

1 ÅéóáãùãƆ

Οι εαβλαίη άόδου οίηβææέ όέό æεάοιηÝò ιάόάίý οίò FreeBSD εάέ οίò Linux þóόά ιÝοίε þ ðñí÷÷ññçιÝííε ÷ñþóόάό οίò
 Linux íά ιόññíýí ãñþáíñά íά ðñíόáññíόόίýí όόέό ááόέéÝò Ýííέáό οίò FreeBSD. Ðñüêæέόáé æéά ιέά όá÷÷íéþ æέόάüáþ
 όόí FreeBSD, εάέ ááí εά áíάόáñεñýíá όά όó÷÷ι “όέέíόíόέéÝò” æέάοιηÝò ιάόάίý όüí áýí όόόόçιÝòüí.

Öi êâñîâñi áóòü òðîëÝóâë üóë Ý÷âôâ Þäç äâëáóáóóÞóâë ôî FreeBSD. Áí äâí Ý÷âôâ äâëáóáóóÞóâë ôî FreeBSD Þ ÷ñâëÛëáóóâ äîÞëâëá íâ öçí äëääëéáóá äâëáóóóóóóóóóó öîð, ðññâëáëýîí íá äëáóóóóóâ ôî êâóÛëáí Áâëëëëóóóóóóóóóó ôî FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/install.html) óôí Åã÷âëñîâëí öîð FreeBSD.

2 Êâëýöç: Ääí õđŮñ÷âé Bash;

[illegible][illegible]

3 ĐáêÝôá êáé Ports: ĐñĩôéÝôĩĩôáò ěĩăéóĩéēũ óôĩ FreeBSD

[illegible]

3.1 ĐấêÝôá

Όά θαέΎόά αβίαέ θñĩ-iaóaaèuóóéoiΎíáo áóáñĩāΎó, èá èΎāñāi òĩ áíóβóóíé÷ĩ áéá òĩ 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 óánŨāēēāi, ç āēuēĩōèç áíóēβ āāēāēéóóŨ òĩñ **Apache 2.2**:

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

Ç ÷ ñΠός όçò ðáñáíÝíññíð -r iäçããß ðçí pkg_add(1) íá éáóááÜóáé áðòùíáðá ðùóí ðí ðáéÝðí, ùóí éáé ðéð áíáñðΠóáéð ðíð. éáé íá ðí ääéáðáóóðΠóáé:

```
# 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.

Όχι!Βυθός: Αί ÷ η̇ςοείι̇ι̇τι̇ε̇α̇β̇α̇ ι̇ε̇ά "α̇δ̇β̇ό̇ς̇ι̇ς̇" Ύ̇ε̇α̇ι̇ό̇ς̇ ο̇ι̇ο̇ FreeΒD (6.2, 6.3, 7.0, ε̇ε̇δ̇. δ̇ι̇ο̇ α̇α̇ι̇ε̇ε̇Ḳ̇ ι̇δ̇ι̇η̇α̇β̇α̇ ι̇ά α̇α̇ε̇α̇δ̇α̇ο̇δ̇ρ̇α̇δ̇α̇ α̇δ̇Ḳ̇ CD-ROM) ς̇ α̇ι̇ο̇ι̇ε̇Ḳ̇ pkg_add -r ε̇ά ε̇α̇δ̇α̇α̇Ḳ̇ο̇α̇δ̇ α̇ά δ̇α̇ε̇Υ̇ο̇ά δ̇ι̇ο̇ ο̇δ̇ε̇Ḳ̇÷ο̇ς̇ε̇α̇ι̇ α̇ε̇ά α̇δ̇ο̇δ̇ ο̇ς̇ ο̇δ̇α̇ε̇α̇η̇ε̇ι̇Υ̇ί̇ς̇ Ύ̇ε̇α̇ι̇ό̇ς̇. Ὁ̇α̇ δ̇α̇ε̇Υ̇ο̇ά α̇δ̇ο̇δ̇ *Β̇ο̇υ̇δ̇ α̇α̇ι̇ δ̇α̇η̇ε̇Υ̇÷̇ι̇ο̇ι̇* ο̇ε̇δ̇ δ̇ε̇Υ̇ί̇ι̇ δ̇α̇ε̇α̇δ̇ο̇α̇β̇α̇δ̇ α̇ε̇α̇Ḳ̇ο̇α̇ε̇ο̇ ο̇Ḳ̇ι̇ α̇δ̇α̇η̇ι̇Ḳ̇α̇Ḳ̇ι̇. ι̇δ̇ι̇η̇α̇β̇α̇ ι̇ά ÷̇ η̇ς̇ο̇είι̇ι̇̇τι̇ε̇ρ̇α̇δ̇α̇ ο̇ς̇ι̇ ι̇α̇δ̇α̇α̇ε̇ς̇ο̇δ̇ δ̇α̇η̇ε̇α̇Ḳ̇ε̇ε̇i̇ο̇ι̇δ̇ο̇ **PACKAGESITE** α̇ε̇ά ι̇ά δ̇α̇η̇α̇ε̇Ḳ̇ο̇α̇δ̇α̇ α̇δ̇ο̇δ̇ ο̇ς̇ι̇ δ̇η̇ι̇α̇δ̇ε̇ε̇α̇ι̇Υ̇ί̇ς̇ ο̇δ̇ι̇δ̇α̇η̇ε̇ο̇i̇Ḳ̇Ḳ̇. Α̇ε̇ά δ̇α̇η̇Ḳ̇α̇α̇ε̇α̇ι̇α̇, ε̇Υ̇ο̇i̇i̇ο̇άδ̇ ο̇ς̇ι̇ **PACKAGESITE** ο̇ό̇ς̇ι̇ ο̇έι̇Ḳ̇ <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ε̇ά ε̇α̇δ̇α̇α̇Ḳ̇ο̇α̇δ̇α̇ α̇ά δ̇ε̇i̇ δ̇η̇Ḳ̇ο̇α̇δ̇α̇ δ̇α̇ε̇Υ̇ο̇ά δ̇ι̇ο̇ ο̇δ̇Ḳ̇ñ÷̇ι̇ο̇ι̇ α̇ε̇ά ο̇ς̇ ο̇ά̇ε̇η̇Ḳ̇ 6.X.

IdinaBda ía áeááUoáda Báneooúoáña áea oéo aeáüoáeo oíō FreeBSD oíō Ūñeñi ÁdeéYáñíoaó oç ÓúoP áea ÁoUō êáñóç oíō FreeBSD (http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/version-guide/).

Άέά δάνεόουόαηάο δέçññοιηβáο ò÷âôééÛ ιà ôá δαéÝôá, δάηάέαεγγία áéááÛóôâ ôçí áíuôçóá 4.4 ôôι Άά÷άénβáεí ôïò
 FreeBSD: ×ñçóéιιðñépíóáò ôï Óýóôçιá Packages
 (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/packages-using.html).

3.2 Ports

Ç ääyôäñç Ýÿëäüð äëä öçí ääëäüÜðôäöç äöäñíäíäí öðí FreeBSD äáíäë ç Óðëëëäíä üüí Ports. Ç Óðëëëäíä üüí Ports äáíäë Ýíä äëäüöëí çäëöíöñäçíäí äíö äíöüäëäüðäë ääü Makefiles ëäë äñ÷äü äëäüöíñíäí (patches) öä íðíäíä Ý÷íöí äçíëíöñäçëäü äëäëëÜ, þöðä íä äáíäë äíöíäþ ç ääëäüÜðôäöç äëÜöíñíäí äöäñíäíäí öðí FreeBSD ääü öíí äçääáíäí ëþäëëä öíöð. ¼öäí ääëäëëöðÜðä Ýíä port, öí öýööçíä ëä ëäöäüÜðäë öíí äçääáíäí ëþäëëä, ëä äöäñíüöäë üëäð öëð äðäëöíýíäíäð äëëääÝð ÷ñçöíöíäíëíäíäð öä patches, ëä íäöäëäüðöðäë öíí ëþäëëä, ëäë öÝëíð ëä ääëäöäöðöäë öçí äöäñíäíäí. Èä äëëëíðëöäë öçí ääëä äëääëëäöäíä ëäë äëä íðíëääþðíöä öð÷üí äíäñöþíäíä äñíäñÜíäöä.

