

# İläçäüò 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 \$

ĐíáõíáôééÜ Äééáépíáôá © 2008 Ç İİÜää ÔâèìçñBùóçò ôĩö FreeBSD  
\$FreeBSD: release/8.4.0/el\_GR.ISO8859-7/articles/linux-users/article.xml 39632  
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Ôĩ FreeBSD âßíáé Ýíá éáôĩ÷õñùìÝĩĩ àìðĩñééü öýíáĩēĩ ôĩö FreeBSD Foundation.  
Ôĩ Linux âßíáé Ýíá éáôĩ÷õñùìÝíá àìðĩñééü öýíáĩēĩ ôĩö Linus Torvalds óóéò ÇíùìÝíáò Đĩēéôåßåò.  
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ðüēçôÝò ôĩöò äéá íá äéäēñßĩĩôĩ óå ðñĩüüíóá ôĩöò èäüñĩÝíóáé àìðĩñééÜ öýíáĩēá. ¼ðĩö áðôÝò  
àìðáíßæĩĩóáé óå áðôü ôĩ èäßáĩĩ éáé äéá üóåò áðü áðôÝò äĩüñßææé ç İİÜää ÁíÜððõçò ôĩö FreeBSD üóé  
âßíáé ðēéáíüĩ íá âßíáé àìðĩñééÜ öýíáĩēá, éå äåßåá Ýíá áðü óå öýíáĩēá: “™” P “®”.

Ôĩ èäßáĩĩ áðôü Ý÷äé óēĩðü íá äĩçèPóáé óçç ãñPãĩñçç äĩēéåßüóç ÷ñçóôpĩ Linux® İÝóĩö / ðñĩ÷÷ñçĩÝĩĩö  
äðēðÝäĩö İå ðéò äáóéēÝò Ýĩñíååò ôĩö FreeBSD

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# 1 ÅéóáãùãƆ

Οι εαβιανί αδοῦ οἱβææέ οεὸ ἀεάοινΎδ ιἀοάιγ οἰῶ FreeBSD ἐάέ οἰῶ Linux πόαά ιΎοιέ Ρ ḁñī÷ùnçιΎñíē ÷ñΡόαὸ οἰῶ Linux ιά ιḁñīγίγ ḁñΠḁñḁ ιά ḁñιῶάνιιῶοιγίγ ῶοδὲ ḁαῶέΎδ Ύñíēαὸ οἰῶ FreeBSD. ḁñūēḁῶάέ ḁεḁ ιέḁ ὀḁ÷ιέέΠ ḁεῶḁḁḁḁ ὀḁ FreeBSD, ἐάέ ḁḁι ἐḁ ḁίḁὀḁñḁγίγḁ ὀḁ ὀḁ÷ḁι “ὀεῑῑῑὀεῑΎδ” ḁεḁὀινΎδ ιἀοάιγ ὀḁι ḁγί ὀὀὀḁḁḁḁḁ.

Òì èàßiàí áðòù òðìèÝóðáè uðè Ý÷àðá Þäç ääèáðáóðÞóáè òì FreeBSD. Áí äáí Ý÷àðá ääèáðáóðÞóáè òì FreeBSD Þ ÷ñäèÝäèáðá ãñÞèäèá íà ðçí äèäèèáðá ääèáðáóððò òì, ðñäèäèäèýíá íá äèäèáðáðá òì èàðÝèäèí Áäèèèèèèðíðáð 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 Áä÷äèñäèí òìð FreeBSD.

## 2 Êâëýöç: Ääí õõŮñ÷âé Bash;

[illegible][illegible]

### 3 ĐáêÝóá êáé Ports: ĐñĩóèÝóĩĩóáo ãĩãéóĩéêü óoĩ FreeBSD

[illegible]

### 3.1 ĐấêÝôá

Όά θαέΥόά αβίαέ θñĩ-iaóáæüüóóéóĩΥiaó áóáñĩãΥó, éá ëΥãäia öĩ áíóβóóĩé÷ĩ áéá öĩ FreeBSD öüĩ áñ÷ãβüĩ .deb óá óóóóΠiaóá Debian/Ubuntu éáé öüĩ áñ÷ãβüĩ .rpm óá óóóóΠiaóá Red Hat/Fedora. Όά θαέΥόά äãæãëβóóáíóáé ÷ñçóëüĩóĩéπíóáó öçĩ áíóĩëP pkg\_add(1). Άéá θánŪääéäia, ç äëüëĩöèç áíóĩëP äãæãéóóŪ öĩĩ **Apache 2.2**:

