

İläçãüò ÃñÐãĩñçò Âêêßícóçò ôĩö FreeBSD ãéá × ñÐóôåò Linux®

John Ferrell

\$FreeBSD: doc/el_GR.ISO8859-7/articles/linux-users/article.sgml,v 1.4 2009/10/08
21:01:16 keramida Exp \$

ÐíãðĩãôêêÜ Äêêãépĩãôá © 2008 Ç İİÜää Ôãèìçñßüóçò ôĩö FreeBSD

Ôĩ FreeBSD áßĩáé Ýĩá éãôĩ÷ ðñüĩÝĩĩ ãĩðĩñêêü öýĩãĩēĩ ôĩö FreeBSD Foundation.

Ôĩ Linux áßĩáé Ýĩá éãôĩ÷ ðñüĩÝĩĩ ãĩðĩñêêü öýĩãĩēĩ ôĩö Linus Torvalds óôéò ÇĩüĩÝĩãò Ðĩēéôãßãò.

İé ēÝĩãéò Intel, Celeron, EtherExpress, i386, i486, Itanium, Pentium, éáé Xeon áßĩáé ãĩðĩñêêü öýĩãĩēã Ð éãôĩ÷ ðñüĩÝĩĩ ãĩðĩñêêü öýĩãĩēã ôçò Intel Corporation éáé ôüĩ ēôããðñêēēĩ ôçò óôéò ÇĩüĩÝĩãò Ðĩēéôãßãò éáé óã Üēēãò ÷ þñãò.

İé ēÝĩãéò Ð ðñÜóãéò Red Hat, éáé RPM áßĩáé ãĩðĩñêêü öýĩãĩēã Ð éãôĩ÷ ðñüĩÝĩĩ ãĩðĩñêêü öýĩãĩēã ôçò Red Hat, Inc. óôéò ÇĩüĩÝĩãò Ðĩēéôãßãò éáé óã Üēēãò ÷ þñãò.

Ç ēÝĩç UNIX áßĩáé éãôĩ÷ ðñüĩÝĩĩ ãĩðĩñêêü öýĩãĩēĩ ôĩö Open Group óôéò ÇĩüĩÝĩãò Ðĩēéôãßãò éáé óã Üēēãò ÷ þñãò.

ÐĩēēÝò áðü óéò ēÝĩãéò Ð ðñÜóãéò İé İðĩßãò ÷ ñçóéİİðĩēĩÝĩóáé áðü ôĩöò éãããéãããããôÝò Ð ôĩöò

ðüēçòÝò ôĩöò ãéã İá äéãēñßĩĩôĩ óã ðñĩüüĩóã ôĩöò èãüñĩÝĩóáé ãĩðĩñêêü öýĩãĩēã. ¼ðĩö áðôÝò

ãĩðãĩßæĩĩóáé óã áðôü ôĩ èãßĩãĩĩ éáé ãéã üóãò áðü áðôÝò ãĩüñßæãé ç İİÜää ÁĩÜðððĩçò ôĩö FreeBSD üéé áßĩáé ðééãĩüĩ İá áßĩáé ãĩðĩñêêü öýĩãĩēã, éã äãßôã Ýĩá áðü óã öýĩãĩēã: “TM” Ð “®”.

Ôĩ èãßĩãĩĩ áðôü Ý÷ãé óēĩðü İá ãĩçèÐóáé óôç ãñþãĩñç ãñēēãßüóç ÷ ñçóôþĩ Linux® İÝĩóĩö / ðñĩ÷ ðñççĩÝĩĩö ãðéðÝãĩö İã óéò äãóéēÝò Ýĩĩĩãò ôĩö FreeBSD

Ðßĩãéãò Ðãñéã÷İİÝĩüĩ

1 ÄéóããüãP	??
2 Êãēýç: Äãĩ ððÜñ÷ãé Bash;	??
3 ÐãēÝóã éáé Ports: ÐñĩíóēÝĩĩĩóãò ēĩãéóĩēēü óôĩ FreeBSD	??
4 Âêêßícóç ôĩö ÓôóðÐĩãôĩö: Ðĩö áßĩáé óã run-levels;	??
5 Ñýēĩéç ÄééôÝĩö	??
6 Firewall	??
7 Áĩãããēĩßæĩĩóãò ôĩ FreeBSD	??
8 procfs: ÐãñãóĩÝĩĩ äēēÜ ü÷é İã÷ãóĩÝĩĩ	??
9 ÓðĩçēēçĩÝĩãò ÁĩôēēÝò	??
10 ÓðĩðãñÜôĩããã	??