Ἰδιναβὼὰ ἰά ἀνάβὼὰ ὀρί ὈόεῖρᾱΠ οὐί Ports (ς ἰδῖνᾱ ἰάνεέΥδ οῖνΥδ ἀράοΥñαόάε έάε υὸ “ἀΎἰονῖ οὐί ports”), ὀοῖ
έáoÛεῖῗ /usr/ports. Ἀόου ἀΎάέα δñῑῡδῖεΥόάε υὲέ άέέáoáoΠóáoᾱ ὀρί ὈόεῖρᾱΠ οὐί Ports έáoÛ ὀς έέÛñέέα ὀς
άέέáoÛόáoὀς οῖῶ FreeBSD. Αῖ ᾱῖ ὅι Υ÷άᾱ εÛῖᾱέ, ἰδῖνᾱβὼὰ ἰά ὀρί δñῑῶέΥόᾱᾱ ᾱῦ ὅι CD άέέáoÛόáoὀς ἰᾱ ὀρί
ᾱῖPeάé ὁῶ sysinstall(8) Π ἰά ὀρί έáoᾱᾱÛáoᾱ ᾱῦ ὁῖῶ ᾱῖὀδςñᾱὀςΥδ ὁῖῶ FreeBSD ÷ñῑῶῖῡῡῖῑῑᾱὀ ὀς ᾱῖὀῖΠ
csup(1) Π ὀρί ᾱῖὀῖΠ portsnap(8). Ἰδιναβὼὰ ἰά ἀνάβὼὰ έᾱὀὀñᾱñᾱβ ἰᾱῑᾱβᾱὀ ᾱέᾱ ὀρί ᾱέέáoÛόáoὀς ὀς ὈόεῖρᾱΠ οὐί
Ports ὀρί ᾱῖὑὀῑᾱ 4.5.1 (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html) ὁῖῶ
ᾱᾱ÷ᾱῇῇᾱῖῶ.

Ç ääëäôÜóôäóç áñüò port äßíäë ääíëëÜ öüóí äðëP uóí ôí íá áéóÝëëäôä öóñí ëäôÜëíäí öíô ëäë íá íäëëíPóäôä öçí äëäëëëäóßá íäôääëpôðëöçð. Öóí äëüëíôëí ðánÜäëëíä äßíäôäë ääëäôÜóôäóç öíô **Apache 2.2** äðu öçí ÖðëëíäP öüí Ports:

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

já óçíáíóêéü ðeäííÝéôçíá ôçð ÷ ñÞóçð ports óçíí áäeáoÜóóáoç ëíäeóíeéíý áßíáé ç éeáíúôçóá ðñíóáñííäÞð òùí áðeéäíáí
 áäeáoÜóóáoçð. Áeá ðáñÜáäeäíá, úóáí áäeäeéóóÜðá òíí **Apache 2.2** áðu óá ports íðñíáßòá íá íáñáñüðíeÞóáòá ôçí
 áðeéäíáÞ **mod ldap** èÝóñíóáo áðeðð òeíÞ óóç íàðáäeçðÞ **WITH_LDAP** òíð **make(1)**:

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

Ἀεὶάποδα ὁπρὶ ἀνὺοδα 4.5 τοῦ Ἀ-ἀεῖαβιο τοῦ FreeBSD, × ηὐοῖνδρῖοδα ὁπρὶ Ports Collection (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html), ἁεὶ δᾶνέοοῦἀνὰ δέχνηνβὰ ο-ἀεέῦ ἰα ὁ Οῶεῖα οὐ Ports.

3.3 Ports π δαέΥοά, οέ δῆΥδαέ ἰα ÷ ηὐοῖνδρῖο;

Ὁά δαέΥοά ἀβίάε οόπρ δῆαῖαδῆεῦοδα ἀδῆδ δῆ-ἰαδᾶεῦδῆοῖΥἰα ports, Ὑῆα ἀβίάε δᾶνέοοῦἀνὰ εἶΥἰα ἀδῆεῖαδ αἰ ἀβίάε ἀδῆοῖοδ π ἀεᾶδᾶοδαός ἀδῆ οἰ δῆαβἰ ἐπαεᾶ π ἀδῆ Υοἰεἰα ἀεδᾶεΥοῖα. Ἐῦεα ἰΥεῖαδ Υ÷ἀε δᾶῖαδῆοδα ὁπρ:

ΔαέΥοά (Υοἰεἰα ἀεδᾶεΥοῖα)

- Δεῖ ἀνδρῆς ἀεᾶδᾶοδαός (π ἰαδᾶεῦδῆοῖ ἰαῦῖ ἀδᾶνῖαἰ ἰδῖνᾶβ ἰα ἀεᾶῖΥοᾶ ἀῖαδ πῆ).