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

C ÷ ñPóç õçð ðáñáíÝõñïõ -r íαçääB ôçí pkg\_add(1) íá éάάάÜöåé áðõüíαäö õüõí õí ðáéÝðí, üõí éάé öéð áíáñðPóáéð ðïð. éάé íá õí äāēáðáöðPóáé:

```
# 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 ðíð FreeBSD (6.2, 6.3, 7.0, ëëð. ðíð äáíëëÜ ðíñáßðá íá ääëáðáðßðáðá äðÜ CD-ROM) ç áíðíëß pkg\_add -r ëá ëáðäáÜðáë óá äáëÝðá ðíð ððëÜ÷÷çëáí äëá äððß çç ððäëäëñëíÝíç Ýëäíóç. Óá äáëÝðá äððÜ *ßóóð äáí ðáñëÝ÷íð* ðëð ðëÝíí ðäëäððáßðð äëäüðáëð ðñí äðáñííäíð. ðíñáßðá íá ÷ ñçóëííðíëáßðáðá ççí íáðááäçðß ðáñëáÜëëííððð `PACKAGESITE` äëá íá ðáñáëÜíðáðá äððß ççí ðñíäðëëäáíÝíç óðíðáñëëííÜ. Äëá ðáñÜÜáëäíá, ëÝðííðáð ççí `PACKAGESITE` ðóçí ðëíß <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ëá ëáðäáÜðáëð óá ðëí ðñüðóáðá äáëÝðá ðíð ððÜñ÷íðí äëá çç óáëñÜ 6.X.

Άέά δάνέοούοάναό δέçñïŕñßåð ó÷:âôééÛ îå ôá δάéÝôá, δάνάέάēÿîå äéååÛóðå ôçí áñúðçóá 4.4 óñí Åã÷:áēñßäēí ôïŕ  
FreeBSD: ×ñçóéíîðîépíóáð ôî Óýóðçíá 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 äßíáë ç Óðëëëïäß ðüí Ports. Ç Óðëëëïäß ðüí Ports äßíáë Ýíá ðëáßðëí ëäëðíðñäëðí ðñð äñðððäëäßðáë äðð Makefiles ëáë äñ÷äß äëäðíñðí (patches) ðá ïðñßá Ý÷íðí äçíëíðñäëäß äëäëëÛ, þððá íá äßíáë äñððð Ç ç ääëáðÛððáðç äëÛíñíñ äðáññïäíð öðí FreeBSD äðð öñí ðççáäß ëðáëëá ðñðð. ¼ðáí ääëäëëððÛðá Ýíá port, ðí óýððçíá ëá ëáððäÛðáë öñí ðççáäß ëðáëëá, ëá äðáññíðáë ùëðð ðëð äðäëðýíñïäð äëëááÝð ÷ñçóëíððñëððáð ðá patches, ëá ïáððäëùððßðáë öñí ëðáëëá, ëáë öÝëíð ëá ääëáðððððáë öçí äðáññíäß. Èá äëëëíðððáë öçí ßäëá äëäáëëáðßá ëáë äëá ïðñëáððñíðá ðð÷í ãñáñðñíáíá ðññññÛíáðá.

Ἰδιῆνᾱβὼᾱ ἰᾱ ἁῆνᾱβὼᾱ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports (ç ἰῑῖᐅᾱ ἰᾱῆῖῖῖῖ ὀῖῖῖῖ ἰᾱῖῖῖῖῖῖῖῖ ἕᾱῖ ὐῖ “ᾱῖῖῖῖῖ ὀὐῖ ports”), ὀῖῖ ἕᾱῖῖῖῖ /usr/ports. Ἀῖῖ ᾱῖῖῖ ὀῖῖῖῖῖῖῖῖ ὐῖῖ ἁῖῖῖῖῖῖῖῖῖῖῖ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports ἕᾱῖῖ ὀç ἁῖῖῖῖῖῖῖ ὀçῖ ἁῖῖῖῖῖῖῖῖῖῖ ὀῖῖ FreeBSD. Ἀῖ ἁῖῖ ὀῖ ῖῖῖῖῖῖῖῖ ὀçῖ ὀῖῖῖῖῖῖῖῖῖῖ ᾱῖῖ ὀῖ CD ἁῖῖῖῖῖῖῖῖῖῖ ἰᾱ ὀçῖ ἁῖῖῖῖῖῖ ὀῖῖ sysinstall(8) ᐅ ἰᾱ ὀçῖ ἕᾱῖῖῖῖῖῖῖ ᾱῖῖ ὀῖῖῖ ἁῖῖῖῖῖῖῖῖῖῖ ὀῖῖ FreeBSD ÷ῖῖῖῖῖῖῖῖῖῖ ὀçῖ ἁῖῖῖῖᐅ csup(1) ᐅ ὀçῖ ἁῖῖῖῖᐅ portsnap(8). Ἰδιῆνᾱβὼᾱ ἰᾱ ἁῆνᾱβὼᾱ ἕᾱῖῖῖῖῖῖῖ ἰᾱçᾱῖῖῖ ἁῖῖ ὀçῖ ἁῖῖῖῖῖῖῖῖ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports ὀçῖ ἁῖῖῖῖῖῖ 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)) ὀῖῖ ἁῖῖ ÷ ἁῖῖῖῖῖῖῖ.