1 ÅéóáãùãƆ

Οι εαβιαίρ άδου διίβææέ οέδ æεάοινÝð ιάοάίý οίð FreeBSD έæέ οίð Linux þóðά ιÝóίε Þ ðñí÷ ùñçίÝñíε ÷ ñþóóάð οίð
 Linux ίά ιðñíýί ãñþáññά ίά ðñíóáññιόóίýί οóέð ááóέέÝð Ýñίεάð οίð FreeBSD. Ðñüêæέóáé æéά ιέά όá÷ ίέέþ æέóáðuāþ
 όóι FreeBSD, έæέ ááί εά áίάόáñεýíå όά όð÷ úí “óέέίóίóέéÝð” æέάοινÝð ιάοάίý ουί áýί όόόóçιÛóúι.

Οι ε&β&ι&ι&ι &α&ο&ι &ο&ι&ε&Υ&ο&ε &ο&ε &Υ&÷&α&α& Πα&ε &α&ε&α&α&ο&ο&Π&α&ε &ο&ι FreeBSD. &Α&ί &α&α&ί &Υ&÷&α&α& &α&ε&α&α&ο&ο&Π&α&ε &ο&ι FreeBSD Π
 ÷&η&ε&Υ&ε&α&ο&α& &ι&Π&ε&ε&α& &α& &ο&ι &ε&ε&α&ε&α&ο&β&α& &α&ε&α&ο&Υ&ο&α&ο&ο& &ο&ι&ο&, &ο&α&η&α&ε&α&ε&ι&γ&ι&α &ι&α &ε&ε&α&ο&Υ&ο&α&ο& &ο&ι &ε&α&ο&Υ&ε&α&ε&ί &Α&α&ε&α&ε&ο&ο&Π&ρ&ι&α&ο& &ο&ι
 FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/install.html) &ο&ι&ι &Α&α&÷&α&ε&η&β&α&ε&ί &ο&ι&ο&
 FreeBSD.

2 Êâëýöç: Ääí õđŮñ÷ăé Bash;

146161ε Υπ-ιρσάε αδϋ οι Linux οδ-ιϋ άεδθρρσρσρσάε υσάρ αράεαεϋδρσρ υσε οι **Bash** αάρ αβράε οι δνιάρδεεαίΥιρ εΎεσρσρ οδρ FreeBSD. Οδρ δνιάρδεεεϋσρσά, οι **Bash** αάρ οδΥπ-ιρ εάρ οδρ αάρεεβρ εεάρνβ ορσ FreeBSD. Αρσβεαδά, οι FreeBSD ÷νρσρρρδρεάβ οι tcsh(1) υδ οι δνιάρδεεαίΥιρ εΎεσρσρ. Οι **Bash** εαεβρ εάε Ύεεά εαεϋσρ δρσ βσυδ εΎεαδά ιά ααεάσασρσρσά, αβράε εεάεΎεεά οδρ Οδρεεαβ ΔάεΎουρ εάε Ports (article.html#SOFTWARE) ορσ FreeBSD.

[illegible]

3 ĐáêÝóá éáé Ports: ĐñĩóèÝóĩĩóáo ãĩăéóĩéêü óoĩ FreeBSD

[illegible]

3.1 ĐấêÝôá

Όά θαέΥόά αβίαέ θññ-ιαόααεüòóéοιΥίαό αόάνñāΥό, εά εΥāñā òñ αίοβόοίε÷ĩ αέα òñ FreeBSD òññ āñ÷āβññ .deb óā óóóóβñāóá Debian/Ubuntu εάέ òññ āñ÷āβññ .rpm óā óóóóβñāóá Red Hat/Fedora. Όά θαέΥόά āāēāēβóóáíóāē ÷ñçóéññíēñβíóáó òçñ áíóñēP pkg_add(1). Άέα θάνŪāēēñā, ç āēüēñōēç áñññēP āāēāēéóóŪ òññ **Apache 2.2**:

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

C ÷ ñÞóç ôçð ðáñāīŸōñīō - r iāçāāß ôçí pkg_add(1) íá éāóāāŪōāé áōōūīāōā ōūōī ōī ðāēŸōī, ūōī éāé ōēð āīāñðÞōāēð
ōīō. éāé íá ōī āāēāōāōðÞōāé:

```
# pkg_add -r apache22
```

```

Fetchng 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÷íí* ðëð ðëÝíí ðäëäððáßðð äëäüðáëð ðñí äðáñííäíí. ðíñáßðá íá ÷ ñçóëííðíëëðáðá ðçí íáðááëçðß ðáñëáÜëëííððð `PACKAGESITE` äëá íá ðáñáëÜíðáðá äððß çç ðñíäðëëäáíÝíç ðóíðáñëëííÜ. Äëá ðáñÜÜáëäíá, ëÝðííðáð ðçí `PACKAGESITE` ðóçí ðëíß <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ëá ëáðäáÜðáðá óá ðëí ðñüðóáðá äáëÝðá ðíð ððÜñ÷ííí äëá çç óáëñÜ 6.X.

Idioma Bôa ía áeááUôôôâ ðâneóóôôôâá áeá óeó áeäüóáeó ôîô FreeBSD óôî Ûñññ ÁðeeYáñíóáó ôç ÓúôóP áeá ÁóUô êäñóç ôîô FreeBSD (http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/version-guide/).

Άέά δάνέοοιόαηάο δέçññοιηβáo ó÷âôééÛ ìà ôá δαéÝôá, δάηάέαεìγìá áéááÛóôâ ôçì áíüôçóá 4.4 ôòì Åã÷âénβαéì ôìò FreeBSD: ×ñçóéìñðìéπίόáo ôì Óýóôçìá Packages (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/packages-using.html).

3.2 Ports

Ç αáyóαñç ÿYëíáñð áëá ðçí ááëáðÛóðáαç áóáñíñáíí ðóí FreeBSD áβíáë ç Óóëëíáβ ðúí Ports. Ç Óóëëíáβ ðúí Ports áβíáë Ýíá ðëáβóëí ëáëóíññáëíí ðíò áðíðáëáβóáë áðú Makefiles éáë áñ÷áβá áëáóíñíí (patches) óá íðíβá Ý÷íóí áçíëíññáçëáβ áëáëëÛ, þóðá íá áβíáë áíóíáð ç ááëáðÛóðáαç áëÛóíñúí áóáñíñáíí ðóí FreeBSD áðú ðíí ðçááβí ëþáëéá ðíòð. ¼ðáí ááëáëëóðÛá Ýíá port, ðí óýóóçíá ëá ëáðááÛóáë ðíí ðçááβí ëþáëéá, ëá áóáñíñóáë ùëáð ðëð áðáëóíýíáíáð áëëááÝð ÷ñçóííðíëííðáð óá patches, ëá íáðááëùðóβóáë ðíí ëþáëéá, éáë óÝëíð ëá ááëáðáóðβóáë ðçí áóáñíñáβ. Éá áëííëðëβóáë ðçí βáëá áëááëéáóβá éáë áëá íðíëááβðíðá ðð÷úí áíáñþíáíá ðñíñáñÛíáðá.

Ἰδιναβὼὰ ἰά ἀνάβὼὰ ὀρί ὈόεῖρᾱΠ οὐί Ports (ς ἰδίβα ἰάνεέΥδ οἴνΥδ ἀράοΥñαοάε εάε υὸ “ἀΎιόνῐ οὐί ports”), οὔῃ
 εάοŬεῖῗ /usr/ports. Ἀόου ἀΎαέα δῆῇδῖεΥόαε υὲε ἀεεάοάοΠόαὼὰ ὀρί ὈόεῖρᾱΠ οὐί Ports εάοŬ ὁς ἀεŬñεάε ὀς
 ἀεεάοŬόάος οἶο FreeBSD. Αἷ αἳ ὅι Υ÷-ἀὼ ἐŬῑᾱε, ἰδιναβὼὰ ἰά ὀρί δῆῖοεΥόαὼὰ ἀδῦ ὅι CD ἀεεάοŬόάος ἰὰ ὀρί
 ἀῖPeάε ὅῖ sysinstall(8) Π ἰά ὀρί εάοᾱŬόαὼὰ ἀδῦ ὅῖο ἀῖοδςñαὸςΥδ ὅῖο FreeBSD ÷ñçéῖῗῖῑῑῑῑῑ ὀς ἀῖῑῑῑ
 csup(1) Π ὀρί ἀῖῑῑῑ portsnap(8). Ἰδιναβὼὰ ἰά ἀνάβὼὰ εᾷδῖῑᾱᾱᾱ ἰᾱçᾱᾱ ᾱεά ὀρί ἀεεάοŬόάος ὀς ὈόεῖρᾱΠ οὐί