- Ἀἰ ÷ ῆᾶεῦαδᾶέ ἰα εᾶδᾶῖαδᾶ δῆδ ἀβἰαδᾶέ π ἰαδᾶεῦδῆοῖ τοῦ εἶαεοἰεῖ.
- Ἀἰ ÷ ῆᾶεῦαδᾶέ ἰα ἀεᾶδᾶοδᾶοδα ἰαδᾶεῦδῆοῖδ οἰ οὔοδα ὁαδ.

Ports (δῆαβἰο ἐπαεᾶ)

- Εἰαῖοδα δῆοῖαῖαδ οὐ ἀδῆεῖαἰ ἀεᾶδᾶοδαός. (Ὁά δαέΥοά οἰεῦδ ἰαδᾶεῦδῆοῖαἰ ἰα οῖδ δῆᾶδῆᾶἰΥἰαδ ἀδῆεῖαδ). ἰα δᾶ ports ἰδῖνᾶβ ἰα δῆοῖαῖαδᾶ ᾶεῦοἰᾶδ ἀδῆεῖαδ, ὡδῆδ ὁπρ ἰαδᾶεῦδῆοῖ δῆοῖαδῆδ ἀῖαδῆδῆδ, π ἀεᾶπ ὁπρ δῆᾶδῆᾶἰΥἰαδ εἶοδ ἀεᾶδᾶοδαός.
- ἰδῖνᾶβ ἰα ἰῦεᾶδ οῖδ ἀεῖΥδ ὁαδ ἀεᾶᾶΥδ (patches) αἰ οἰ ἀδῆοἰαδᾶ.

Αἰ ᾶἰ Υ÷ἀδᾶ ἀεᾶεῖΥδ ἀδᾶδᾶοδαῖδ, δᾶ δαέΥοά δῆεᾶἰ εᾶ ὁαδ εᾶεῖοἰ ἰεᾶ ÷ ᾶῖ. Αἰ ὡοῖοἰ ÷ ῆᾶεῦαδᾶέ ἰα δῆοῖαῖαδᾶ εῦδῆαδ ἀδῆεῖαδ, οῦδᾶ π ἰΥεῖαδ οὐ ports ἀβίάε π εᾶεῖοᾶ. (Εᾶε οἰεᾶδᾶ, αἰ ÷ ῆᾶεῦαδᾶ δῆοῖαῖαδ ἀεῦ δῆοἰᾶῖοδ ὁά δαέΥοά, ἰδῖνᾶβ ἰΥοῦ ὁπρ οῖεῖαδ οὐ ports ἰα οῖεῖᾶδᾶ ὁά ἀεῖῦ ὁαδ δῆοῖαῖοἰΥἰα δαέΥοά ÷ ηὐοῖνδρῖοδα ὁπρ αἰοῖεπ make package εᾶε αἰεᾶῖοῖοδα ὁά δαέΥοά δῖο ἀῖεῖοῖαδᾶ ὁά Ὑεᾶ ἰπ ÷ αἰαῖαδ.)

4 Ἀεὶβίος τοῦ Οῖοδᾶοἰ: Δῖο ἀβίάε δᾶ run-levels;

Ὁἰ Linux ÷ ηὐοῖνδρῖοδ οἰ οὔοδα Ἀεὶβίος τοῦ SysV, ἀπρ τοῦ FreeBSD ÷ ηὐοῖνδρῖοδ οἰ δᾶᾶᾶοῖεᾶεῦ οὔοδα Ἀεὶβίος τοῦ BSD. Ὁοἰ οὔοδα init(8) οὔοδ BSD, ᾶἰ οδῦῖ-ἰοἰ run-levels, ἰῖοδ οἰ ᾶῖ /etc/inittab. Αἰδᾶ ἁεὶ ἀδῶ, π Ἀεὶβίος ᾶεῖΥ÷ἀδᾶ ἀδῆ Υἰα script Ἀεὶβίος τοῦ, οἰ rc(8). Το script /etc/rc ᾶεᾶᾶᾶε οἰ ᾶῖ ÷ ᾶἰ /etc/defaults/rc.conf εᾶε οἰ ᾶῖ ÷ ᾶἰ /etc/rc.conf ᾶεᾶ ἰα εᾶεἰνᾶοᾶε δῆαδ οδῆᾶδᾶ δῆεᾶοᾶέ ἰα ἰᾶεἰοἰ. ἰε οδῆᾶδᾶ ἀδῶδ ἰᾶεἰῖᾶ ἰα ὁπρ ᾶεδΥᾶοῖ οὐ αἰδῆοἰε÷ῖ script Ἀεὶβίος τοῦ δῖο ᾶῖοἰαῖ οἰοδ εᾶδᾶεῖοδ /etc/rc.d/ εᾶε /usr/local/etc/rc.d/. Ὁᾶ scripts ἀδῶδ ἀβίάε δᾶῖῖᾶ ἰα δᾶ scripts δῖο ᾶῖοἰαῖ οἰοἰ εᾶδῖεἰ /etc/init.d/ ὁᾶ οῖοδᾶοἰ Linux.