Ç ääëäóÜóóäóç äíüò port äßíäë ääíëëÜ öüöí äðëP üöí öí íá äéóÝëëäöä öüíí ëäöÜëíäí öíö ëäë íá íäëëíPóäöä öçí äëäëëëäößá íäöääëpöóëöçö. Ööí äëüëíöëí äánÜääëäíä äßíäöäë ääëäóÜóóäóç öíö **Apache 2.2** äðu öçí ÖðëëíäP öüí Ports:

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

Já óçíáíóééü ðéäñÝéðçíá òçð ÷ ñÞóçð ports óòçí áäéáðÜóóáóç ëñééóíééñý áñíáé ç ééáíuòçóá ðññóáñññäÞð òuí áðééñäÞí áäéáðÜóóáóçð. Áéá ðáñÜáäéäñíá, uóáí áäéáééóðÜóá òñí **Apache 2.2** áðu óá ports ðñññáßòá íá áñáñññññéÞóáòá óçí áðééñäÞ **mod\_ldap** èÝññíóáó áðéðð 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, ×ñçóéïïðíéðíóáð 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 ðãñéóóüôãñãð ðëçñïïñßãð ó÷ãóééÜ ïà ôç Óõëëïãß ðùí Ports.

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

[illegible]

# ĐáêÝôá (Ýôïëíà àêôãëÝóéíà)

- Δεί ἀνῑαῖνς ἀἀεάδῑόόας (ς ιἀάαῖῑῑῑῑῑῑς ιἀᾶῑῑῑ ᾶῑᾶῑῑῑῑῑ ιῑῑῑᾶῑ ῑᾶ ᾶῑᾶῑῑῑῑ ᾶῑᾶῑῑ ῑᾶ).
- Ἀᾶῑ ÷ ῑᾶῑῑῑῑῑ ῑᾶ ῑᾶᾶῑῑῑῑῑ ῑῑῑ ᾶῑῑῑῑς ς ιᾶῑῑῑῑῑῑῑ ῑῑῑ ῑῑῑῑῑῑῑῑ.
- Ἀᾶῑ ÷ ῑᾶῑῑῑῑῑ ῑᾶ ᾶῑᾶῑᾶῑῑῑῑῑ ιᾶῑᾶῑῑῑῑῑῑ ῑῑῑ ῑῑῑῑῑῑῑῑ.

## Ports (őçãáßïò êpäéêáo)

- [illegible]

Ἄν ἀὰν Ὑ ÷ ἀὸα ἀεᾶεῤῥὸ ἀδᾶεῦῤῥᾶεῤ, ὁα δᾶεῤῥὸα δᾶεᾶῖῤ ἑὰ ὁᾶδ ἑᾶεῤῥῶῖ ἱεᾶ ÷ ᾶῖῤ. Ἀῖ ὑὸῦῶῖ ÷ ῖᾶεῤᾶᾶῥᾶ ἱᾶ  
 ὀῖῥᾶῖῥᾶῥᾶ ἑῤῥῶῖᾶ ᾶδᾶεῖᾶῤῥ, ὁῦῶα ḡ ἱῤῥῶῖᾶ ὁῖῥ ῖῥῥᾶ ḡ ἑᾶεῤᾶῖῥ. (Ἐᾶε ὀῖḡᾶῤᾶ, ἁῖ ÷ ῖᾶεῤᾶᾶῥᾶ  
 ὀῖῥᾶῖῥᾶῥ ᾶεῤ ὀῖῥῶῖῤᾶ ὁᾶ δᾶεῤῥὸα, ἱδῖᾶῤᾶ ἱῤῥᾶ ὀḡῥ ὀḡᾶῖᾶῤᾶ ὁῖῥ ῖῥῥ ἱᾶ ὀḡᾶῖᾶῤᾶ ὁᾶ ἁεῤ ὁᾶδ  
 ὀῖῥᾶῖῥᾶῖῤῥᾶ δᾶεῤῥὸα ÷ ῖḡᾶῖῥῥῶῖῥῥᾶῥ ὀḡῖ ἁῖῥῥᾶ **make package** ἑᾶε ἁῖḡᾶῖῤῥῶῖᾶ ὁᾶ δᾶεῤῥὸα δῖῥ ἁḡῖῥῥῖᾶῤᾶῥᾶ  
 ὁᾶ Ὑᾶᾶ ἱḡ ÷ ἁῖῤᾶῥᾶ.)

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

Οι Linux ÷ ηςοείηδιέαβ οι όγούοια âêêβίςοçð SysV, âηρ οι FreeBSD ÷ ηςοείηδιέαβ οι ðánaáιόεαêη όγούοια âêêβίςοçð BSD. Οι όγούοια init(8) όýðη BSD, ââι ððÛñ÷ìοι run-levels, ÿðâ οι âñ÷âβι /etc/inittab. Αίοβ âέα äòðÛ, ç âêêβίςοç âêÿâ÷âðáε äðü Ýíá script âêêβίςοçð, οι rc(8). Το script /etc/rc âέαâÛæáε οι âñ÷âβι /etc/defaults/rc.conf êáε οι âñ÷âβι /etc/rc.conf âέα íá êáèηñòáε ðìêäð ðçηñâòâð ðηηêáέðáε íá íáêêηòοι. Íε ðçηñâòâð äòðÿð íáêêÿíá íâ ðçí âêðÿέâοç ðηι áíòòòοι÷÷ì script âêêβίςοçð ðηò âñòòêηòáε ðòηðð êáðáêüñðð /etc/rc.d/ êáε /usr/local/etc/rc.d/. Όá scripts äòðÛ âβíáé ðáñüñíέα íâ ðá scripts ðηò âñòòêηòáε ðòηι êáððÿêäη /etc/init.d/ ðά ððððòìáðá Linux.