 Ports ὀρί ἀῖῡῑçᾱ 4.5.1 (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html) ὅῖο
 ᾱᾱ÷ᾱῑῑᾱῖῑ.

Ç ääëäôÜóóäóç áñüò port äßíäë ääíëëÜ öüóí äðëP uóí ôí íá áéóÝëëäòä öóñí ëäòÜëíäí öíò ëäë íá íäëëíPóäòä öçí äëäëëëäòä íäòääëpòðëöçð. Öóí äëüëíðëí ðánÜäëëíä äßíäòäë ääëäôÜóóäóç öíò **Apache 2.2** äðü öçí ÖðëëíäP öüí Ports:

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

já óçíáíóêéü ðëáííÝéôçíá ôçð ÷ ñÞóçð ports óçíí áâéáðÜóóáóç ëíäéóíééíý áßíáé ç ééáíüôçóá ðñíóáñííäÞð òüí áðééäíþí
 áâéáðÜóóáóçð. Áéá ðáñÜáâéäíá, üóáí áâéáééóóðÜóá òíí **Apache 2.2** áðü óá ports íðñíáßóá íá íáñáñüðíéÞóáðá ôçí
 áðééäíþ **mod ldap** èÝóñíóáð áðéþð òéíÞ óóç íáðáâéçðÞ **WITH_LDAP** òíð **make(1)**:

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

ἈέάάŨóâ ôçí áúüôçá 4.5 öïð Ἄã÷ǎñéáßïð öïð FreeBSD, ×ñçóëüîðíêépíáoð ôçí Ports Collection (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html), ἄέα ðǎñéóóüôǎñǎð ðēçñüöîñßǎð ó÷ǎôéêŨ ïǎ ôç ÓõēēīāP ôüí Ports.

3.3 Ports Þ ðáêÝôá, ôé ðñÝðáé íá ÷ñçóéìðïéÞòù;

[illegible]

ĐáêÝôá (Ýôïëíà àêôãëÝóéíà)

- [illegible]

Ports (őçääßïò êpäéeâò)

- [illegible]

[illegible]

4 Αέεβίçόç ôĩõ ÓóóôΠιάôĩò: Ðĩõ áβιάέ ôá run-levels;

Οι Linux ÷ ηςοείηδιέαβ οι όγούοία âêêβίςοçð SysV, âηρ οι FreeBSD ÷ ηςοείηδιέαβ οι θάνάαίόεαέυ όγούοία âêêβίςοçð BSD. Όοι όγούοία init(8) όýðĩ BSD, ââί òðŨñ÷ĩοί run-levels, ιýðâ òĩ âñ÷âβĩ /etc/inittab. Áίòβ âέα áðòŨ, ç âêêβίςοç âêŸâ÷âðáε áðũ Ÿía script âêêβίςοçð, òĩ rc(8). To script /etc/rc âέαâŨæáε òĩ âñ÷âβĩ /etc/defaults/rc.conf êάε òĩ âñ÷âβĩ /etc/rc.conf âέα ίá êάειηβòáε ðĩεάð òðçηάòβâð ðηυêάεðáε ίá ίâέείβοίοι. Ιé òðçηάòβâð áðòŸð ίâέείŨía ίâ òçί âεòŸέáoç òυι áίòβòίε÷÷υι script âêêβίςοçð ðĩò âηβóεĩíòáε òóĩòð êáðáεũĩáð /etc/rc.d/ êάé /usr/local/etc/rc.d/. Óá scripts áðòŨ âβίάέ ðάνυιιέá ίâ òá scripts ðĩò âηβóεĩíòáε òóĩĩ êáðòŸετáĩ /etc/init.d/ òâ òðóðβιáðá Linux.

Ãéáôβ òðÛñ÷ïôí äÿí ôïðïèãóβãò ãéá óá scripts áêêβίϗόϗò ôüí òðçñãóêñí; Óá scripts ðïò ãñβóêñíóáé óóñí éáðÛêññ /etc/rc.d/ ãβíáé ãéá ãóãñññãÝð ðïò áñPêññí óóñí “ãáóéêñ” 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 ããéãóóóãéãß áðñ ôïò ð÷ñPóðãò, ùðùð ãéá ðãñÛããéãñá ï **Apache**, òñ **Squid**, ê.ê.ð.