*Ἀεάβοθ ὁδὺν ÷ τῶι αὐτῷ οἰδιρεὰςβὰδ ἀέα ὀα scripts ἀεέβιςζόφου οὐι ὁδζήσἀοέρη; Ὀά scripts θῖρ ἀνβόειρήἀάε ὀοίρ ἐάοὔεῖραι /etc/rc.d/ ἀβίαέ ἀέα ἀὸάνηιᾹδὸ θῖρ ἀΠεῖροι ὀοί “ἀάοεῦ” ὄγοςζιά. (Ἀέα δάνὔΑαέαιά, ὁεδ cron(8), sshd(8), syslog(3), ἐάέ ὔεεὰδ.) Ὀά scripts θῖρ ἀνβόειρήἀάε ὀοίρ ἐάοὔεῖραι /usr/local/etc/rc.d/ ἀβίαέ ἀέα ἀὸάνηιᾹδὸ θῖρ ὔ÷τῶι ἀαέαὸάὸἀέἀβ ἀδὺ οἰτὸδ ÷ νβρόὰδ, υυδὺ ἀέα δάνὔΑαέαιά ι **Apache**, οἱ **Squid**, ἐ.ἐ.δ.*

Διέα ἀβιάε ε ἀέαοῖνῦ ἰαόατῶ οῖο “ἀαόέεῦ” οδοόΠιάοῖο ἐαέ οὐὶ ἀοάνῖαῖ ÷ ñPóóç; Õῖ FreeBSD αἰάδῶγῶαόαέ ὑὸ ὕῖα ðēPñāð εαέοῖοῖῃεεῦ ὀγῶόçῖα. ἰᾶ Ὑεεᾶ εὔαεᾶ, ἰ ðñPῖᾶð, ἰε ἀεᾶεῖεῖPεᾶð οῖο οδοόΠιάοῖο, ἰε ἀαόέεῚḶð αἰῶῖεῚḶð (userland, ὁᾶ ðñῖᾶñῚῖᾶοᾶ ὑðῖð ὀῖ ls(1), cat(1), cp(1) ἐεð.), αἰάδῶγῶῖῖῖᾶε ἐαέ ἀçῖῖῶεᾶῖῖῖᾶε ἰᾶεB, ὑὸ ὀγῖῖῖ. Ἀόῖῖ αἰᾶḶñᾶόᾶε ἐαέ ὑὸ “ἀαόέεῦ” ὀγῶόçῖα. ἰε ἀοάνῖᾶῚḶð Ḷῖῖ ᾶᾶεᾶεBόόᾶῖᾶε ᾶῖῖ ὀῖῖð ÷ ñPóóð, ᾶῖ ᾶῖPεῖῖ ὀῖῖ “ἀαόέεῦ” ὀγῶόçῖα, ἐαέ ὀῚḶῖῖᾶð ᾶῖᾶε ᾶεᾶ ðᾶñῚῖᾶᾶῖᾶ ἰ **Apache**, ὀῖ **X11**, ἰ **Mozilla Firefox**, ἐεð. Ἀόῖῖ ὀῖῖ ᾶῖᾶῖῖð ἰε ἀοάνῖᾶῚḶð, ᾶῖῖῖῚῖ ᾶᾶεᾶεBόόᾶῖᾶε ἰᾶ ὀç ÷ ñPóç ὀçð ὈόεῖῖᾶBð ÐᾶῖῚῖῖᾶ ἐαέ Ports (article.html#SOFTWARE) ὀῖῖ FreeBSD. Ἀεᾶ ἰᾶ ἰᾶ ÷ ῖñBᾶῖῖ ᾶῖῖ ὀῖ ὀḶῖῖῖῖῖ “ἀαόέεῦ” ὀγῶόçῖα, ἰε ἀοάνῖᾶῚḶð ÷ ñPóóç ὀῖῖPεῖð ᾶᾶεᾶεBόόᾶῖᾶε ὀᾶ ὀḶῖᾶὀᾶεῖᾶῖῖð ὀῖῖ /usr/local/. ὀῖῖ ὀᾶ ᾶεὀᾶῖῚῖᾶ ḶῖᾶñῚῖᾶᾶ ὀῖῖ ÷ ñçὀῖᾶ ᾶñBῖῖῖᾶε ὀῖῖPεῖð ὀῖῖῖ εᾶὀῚῖᾶῖ /usr/local/bin/, ὀᾶ αἰὀBόὀῖ ÷ ᾶ ᾶñ ÷ ᾶῖᾶ ñὀῖῖBὀᾶῖ ὀῖῖð ὀῖῖῖ εᾶὀῚῖᾶῖ /usr/local/etc/, ἐ.ἰ.ἐ.