[illegible][illegible][illegible]

Όι άέυήρηήι άδύοδάοία άδύ όι άñ÷÷βι /etc/rc.conf άίάñήήιέάβ όçι όδçñάόβά sshd(8) έάέ όήι **Apache 2.2**. Άδβόçό έάέñβæάέ ύόέ ι **Apache** έά ήάέήβόάέ ή άίάñήήιέçι Ýίç όç άόίάόύόçά SSL.

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

Ἄδῡ ὁϙ ὀόεἰἵP ḑiō iéá ὀḑᑕñáḑá áíáñḗḑiééçéḗḑ ὀḑi ḗñ÷ḗḑi /etc/rc.conf, ḑiñḗḑá ḑá ὀᑕi ḑáééiḑḑáḑ ḑḑḑéḗḑḑ  
 ḑḑḑ ὁϙ ḗñḗḑiḑ ḗiḑiḑḑi (÷ḗñḑḑ ḑá ÷ñáéÜæḑḑḑ ḑá ḑḑḑḑḑééiḑḑḑḑ ḑi ὀýḑḑḑḑḑ ḑḑḑ):

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

Áí íéá òðçñáòßá ááí Ý ÷ áé áíññãñðíéçéáß óóí áñ ÷ áßí áóòü, ìðññáßòá íá áíáíáéÜóáòá ôçí áêêßíçòç ôçò áðü ôçí ãñáñíP  
áíòíèþí íá ôçí áðééñáP forcestart:

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

## 5 Ñýèìéóç Äéêôýïõ

### 5.1 ÄéåđáöÝò Äéeôýĩõ

Άϊός άέά οϊ άαίέου άίάάϋνέοόέου όγδϊό *ethX* δϊό ÷ñçóéïðïέάß οϊ Linux άέά όçí άίάάßñέόç ιέάó άέάδáoðò άέέόγϊó, οϊ FreeBSD ÷ñçóéïðïέάß ùò άίάάϋνέοόέου οϊ ùñá οϊó ðñññÙñáοϊó ιáßαçόçó άέεϊεϊεϊγϊáñ áδù Ýíá άñέέιι. Ç άέεϊεϊεç Ýññáò áδù όçí άíόϊεß ifconfig(8) áäß÷íáέ άγϊ έÙñόáo άέέόγϊó Intel® Pro 1000 (íá άίάάϋνέοόέέÛ 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 Äéåõèýíóåùì IP

ἸδιναΒοῶ ἰά ἀγῆΥοῶδῶ ἰεᾶ ἀεγυεοῖός IP οᾶ ἰεᾶ ἀεᾶδᾶοΒ ἀεέδῶτῶ ἰᾶ ος ÷ πῶρος οςδῶ ἀφῶρεΒδ ifconfig(8). Ἄεᾶ ἰᾶ ἀβῖᾶε ἰυῖεῖς ὑῶδῶοῖ ἄδῶΒ ς ἀεεᾶᾶΒ, εᾶε ἰᾶ ἰγῖ ÷ Ὑῖᾶοᾶε οᾶ εὕεᾶ ἄδᾶῖᾶεεβῖγός, εᾶ δῶνΥῶε ἰᾶ οςῖ δᾶῖεεὕᾶᾶδῶ οῶῖ ἄῖ ÷ ἄβῖ /etc/rc.conf. Ὅοῖ ἀεὑεῖτῶεῖ δᾶῖᾶᾶεᾶῖ οᾶβῖᾶοᾶε ς εᾶοᾶ ÷ πῆγός δῖο δᾶῖεεᾶᾶᾶᾶᾶᾶᾶ ὅῖ ὑῖᾶᾶ δῖο δῶῖεῖᾶεῶῶΒ (hostname), οςῖ ἀεᾶῖεῶῶῶῶῶῶ IP, εᾶεβῶ εᾶε οςῖ δῖᾶᾶῶεεᾶᾶᾶᾶᾶ Ὑῖς δῖες (defaultrouter):

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

×ñçóëiïðiéPóôâ ôçí áëüëiøëç êáôá÷þñçóç áéá íá êáëiñßóáôâ üôë iéá äéáðáöP éá éaiâÜiáë ñõëißóáèð iÝòù DHCP:

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

## 6 Firewall

Όλοι Linux → ηνζόεηηιέάβθαέ οι **IPTABLES** οι ιθίβι θάνΥ → άε οθζηνάοβαό firewall οά άδβθαάι οθηνΠρά. Οι FreeBSD θάνΥ → άε άδββόο firewall ιΥού οίω οθηνΠρά. Άέά οςι άεηνβάάέα, 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))