Ðñéá ãβíáé ϗ ãéãóññÛ ïãóãññ ðïò “ãáóéêñ” óóóðPíáðïð éáé ðñí ãóãñññãñ ð÷ñPóðϗ; Òñ FreeBSD áíãðóýóóããóáé ùð Ýíá ðêPñãð éãéóñòñãéêñ óýóóϗíá. ïã Ûêêã ãñãéá, ï ðòñPíáð, ïé ãéãéêñêñêñ ðïò óóóðPíáðïð, ïé ãáóéêñÝð áñóñêñÝð (userland, óá ðñññãÛñíáóá ùðùð òñ ls(1), cat(1), cp(1) êêð.), áíãðóýóóñíóáé éáé ãçñíóéãññíóáé ïããß, ùð óýññêñ. Áðòñ áíãóÝñãóáé éáé ùð “ãáóéêñ” óýóóϗíá. ïé ãóãñññãÝð ðïò ããéãéβóóáñíóáé áðñ ôïò ð÷ñPóðãò, ããñ áñPêññí óóñí “ãáóéêñ” óýóóϗíá, éáé ðÝñíéãð ãβíáé ãéá ðãñÛããéãñá ï **Apache**, òñ **X11**, ï **Mozilla Firefox**, êêð. Áðñññ ðïò ãβãñðð ïé ãóãñññãÝð, ããñéêñ ããéãéβóóáñíóáé ïã ðϗ ð÷ñPóϗ ðϗð ÓðêññãPð ÐãêñÝðñí éáé Ports (article.html#SOFTWARE) ðïò FreeBSD. Ãéá ïá ïã ð÷ññãêññí áðñ òñ ððñêñêññ “ãáóéêñ” óýóóϗíá, ïé ãóãñññãÝð ð÷ñPóðϗ óóñPêñð ããéãéβóóáñíóáé óã ððñéãóáéñññò ðïò /usr/local/.ðóé óá ãéðãéÝóéñá ðñññãÛñíáóá ðñí ð÷ñçóðññ ãñβóêñíóáé óóñPêñð óóñí éáðÛêññ /usr/local/bin/, óá áñóβóñíé÷ã ãñ÷ããá ðòèñóáññí ôïò óóñí éáðÛêññ /usr/local/etc/, ê.ñ.ê.

ïé ððçñãóβãò áñãñññðñéññíóáé ïã ðϗ ðññóêPêϗ ïéãð ãããñãóPð óýðññ ãñññãðððçñãóβãð_enable="YES" óóñí ãñ÷ãβñ /etc/rc.conf (rc.conf(5)). Ñβñðã ïéã ïáðéÛ óóñí ãñ÷ãβñ /etc/defaults/rc.conf ãéá ïá ããβðã ðéð ðñññðéêñãÝð ðïò óóóðPíáðïð. ïé ðòèñóáéð ðïò êñññññ ðóñí ãñ÷ãβñ /etc/rc.conf ððãñéó÷ñññ Ýñññóé ðññ ðñññðéêñãññ áðòñ. Áðβóϗò, éáðÛ ðϗ ããéãóðÛóóáóϗ ðññóéãðññ ãóãñññãññ, ããããéêñãßðã ùðé ãéããÛóóãð ðϗ áñóβóñíé÷ϗ ðãèñçñβñóϗ ãéá ïá ãñãßðã ðùð ïá áñãñññðñéPóãðã ðò÷ññ ó÷ãðéêñÝð ððçñãóβãò.

Òñ ãéññêñêñ áðñóðãóñá áðñ òñ ãñ÷ãβñ /etc/rc.conf áñãñññðñéãß ðϗ ððçñãóβã sshd(8) éáé òññ **Apache 2.2**. Áðβóϗò éãéññãéãé ùðé ï **Apache** éã ïãéêñPóáé ïã áñãñññðñéϗÝñϗ ðϗ ãñññññðϗóá SSL.

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

Áðñ ðϗ óóéãñP ðïò ïéã ððçñãóβã áñãñññðñéϗãß óóñí ãñ÷ãβñ /etc/rc.conf, ïðññãßðã ïá ðϗ ïãéêñPóãðã áðãðéãßðã áðñ ðϗ ãñãññP áñóñêññ (÷ññβð ïá ð÷ñãéÛãéãéãé ïá ððãññéêñPóãðã òñ óýóóϗíá óáð):

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

Áñ ïéã ððçñãóβã ããñ Ý÷ãé áñãñññðñéϗãß óóñí ãñ÷ãβñ áðòñ, ïðññãßðã ïá áñññãéÛóãðã ðϗ ãéêβίϗόϗò ðϗð áðñ ðϗ ãñãññP áñóñêññ ïá ðϗ ãðéêññãP forcestart:

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

5 Ñýñíéóϗ Áééôÿñ

5.1 ÁéãðãóÝò Áééôÿñ