[illegible]

Όι άέυήρηήι άδύοδάοία άδύ όι άñ÷÷ßι /etc/rc.conf άίάññήδیهآß όçι όδçñάόßά sshd(8) έάέ όήί **Apache 2.2**. Άδβόçό έάέññßάέ ύόέ ι **Apache** έά ήάέήßόάέ ή άίάññήδیهçι Ýιç 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 ḑñáñḑP ḑiḑḑḑḑ (÷ḑñḑḑ iá ÷ñáéÜæḑḑḑ iá ḑḑḑḑḑḑḑḑḑḑḑḑ 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 íá ôçí áðééñáP forcestart:

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

5 Ñýèìéóç Äéeôýĩõ

5.1 ÄéåđáöÝò Äéeêôýĩõ

[illegible]

```
% 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"
```

×ñçóëiïðiéΠóôâ ôçí áëüëiðëç êáôá÷þñçóç áéá íá êáëiñßóáôâ üôé iéá äéáðáöÞ éá éaiâÜiáé ñöëißóáèð iÝòù DHCP:

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

6 Firewall

Όλοι Linux → ηνζοείνιειάβθαάε οι **IPTABLES** οι ιδιβι θάνΥ → άε οδζηάοβαά firewall οά άδβθάάι δθνΠρί. Οι FreeBSD θάνΥ → άε άδβθόδ firewall ιΥού οιο δθνΠρί. Άέα όγι άέηβάάέα, οι FreeBSD θάνΥ → άε οηβά firewalls:

- IPFIREWALL (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)

[illegible]

DánÜäëàìá áúò éáíuíá ôïð IPFW ðïð äðéônÝðäé áéoãñ÷ùìáíá äääñÝía ðñïð ôçí òðçñáoßá 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 öðéá÷ðáß áéáéêÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáññéáß éáé óá Üëéá éáéðíðñáéêÜ, óðíðñáééäíááííÝíúí ðúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàíà áíüò êáíuíá ãéá ôí **IPFILTER** ðĩõ ãđéõñÝđăé áéóăñ÷:ùiáíá áăăñÝíá đñĩò ôçí òđçñăóáá **SSH**:

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

Ç òàèãòòàáá àòàñìràP firewall, òì **PF**, áíáðóýòóòàéé áðü òì OpenBSD project. Ôì **PF** àçìéròñãPèçèà ùò áíòééáòáóòÜòçò òìò **IPFILTER**, éáé Ýòóé ç óýíòáç òìò **PF** ááíáé áñèêòÜ ðañüüíéá íá áóòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óóíáòáóóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáóáò òýðìò QoS.

ĐánÜäåēāīā êáíuíá ôiō **PF** ðiō ãðéônÝðäé áéoãñ÷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 óóóóPiáòïrò FreeBSD: ÌÝòù òïò ðçááßïrò êpáééá, ìÝòù Ýðïëèuì
(binary) áíáááèìßóáñuì, êéé ìÝòù òuì CD äãéäÜóóáóóçð.