Οἱ **IPFWALL** ἢ **IPFW** (ç áföřēP ÷ áēēēōīŕŷ ðūī ēáſūſūī ðīō **IPFW** áβáíē ç ipfw(8)) áβáíē ðī firewall ðīō Ŷ ÷ áē áíáððð ÷ ēáβ ēáē ðōſōçñáβðáē áðū ðçŕī ñŨáá áſŨððōçŕŕð ðīō FreeBSD. Οἱ **IPFW** ἰðīñáβ íá ðōſáðáðóðáβ íá ðī dummynet(4) áēá íá ðánŶ ÷ áē áðíáðūðçðáð áēáſūñðūòçð ðçð ēβíçççð ðáēŶðūī (traffic shaping) ēáē íá áññīēŕíáē áēáðīñáðēēēŕŷ ðŷðīðð ðōſáŶóáſſ áēēðŷŷō.

ĐánÜäæāiā áíuò êáíuíá ôiō **IPFW** ðiō ãðëõñÝðäé áéóãñ÷ùiáíá äããñÝíá ðñiò ôcí õðçñãóá **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 öðéá÷ðáß áéáéÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáññéáß éáé óá Üëéá éáéðíðñáéÜ, óðíðñáééáíááííÝíúí ðúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàíà áíüò êáíuíá ãéá ôî **IPFILTER** ðĩõ ãđéõñÝđăé áéóăñ÷:ùìáíá áăăñÝíá ðñĩò ôçí òđçñăóăá **SSH**:

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

Ç òàèãòòàáá àòàñìràP firewall, òì **PF**, áíáðóýóóòàéé áðü òì OpenBSD project. Ôì **PF** àçìéròñãPèçèà ùò áíòééáóáóòÜòçò òìò **IPFILTER**, éáé Ýóóé ç óýíóáç òìò **PF** àáíáé àñèàòÜ ðañüüíéá íá áóòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óóíáóóóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáóáò òýðìò QoS.

ĐánÜäåēāiá êáíuíá ôiō **PF** ðiō ãðéônÝðäé áéóañ÷ùìáíá äääiñÝíá ðñiò ôçí òðçñáóßá **SSH**:

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

## 7 Άίάâáèìβæïïôáò ôï FreeBSD

ÖðÜñ÷ïï ññáoð ìÝèäëé áéá ôçí áíááÜèìéóç áúüð óóóóPiáòïø FreeBSD: ÌÝóù òïð ðçááßïø èþäééá, ìÝóù Ýðìèìì (binary) áíááäèìßóáìì, éäé ìÝóù öùì CD ääéäÜóóáóóçð.

Ç äæäðÛððáðç ìÝóù òìð ðçäâðìò èðäéä äâðäé ç ðér ðìèýðèìèç, äæÛ ðñìòóÝñäé éäé ðç ìääæýðäñç äððáðð äðäéðìâä. Ç äéääéäðâä äððð ðäñééäìäÛðäé ðì ððä÷ññìéðìù òìò ðìðéèýð áððéäñÛðìò òìò ðçäâðìò èðäéä òìò FreeBSD ìä òìí èðäéä òìò FreeBSD ðìò äñððéäðäé ððìðð äìððçñäððçÝð CVS (Concurrent Versioning System). Äðù ðç ððéäìð ðìò ðì òìðéèù áððâñäðì ðçäâðìò èðäéä äâðäé äððäèùÝñ, ìðñâððä ìä ìäðäæùðððððäðä ìÝäð äæäùäæð òìò ððñððä éäé ðùí ääðéèðð ðñìäñäìÛðùí. Äéä ðäñéððùððäñäð ðççñìòìñâðð ð÷÷äðéèÛ ìä òì ðýððçðä äðääÛèìéððð ìÝóù ðçäâðìò èðäéä, äâððä ðì èäðÛèäéð ÄìçìÝñùðç éäé ÄðääÛèìéðç ([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)) ððì Ää÷äéñâäéð òìò FreeBSD.

