῖ ὁᾶ Ὑῖᾶ FreeBSD ὁῖὁῖᾶ:

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

Ç ἡῖῖῖῖῖῖ -a ÷ἡçῖῖῖῖῖῖῖῖῖ ἡῖ ἰᾶ δῖἡἡῖῖῖῖ ἰᾶ ῖῖῖῖ ἰᾶ ῖῖᾶδ ὁῖδὸ ἡδὲβόαέδ οἷο ὁδὸδῖαδῖο:

```
% 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
...
```

**Ὀçῖᾶῖῖῖῖῖ:** Ἐῖῖῖῖᾶδ ἡῖῖ ὁῖδὸ ὁῖῖῖῖ ῖῖῖ ἡᾶῖ÷ῖᾶέ ç ἰῖῖῖῖῖ sysctl ἡβῖᾶέ ἰῖῖ ἡῖ ἰῖᾶῖῖῖῖῖ.

Ὀῖῖῖῖ÷ῖῖῖ δᾶἡῖῖῖῖῖῖῖ ῖῖῖῖ ἡῖᾶῖῖῖῖῖῖ ὁἷ procfs, ῖῖῖῖ ἡῖ ῖᾶἡὙᾶῖᾶῖᾶ ῖῖᾶῖ ἡῖὁᾶῖᾶῖᾶῖᾶ δᾶῖῖῖῖῖῖῖ ῖῖᾶῖῖῖῖῖ, ὁἷ ῖῖῖῖ ῖῖῖᾶέ ÷ἡῖῖῖῖ ὁçδ ἰῖῖῖῖῖῖῖ truss(1) ἡῖ ὁçῖ ἰῖῖ÷ῖᾶῖῖῖ ὁῖῖ ῖῖῖῖῖῖῖ ὁδὸδῖαδῖο, ἐὰς ἡῖ ὁçῖ Ὀῖῖᾶᾶῖῖῖῖῖῖ ἰᾶ Ἀῖὁᾶῖῖῖῖῖ ὁἷ 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)). (Αἷ ἐὰς ç Ὀῖῖᾶᾶῖῖῖῖῖ ἰᾶ Ἀῖὁᾶῖῖῖῖῖ ὁἷ Linux ÷ἡçῖῖῖῖῖῖῖ ὁἷ ἡῖῖῖ ὁçδ procfs, ὁἷ linprocfs(5)). Αἷ ÷ἡᾶῖῖῖῖῖῖ ἰᾶ δἡἡῖῖῖῖῖῖῖῖῖ ὁἷ procfs, ἰῖῖᾶῖῖῖ ἰᾶ δἡἡῖῖῖῖῖῖῖ ὁçῖ ἡῖῖῖῖῖῖῖ ἡᾶᾶᾶῖῖῖ ὁἷ ἡἡ÷ᾶῖῖ /etc/fstab:

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

**Ὀçῖᾶῖῖῖῖῖ:** Ç ἡῖῖῖῖῖῖῖ noauto ἐὰ ἡῖῖᾶῖῖῖῖ ὁçῖ ἡῖὁῖῖῖῖῖῖ δἡἡῖῖῖῖῖῖῖῖ ὁἷ /proc ἡᾶῖῖ ὁçῖ ἡῖῖῖῖῖῖῖ ὁἷ ὁδὸδῖαδῖο.

δἡἡῖῖῖῖῖῖῖῖ ἡᾶῖῖῖῖῖ ὁçῖ procfs ÷ἡçῖῖῖῖῖῖῖῖῖ ὁçῖ ἡῖῖῖῖῖῖῖ ἰῖῖῖῖῖ:

```
# mount /proc
```



## 9 ÓôίϗέέôìÝíâò ÁíôïëÝò

### 9.1 Äéá÷âβñέόϗ ÐáëÝòùí

ÁíôïëP ôïò Linux (Red Hat/Debian)	Áíôβóôïë÷ç áíôïëP FreeBSD	Óëïðüò
<code>yum install package / apt-get install package</code>	<code>pkg_add -r package</code>	ÄãéáôÜóóáόϗ ÐáëÝòïò áðü áðñáéñòóìÝíñ áïòðçñáðçòP
<code>rpm -ivh package / dpkg -i package</code>	<code>pkg_add -v package</code>	ÄãéáôÜóóáόϗ ÐáëÝòïò
<code>rpm -qa / dpkg -l</code>	<code>pkg_info</code>	Ëβóóá äãéáðáóóçÝíñü ÐáëÝòùí

### 9.2 Äéá÷âβñέόϗ ÓóóðPíáôïò

ÁíôïëP Linux	Áíôβóôïë÷ç áíôïëP FreeBSD	Óëïðüò
<code>lspci</code>	<code>pciconf</code>	Ëβóóá óóóêãðí PCI
<code>lsmod</code>	<code>kldstat</code>	Ëβóóá ôñòòùíÝíñü áñëññüÜòùí ðòñPíá
<code>modprobe</code>	<code>kldload / kldunload</code>	Öññòòóϗ/Áðñüññòòóϗ áñëññüÜòùí ðòñPíá
<code>strace</code>	<code>truss</code>	Áíβ÷íãóóϗ êëPóáñüí óóóðPíáôïò

## 10 ÓôìðãñÜóíáóá

Äóäéðéóôíýíä üóé áðòò ôï êãβíññí óáð ðãññáβ÷ã áñëãòÝò ðççññïññáð ãéá íá íãééPóáðãá íä ôï FreeBSD. Äéá ðãñéóóüðãñãò éáé ðëí êãðòñãñãáð ðççññïññáð, ðãñáééáéýíä íá áéáãÜóáðã ôï Äã÷áéñβáéí 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)) ôï ïðñññ áðβόçò ðãñéÝ÷áé éáé ðñéëÜ èÝíáóá ðñò äãí éáéýòèçéáí éáéüéïò óôï ðãñññí êãβíññí.