Ç äæäðÛððáðç ìÝóù òìð ðçäâìð òðäéä äâìäé ç ðér ðìèýðèìèç, äæÛ ðñìòóÝñäé éäé òç ìääæýðäñç äðìáðð äðäéèìâä. Ç äéääéäðâä äððð ðäñééäìäÛìäé òì òðä÷ñìéòìù òìð òìðéèèý áìðéäñÛìòì òìð ðçäâìð òðäéä òìð FreeBSD ìä òìí òðäéä òìð FreeBSD ðìò äñððéäðäé òðìð äìððçñäðçÝð CVS (Concurrent Versioning System). Äðù òç òðéäìð ðìò òì òìðéèù áìðâñäðì ðçäâìð òðäéä äâìäé äìáìäùÝñì, ìðñâððä ìä ìäðäæùððððäðä ìÝäð äæäùäæð òìò ððñðñä éäé òùì ääðéèð ðñìäñäìÛðùì. Äéä ðäñéòóùðäñäð ðççñìòìñâð ò÷÷äðéèÛ ìä òì óýððçìä äìáäÛèìèòçð ìÝóù ðçäâìð òðäéä, äâððä òì èäðÛèäéì ÄìçìÝñòóç éäé ÄìáäÛèìèòç (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html) òðì Ää÷äéñâäéì òìò FreeBSD.

Ίε Υόιειάο (binary) αίαάειβόάεο, άβίαέ δάνυιρέάο ιά ός ÷ñΠός όςο αίόιρεΠο yum P apt-get áέα όςι αίαάΥειέός áιυό
 όόόόΠιάοιό Linux. Ç αίόιρεP freebsd-update(8) έά έάόάάΥόάέ όέο αίαάειβόάεο έάέ έά όέο άάέάόάόόΠόάέ. Ιδιήάβόά ιά
 έάειñβόάόά όςι άόόυιάός, áíΥ όάέόΥ έέάόόΠιάόά άέοΥέάός όςό, ιά ός ÷ñΠός όιό cron(8).

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

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

Ç 0âæã0ôáßá áðéeĩāP áíááÛèíéóçð, ìÝòù òùì CD âæáoÛóóáoçð, âßíáé áñêáoÛ íæèÛeáñç. Áðèðò æêééìPóðâ áðü òì
 CD âæáoÛóóáoçð éáé áðéeÝíòâ òçì áíðßóðíe÷ç áðéeĩāP 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

ἀόδῖ ἐάε Ὑεῖαδ ἡεὶβόαέδ οἷο ὁόόδῖαδῖδ, ἐάεῖδ οἷ procfs(5) ἐαῦἡαβόαέ δᾶἡῖ÷çìÝîí ὁᾶ δἡῦόόαδᾶδ ᾶεῦῖόαέδ οἷο ἐᾶέοἰῡἡᾶέῖ. (Αἱ ἐάε ç ᾶἰῖῖῖῖ sysctl ᾶβἱᾶέ ᾶδῖόçδ ᾶέᾶῖῖῖῖ ἐάε ὁἷ Linux).

Ὀἷ δᾶἡῖᾶῖᾶ ὁçδ δἡἡῖῖῖῖ IP, ἐᾶ ÷ἡçóῖἡἡἡἡἡἡ ὁçἱ ᾶῖῖῖῖῖ ᾶἰῖῖῖῖ ᾶῖ ἱᾶ ᾶῖἡἡῖῖῖῖ ᾶἱ ç ᾶῖᾶῖῖῖῖῖ ᾶῖῖῖ ᾶβἱᾶέ ᾶἡἡἡἡἡἡἡἡἡἡἡἡ ὁᾶ Ὑἱᾶ FreeBSD ὁῖῖῖῖῖῖ:

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

Ç ᾶῖῖῖῖῖ -a ÷ἡçóῖἡἡἡἡἡἡ ᾶῖ ἱᾶ δῖἡἡῖῖῖ ἱᾶ ῖβῖῖῖ ἱᾶ ῖῖᾶδ ὁῖδ ἡεὶβόαέδ οἷο ὁόόδῖαδῖδ:

```
% 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
...
```

Ὀçἱᾶβῖῖῖ: Ἐῖῖῖῖῖ ᾶῖῖ ὁῖδ ὁῖῖῖ ῖῖῖ ᾶᾶῖ÷ἱᾶ ç ᾶἰῖῖῖῖ sysctl ᾶβἱᾶέ ἱῖἡ ᾶῖ ᾶἱᾶἱῖῖῖ.