Ίε Υοιείαò (binary) áíááæèíòáæò, áβíáé ðáñüüíéáò íà òç ÷ ñÞòç òçò áíòíēÞò yum Þ apt-get áéá òçí áíááÜèíéòç áíüò ðòòòÞíáòíð Linux. Ç áíòíēÞ freebsd-update(8) èá èáòááÜòáé òèò áíááæèíòáæò éáé èá òèò ááæáòáóòÞóáé. Ìðíñáòá íá èáèíñòáòá òçí áóðüüíáòç, áíÜ òáèòÜ äéáóòÞíáóá áèòÝéáòç òçò, íà òç ÷ ñÞòç òíð cron(8).

**Όγιὰβυός:** Αί δñüēääéáé íá ÷ ñçóéíïðíéΠάððά ðí cron(8) äéá ðñĩāñáíìäóéóíÝíäð áíáääèìßóáéð, ääääéùèäßððä üðé ÷ ñçóéíïðíéäßððä öçí áíðíēΠ freebsd-update cron ððí äñ÷:äßí crontab(1) äéá íá äēä÷éððíðíēçēäß ç ðēéáíüðçðä íá äßíäðáé áíáÝýüóç öçí ßäéä óðēäìΠ äðü Ýíá íääÜēí äñēèìü ïç÷:áíçÜððüí.

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

Ç öâëãöôáâá äðëëïãP áíááÛëíóçð, ìÝòù òùì CD äãëáðÛóóáóçð, áâíáë äñëãðÛ íäëÛëãñ. Áðëð ãëëëíPóðã áðü òì  
 CD äãëáðÛóóáóçð ëáë äðëëÝíðã òçì áíððóðíë÷ç äðëëïãP áíááÛëíóçð (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 ὀῶῶDΠᾱίῶιδ, ἐᾶἐρδ οἰ procfs(5) εἰαυῆἈβοᾱε δᾱνῦ÷çìÝñ ὁᾱ δñυῶῶᾱῶᾱ ᾱεἰῶῶᾱῶ οἷῶ  
εᾶεἰοἰῆᾱεἷý. (Áí εᾶε ç αἴῶιeP<sub>sysctl</sub> ᾱβῐᾱε ᾱδβῶçð ᾱεᾶéÝῶεῖç εᾶε ὀῶῶ Linux).

Όοι δαηŨάεαia όσο δηηπεόσο IP, έα ÷ήσoέηδηέρύoαια όçi άέueiωδές αίοίeP άέα ίά έάειηβóτoia άί ç äöíaöuôçoá äöðP äßíáé áíañāīdīécīÝíc oá Ýía FreeBSD óýóôçía:

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

Ç ¢đééĩãP -a ÷ñçóéĩđĩéãßôáé ¢éá íá đŨñĩõĩã íéá ëßóóá ìã üëàò ôéò ñõèìßóáéò 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 ôéíÝò ðĩö äãß÷íáé ç áíôîÊP<sub>sysctl</sub> áßíáé ìüñ äéá áíÜáíüóç.

Ὁ ὁῦν ÷ τοῖ ἀναεδοροαέο υδθρ ἀδαέαβαθαέ οἱ procfs, υδθυ ἀά θανῶααεία υδαῖ ἀεοαβαθα δαέευοαῖ εἰαείοιέυ, οἱ ἰθῖβι εὔταέ ÷ πβος σος αἰοῖεβδ truss(1) αά σγῖ αῖβ ÷ ἰαός οῦι ἐεβθαῖ οδοόβιαοῖ, έαέ αά σγῖ Ὀοἰααούσσοά ἰα ἈεοαέΎοεία 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 έαέ σ Ὀοἰααούσσοά ἰα ἈεοαέΎοεία οῖο Linux ÷ ηςοείηθείαβ οἱ αέεύ σος procfs, οἱ linprocfs(5)). Άί ÷ ηαέῶααάέ ἰα θηοααόβραοα οἱ procfs, ἰθηῖβαθα ἰα θηοεΎοαα σγῖ αέυειρες ααῇαάβ οοἱ αῇ ÷ ἂβι /etc/fstab:

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

**Ὁγιαβυός:** Ὁ ἀδελφεῖς *noauto* ἐὰ ἀιδιᾶβόαε ὁγι ἀδὸυιδός δῆτοῦῆδός τοῖο /*proc* ἐὰδῦ ὁγι ἀέεβίγός τοῖο  
 ὁδὸδπλαδὶδ.

ĐñiôáñôPôôâ éáôüđéí ôcí procfs ÷ñcóëüđiëpíôáò ôcí áéüëiôëç áíôieP:

```
# 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 áïòðçñáòçòP
<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 äãéáôáóóçÝíñüí ÐáëÝòùí

### 9.2 Äéá÷âβñέόϗ ÓóóôPíáôïò

ÁíôïëP Linux	Áíôβóôïë÷ç áíôïëP FreeBSD	Óëïðüò
<code>lspci</code>	<code>pciconf</code>	Ëβóóá óóóêãðí PCI
<code>lsmod</code>	<code>kldstat</code>	Ëβóóá ôñòòùíÝíñüí áñëññüíÜòùí ðòñPíá
<code>modprobe</code>	<code>kldload / kldunload</code>	Öññòòòç/Áðñüññòòòç áñëññüíÜòùí ðòñPíá
<code>strace</code>	<code>truss</code>	Áíβ÷íáòóϗ êëPóáñüí óóóôPíáôïò

## 10 ÓôìðãñÜóíáóá

Äóäêðéóôíγíä üòé áòòü ôí êäβíäñí óáò ðãññâ÷ä áñëáòÝò ðççññïññâò ãéá íá íäééíPóáôä íä ôí FreeBSD. Äéá ðãñéóóüðãñäò éáé ðëí êäðòñãññâò ðççññïññâò, ðãñáéáéíγíä íá äéáäÜóáòä ôí Äã÷äéñβáéí 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)) ôí ïðññí äðβόçò ðãñéÝ÷äé éáé ðñéëÜ èÝíáóá ðñò ääí éáéýòèçéáí éáéüéïò óôí ðãññüí êäβíäñí.