Áñóβ ãéá òñ ããñéêñ áñããñññéóóóéêñ óýðññ ethX ðïò ð÷ñçóéññðñéãß òñ Linux ãéá ðϗ áñãñññéóϗ ïéãð ãéãðãóPð ãééôÿñ, òñ FreeBSD ð÷ñçóéññðñéãß ùð áñããñññéóóóéêñ òñ ùññá ðïò ðñññãÛñíáðïð ïãPãϗóϗð áéññòéñññññ áðñ Ýñá ãñéêñ. ϗ ãéññêñðϗ Ýññãð áðñ ðϗ áñóñêñ ifconfig(8) ããß÷ñãé äÿñ êñññãð ãééôÿñ Intel® Pro 1000 (ïã áñããñññéóóóéêñ 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 Ἡεῖβόαε Ἀεῖεῖγίαῖ IP

Ἡῖῖῖῖῖ ἱά ἱάεῖῖῖῖ ἱεῖ ἱεῖῖῖῖῖ IP ὁῖ ἱεῖ ἱεῖῖῖῖ ἱεῖῖῖῖῖ ἱῖ ὁε ÷ ἡῖῖῖ ὁεῖ ἱῖῖῖῖῖ ifconfig(8). Ἀεῖ ἱῖ ἱῖῖῖ ἱῖῖῖῖ ὁῖῖῖῖ ἱῖῖῖ ἱεῖ ἱῖῖῖῖ, ἱεῖ ἱῖ ἱῖῖ ÷ ἱῖῖῖῖ ὁῖ ἱῖῖῖ ἱῖῖῖῖῖῖῖ, ἱῖ ἱῖῖῖῖ ἱῖ ὁεῖ ἱῖῖῖῖῖῖ ὁῖ ἱῖῖ ÷ ἱῖῖ /etc/rc.conf. Ὀῖ ἱῖῖῖῖ ἱῖῖῖῖῖ ὁῖῖῖῖῖ ἱεῖ ἱῖῖῖῖῖ ἱῖῖῖῖῖ ὁῖ ἱῖῖῖῖῖ ὁῖ ἱῖῖῖῖῖῖῖ (hostname), ὁεῖ ἱῖῖῖῖῖ IP, ἱῖῖῖ ἱῖ ὁεῖ ἱῖῖῖῖῖῖῖῖ ἱῖῖῖῖῖ (defaultrouter):

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

× ἡῖῖῖῖῖῖῖ ὁεῖ ἱῖῖῖῖῖῖ ἱῖῖῖῖῖ ἱῖῖ ἱῖ ἱῖῖῖῖῖῖ ὁῖ ἱῖ ἱῖῖῖῖῖῖ ἱῖῖῖῖῖῖ ἱῖῖῖῖῖῖῖ DHCP:

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

6 Firewall

Ὀῖ Linux ÷ ἡῖῖῖῖῖῖῖῖ ὁῖ **IPTABLES** ὁῖ ἱῖῖῖ ἱῖῖῖ ÷ ἱῖ ὁῖῖῖῖῖῖῖ firewall ὁῖ ἱῖῖῖῖῖ ὁῖῖῖῖῖ. Ὀῖ FreeBSD ἱῖῖῖ ÷ ἱῖ ἱῖῖῖῖῖῖ ἱῖῖῖ ὁῖῖ ὁῖῖῖῖῖ. Ἀεῖ ὁεῖ ἱῖῖῖῖῖῖ, ὁῖ FreeBSD ἱῖῖῖ ÷ ἱῖ ὁῖῖῖῖῖῖῖῖ:

- IPFW (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)
- PF (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/firewalls-pf.html)

Ὀῖ **IPFW** ἡ **IPFW** (ἱ ἱῖῖῖῖ ÷ ἱῖῖῖῖῖῖ ὁῖ ἱῖῖῖῖῖ ὁῖ **IPFW** ἱῖῖῖ ἱ ἱfw(8)) ἱῖῖῖ ὁῖ firewall ὁῖῖ ἱῖ ÷ ἱῖ ἱῖῖῖῖ ÷ ἱῖῖ ἱῖ ὁῖῖῖῖῖῖῖ ἱῖῖ ὁεῖ ἱῖῖῖ ἱῖῖῖῖῖῖ ὁῖ FreeBSD. Ὀῖ **IPFW** ἱῖῖῖῖ ἱῖ ὁῖῖῖῖῖῖῖ ἱῖ ὁῖ **dummynet(4)** ἱῖῖ ἱῖ ἱῖῖῖ ÷ ἱῖ ἱῖῖῖῖῖῖῖ ἱῖῖῖῖῖῖῖ ὁεῖ ἱῖῖῖῖῖῖῖ (traffic shaping) ἱῖῖ ἱῖ ἱῖῖῖῖῖῖῖ ἱῖῖῖῖῖῖῖῖ ὁῖῖῖῖῖ ὁῖῖῖῖῖῖ ἱῖῖῖῖῖῖῖ.

ἱῖῖῖῖῖῖ ἱῖῖ ἱῖῖῖῖ ὁῖ **IPFW** ὁῖ ἱῖῖῖῖῖῖ ἱῖῖῖ ÷ ἱῖῖῖ ἱῖῖῖῖῖ ὁῖ ὁῖῖῖῖῖ **SSH**:

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

Ôi **IPFILTER** áðíáé íéá áóáñííáP firewall ðíó áíáððýóóáðáé áðú ôíí Darren Reed. Äáí Ý÷-áé öðéá÷ðáß áéáéêÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáññéáß éáé óá Üëéá éáéðíðñáéêÜ, óðíðñáééäíááííÝíúí ðúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàlà áíüò êáíuíá ãéá ôi **IPFILTER** ðĩõ ãđéõñÝđăé áéóăñ÷:üàíá àăăñÝíá 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** açìérìòñàPèçèà ùò áíòééáóáóòÜòçò òìò **IPFILTER**, éáé Ýóóé ç óýíóáç òìò **PF** ááíáé áñèêòÜ ðañüüíéá íá áóòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óóíáóóóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáóáò òýðìò QoS.