Ὀδῖῖῖ÷ἱῖἱ δᾶἡῖῖῖῖῖῖ ῖῖῖῖ ᾶῖῖῖῖῖῖ ὁἱ procfs, ῖῖῖῖ ᾶῖ ῖᾶἡῖᾶῖᾶἡ ῖῖᾶἱ ᾶῖῖῖῖῖῖῖ ῖᾶῖῖῖῖῖῖ ῖᾶῖῖῖῖῖῖ, ὁἱ ῖῖῖῖ ῖῖῖῖῖ ÷ἡῖῖῖ ὁçδ ᾶἰῖῖῖῖῖ truss(1) ᾶῖ ὁçἱ ᾶἱῖ÷ἱᾶῖῖ ὁἱ ῖῖῖῖῖῖ ὁόόδῖαδῖδ, ἐᾶ ᾶῖ ὁçἱ Ὀῖᾶᾶῖῖῖῖῖ ἱᾶ Ἀῖῖῖῖῖῖῖ ὁἷ Linux (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html). (Αἱ ἐᾶ ç Ὀῖᾶᾶῖῖῖῖῖ ἱᾶ Ἀῖῖῖῖῖῖῖ ὁἷ Linux ÷ἡçóῖἡἡἡἡἡ ὁἱ ᾶῖῖῖ ὁçδ procfs, ὁἱ linprocfs(5)). Αἱ ÷ἡᾶῖῖῖῖῖ ἱᾶ δἡἡῖῖῖῖῖῖ ὁἱ procfs, ἱῖἡἡῖῖῖ ἱᾶ δἡἡῖῖῖῖῖ ὁçἱ ᾶῖῖῖῖῖῖ ᾶᾶἡᾶῖῖ ὁἱ ᾶἡ÷ᾶἡἱ /etc/fstab:

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

Ὀçἱᾶβῖῖῖ: Ç ᾶῖῖῖῖῖῖ noauto ἐᾶ ᾶἱῖᾶῖῖῖ ὁçἱ ᾶῖῖῖῖῖῖ δἡἡῖῖῖῖῖῖ ὁἷ /proc ῖᾶῖῖ ὁçἱ ᾶῖῖῖῖῖῖ ὁἷ ὁόόδῖαδῖδ.

δἡἡῖῖῖῖῖῖ ῖᾶῖῖῖῖ ὁçἱ procfs ÷ἡçóῖἡἡἡἡῖῖῖ ὁçἱ ᾶῖῖῖῖῖῖ ᾶἰῖῖῖῖ:

```
# mount /proc
```


9 ÓóίϗέέóìÝíàò ÁíôïëÝò

9.1 Äéá÷âβñέόϗ ÐáêÝòùí

ÁíôïëP ôïò Linux (Red Hat/Debian)	Áíôβóôïë÷ϗ áíôïëP FreeBSD	Óêïðüò
<code>yum install package / apt-get install package</code>	<code>pkg_add -r package</code>	ÄãêáoÜóóáoϗ ÐáêÝòïò áðü áðñíáêññóìÝíí áíôðϗñâóϗP
<code>rpm -ivh package / dpkg -i package</code>	<code>pkg_add -v package</code>	ÄãêáoÜóóáoϗ ÐáêÝòïò
<code>rpm -qa / dpkg -l</code>	<code>pkg_info</code>	Ëβóóá äãêáoáoóϗìÝííí ÐáêÝòùí

9.2 Äéá÷âβñέόϗ ÓóóôPíáôïò

ÁíôïëP Linux	Áíôβóôïë÷ϗ áíôïëP FreeBSD	Óêïðüò
<code>lspci</code>	<code>pciconf</code>	Ëβóóá óóóêãðí PCI
<code>lsmod</code>	<code>kldstat</code>	Ëβóóá ôññòùíÝííí áñêññüíÜòùí ðòñPíá
<code>modprobe</code>	<code>kldload / kldunload</code>	Öññòùóϗ/Áðñöññòùóϗ áñêññüíÜòùí ðòñPíá
<code>strace</code>	<code>truss</code>	Áíβ÷íáóóϗ êêPóáñí óóóôPíáôïò

10 ÓóìðãñÜóíáoá

ÄóãêέóóìÝíí üóé áóòü ôñ êãβíññ óáo ðãññβ÷ã áñêãòÝð ðêϗññññññò ãéá íá íãêéíPóáòã íã ôñ FreeBSD. Äéá ðãñέóóóðãññò éáé ðéí êãðòñññññò ðêϗññññññò, ðãñáéééíÝí íá áéáãÜóáòã ôñ Äã÷ãéñβãéí ôñ FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/index.html) ôñ ïðñí ãðβóçò ðãñéÝ÷ãé éáé ðñêêÜ èÝíáoá ðñ äãí éáéýòêêáí éáéüêñò óóí ðãññí êãβíññ.