ĐánÜäåēāiā êáíuíá ôiō **PF** ðiō ãđéônÝđăé áéoăñ÷ùiăiá āăăiñÝiá đñiò ôçí òđçñăóóă **SSH**:

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

7 Άίαâáèìβæïïôáò ôï FreeBSD

ÖðÜñ÷ïï ññáoò ìÝèäëé áéá ôçí áíááÜèìéóç áíuò óóóóPíáòïò FreeBSD: ÌÝòù òïò ðçááßïò èpáééá, ìÝòù Ýðìèìì (binary) áíáááèìßóáìì, éáé ìÝòù òùì CD äãéäÜóóáóóçò.

Ç äææäöÜöðäöç ìÝóü öîð ðçäæßîð ëðäëä äßíäé ç ðér ðíëýðëíëç, äëëÜ ðñîóÝñäé éäé öç ìääæýðäñç äöíäðP äðäëéßä. Ç äéääéäößä äöðP ðäñéëäìäÜíäé öì öðä÷ñííéöíü öîð öìðéëéý áíðéäñÜöîð öîð ðçäæßîð ëðäëä öîð FreeBSD ìä öíí ëðäëä öîð FreeBSD ðîð äñßöéäðäé öóíðð äíððçñäðçÝð CVS (Concurrent Versioning System). Äðü öç öóéäìP ðîð öì öìðéëü áíðäñäöîð ðçäæßîð ëðäëä äßíäé äíáíäüÝñ, ìðñäßðä ìä ìäðäæüððßðäðä ìÝäð äëäüäðäéð öîð ððñÞíä éäé öüí ääöéëÞí ðñíäñäìÜöüí. Äéä ðäñéöóüðäñäðð ðççñîðíñäðð ö÷äðéëÜ ìä öî öýððçíä äíáäÜëíéðçð ìÝóü ðçäæßîð ëðäëä, ääßðä öì éäðÜëäéí ÄíçìÝñóöç éäé ÄíáäÜëíéðç (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html) öóí Ää÷äéñäëéí öîð FreeBSD.

Iε Υοιειάο (binary) áíááæiβóáèð, áβíáé ðáñüüíεάò iá òç ÷ñÞóc òçò áíõíεÞò yum Þ apt-get áéá òçí áíááΥειέóc áíüð ðóóðÞíáòíð Linux. Ç áíõíεÞ freebsd-update(8) εá εáòááΥóáé òéð áíááæiβóáèð εάé εá òéð ááεάóáóðÞóáé. Iðññáβá iá εáεíñβóáòá òçí áóðüüiáòç, áíΥ óáεòΥ áéáóðÞíáóá áεòΥεáóc òçòð, iá òç ÷ñÞóc òíð 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 áðéeĩāP áíááÛèíóçò, ìÝòù òùì CD âæáoÛóóáoçò, âßíáé áñêáoÛ íæèÛeáñç. Áðèðò æêééìPóðâ áðü òì
 CD âæáoÛóóáoçò éáé áðéeÝíòâ òçì áíòßóðíé÷ç áðéeĩāP áíááÛèíóçò (upgrade).

8 procfs: ÐǎñáóìÝĩ áëëÜ ü÷é Îǎ÷áóìÝĩ

Ói Linux, é ÷ñááóâá íá áââôâ ôi /proc/sys/net/ipv4/ip_forward áé íá éâëññóáôâ áí áíáíé áíáññíðéííÍí c ðñíðécó IP (IP forwarding). Ói FreeBSD é ðñÝðáé íá ÷ñcéííðéííóáôâ ôi sysctl(8) áé íá áââôâ

ἀόδῖ ἐάε Ὑεῖαδ ἡδὲβόαέδ οἷο ὁδὸδῖαδῖδ, ἐάεῖδ οἷ procfs(5) ἐαῦἡαβόαέ δᾶἡν÷çìÝîí οᾶ δἡῦοᾶᾶδᾶδ ἀεῦοᾶέδ οἷο ἐᾶέοἰῶἡᾶᾶᾶᾶ. (Αἱ ἐάε ç αἰῶἡῖῖ sysctl ἀβῖαέ ἀδβόçδ ἀέᾶᾶᾶᾶᾶ ἐάε οἷ Linux).

Οἷ δᾶἡὙᾶᾶᾶᾶ ὁçδ δἡἡᾶᾶᾶᾶ IP, ἐᾶ ÷ἡçóᾶἡἡἡᾶᾶᾶ ὁçἱ ᾶᾶᾶᾶᾶᾶ αἰῶἡῖῖ ᾶᾶ ἱᾶ ᾶᾶἡἡᾶᾶᾶᾶ ᾶἱ ç ᾶᾶᾶᾶᾶᾶᾶ ᾶᾶᾶ ᾶβῖαέ ᾶᾶἡᾶᾶᾶᾶᾶᾶᾶᾶ Ὑἱç οᾶ Ὑἱᾶ FreeBSD ὁᾶᾶᾶᾶ:

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

Ç ᾶᾶᾶᾶᾶ -a ÷ἡçóᾶἡἡᾶᾶᾶ ᾶᾶ ἱᾶ δὙἡᾶᾶ ἱᾶ ᾶβόᾶ ἱᾶ Ὑῖαδ ὁᾶᾶ ἡδὲβόαέδ οἷο ὁδὸδῖαδῖδ:

```
% 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
...
```

Οçἱᾶβῦᾶç: ἘὙᾶᾶᾶ ᾶᾶ ὁᾶᾶ ὁᾶᾶᾶ ὁἷο ᾶᾶᾶᾶᾶ ç ᾶἰῶἡῖῖ sysctl ἀβῖαέ ἱῦἡ ᾶᾶ ᾶἱὙᾶἱᾶᾶ.

ὈδὙἡ÷ἱῶἱ δᾶἡᾶᾶᾶᾶᾶ Ὑᾶᾶ ᾶᾶᾶᾶᾶᾶ ὁἷ procfs, Ὑᾶᾶ ᾶᾶ δᾶἡὙᾶᾶᾶᾶ Ὑᾶᾶ ᾶᾶᾶᾶᾶᾶ δᾶᾶᾶᾶᾶᾶ ᾶᾶᾶᾶᾶᾶ, ὁἷ ἱᾶἡἱ ἘὙἱᾶᾶ ÷ἡᾶᾶ ὁçδ ᾶἰῶἡῖῖδ truss(1) ᾶᾶ ὁçἱ ᾶἱᾶ÷ἱᾶᾶᾶ ὁἷ Ἐᾶᾶᾶᾶ ὁδὸδῖαδῖδ, ἐᾶᾶ ᾶᾶ ὁçἱ Ὀᾶᾶᾶᾶᾶᾶᾶ ἱᾶ Ἀᾶᾶᾶᾶᾶᾶ ὁἷ Linux (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html). (Αἱ ἐάε ç Ὀᾶᾶᾶᾶᾶᾶᾶ ἱᾶ Ἀᾶᾶᾶᾶᾶᾶ ὁἷ Linux ÷ἡçóᾶἡἡᾶᾶᾶ ὁἷ ᾶᾶᾶ ὁçδ procfs, ὁἷ linprocfs(5)). Αἱ ÷ἡᾶᾶᾶᾶᾶ ἱᾶ δἡἡᾶᾶᾶᾶᾶ ὁἷ procfs, ἱᾶἡᾶᾶᾶ ἱᾶ δἡᾶᾶᾶᾶᾶ ὁçἱ ᾶᾶᾶᾶᾶᾶ ᾶᾶᾶᾶᾶ ὁἷ ᾶἡ÷ᾶἡἱ /etc/fstab:

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

Οçἱᾶβῦᾶç: Ç ᾶᾶᾶᾶᾶᾶ noauto ἐᾶ ᾶἡᾶᾶᾶᾶ ὁçἱ ᾶᾶᾶᾶᾶᾶ δἡᾶᾶᾶᾶᾶ ὁἷ /proc ᾶᾶᾶ ὁçἱ ᾶᾶᾶᾶᾶᾶ ὁἷ ὁδὸδῖαδῖδ.

Δἡᾶᾶᾶᾶᾶᾶ ᾶᾶᾶᾶᾶ ὁçἱ procfs ÷ἡçóᾶἡἡᾶᾶᾶᾶ ὁçἱ ᾶᾶᾶᾶᾶᾶ ᾶἰῶἡῖῖ:

```
# mount /proc
```


9 ÓõíçèéóìÝíàò ÁíôïëÝò

9.1 Äéá÷ãßñéóç ÐáêÝôùí

ΆιόϊεP οϊō Linux (Red Hat/Debian)	ΆιόΒόόϊε÷ç άιόϊεP FreeBSD	Όεϊδύο
yum install <i>package</i> / apt-get install <i>package</i>	pkg_add -r <i>package</i>	ΆæέάδŮóóάόç δάέÝôïō áδũ άδñíáέñóôŮÝíñ áιôδçñáôçôP
rpm -ivh <i>package</i> / dpkg -i <i>package</i>	pkg_add -v <i>package</i>	ΆæέάδŮóóάόç δάέÝôïō
rpm -qa / dpkg -l	pkg_info	ËΒóóá áæέάóááóôçŮÝíñũí δάέÝôũí

9.2 Äéá÷βñέός ÓõóôΠιάôïò

[illegible]

10 ÓõìďǎñŮóìáôá

[illegible]