



# 1 ÅéóáãùãƆ

Οι εαβιαίρ άδου διίβææέ οέδ æεάοινÝð ιάοάίý οίτ FreeBSD έεέ οίτ Linux þóðá ιÝóίε Þ ðñι÷ ùñçιÝñíε ÷ ñþóóað οίτ Linux ίά ιðñíýι ãñþáññά ιά ðñιόáññιόóίýι οóέδ ááóέéÝð Ýíñέáð οίτ FreeBSD. Ðñüêæέóáé æéά ιέά óá÷ιέéþ æέóáðuñþ óóι FreeBSD, έέé ááι εά áίáóáññέýíá óá óð÷ύι “óέέιόιόέéÝð” æέάοινÝð ιάοάίý ουι áýι óóóçιÝðουι.

Οι ε&βλ&α&ι α&δ&ο&ι ο&δ&ι&ε&Υ&ο&α&ε υ&ο&ε Υ&÷&α&ο&α Πα&ε α&α&ε&α&ο&ο&Π&ο&α&ε ο&ι FreeBSD. Α&ι α&α&ι Υ&÷&α&ο&α α&α&ε&α&ο&ο&Π&ο&α&ε ο&ι FreeBSD Π& ÷&η&α&ε&Υ&α&ο&α α&ι Π&ε&α&ε&ι ι&α ο&ε&ι α&ε&α&ε&α&ο&β&α α&α&ε&α&ο&ο&Π&ο&α&ο&ο&ε ο&ι&ο, δ&α&η&α&ε&α&ε&ρ&ι&γ&ι&α ι&α α&ε&α&ο&ο&α&ο&ι ο&ι ε&α&ο&Υ&ε&α&ε&ι Α&α&ε&α&ε&ο&ο&Π&ρ&ο&α&ο& ο&ι 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)) ο&ο&ι Α&α&÷&α&ε&η&β&α&ε&ρ& ο&ι&ο FreeBSD.

## 2 Êâëýöç: Ääí õđŮñ÷âé Bash;

146161ε Υπ-ιρσάε αδϋ οι Linux οδ-ιϋ ΞεθεΠοοιρσάε υοάρ αράεαϋδοιρ υοε οι **Bash** αάρ Αβράε οι θνιρδεεαλΥιρ εΥεοορσ οοι FreeBSD. Οοϋρ θνιρδεεαλΥιρ, οι **Bash** αάρ οδΥπ-ιρ εάρ οοϋρ ΑαοεεΠ αεαμΠ οιρ FreeBSD. Αρσθεαοά, οι FreeBSD ÷ηϋοερθιρεαβ οι tcsh(1) υο οι θνιρδεεαλΥιρ εΥεοορσ. Οι **Bash** εαεϐο εάε Υεεα εαεϋοϋ θιρ Βοϋδ εΥεαοά ιά ΑαεαοαοοΠοαοα, Αβράε αεαεΥοεά οοϋ ΟοεεραΠ ΔαεΥοιρ εάε Ports ([article.html#SOFTWARE](http://article.html#SOFTWARE)) οιρ FreeBSD.

[illegible]

### 3 ĐáéÝóá éáé Ports: ĐñĩóèÝóĩĩóáo ěĩăéóĩéêü 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 óóóóΠίαόá Debian/Ubuntu εάέ òññ āñ÷āβññ .rpm óā óóóóΠίαόá Red Hat/Fedora. Όά θαέΥόά āāēāēβóóáíóāē ÷ñçóéññíēñíóáó 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 īāçāāß ôçí pkg\_add(1) íá éāóāāŪōāé áōōūīāōā ōūōī ōī ðāēŸōī, ūōī éāé ōēð āīāñðÞōāēð  
ōīō. éāé íá ōī āāēāōāōðÞōāé:

```
# 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 äáíëëÜ ìðíñáßðá 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. ìðíñáßðá íá ÷ ñçóëííðíëëðáðá ðçí íáðááäçðß 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.

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/](http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/version-guide/)).

Άέά θάνέοούοάναό δεçññoinßão ó÷âôééÛ ìà óá ðáéÝóá, ðánaéæëÿiá æéääÛóóâ ôçí áíuôçóá 4.4 óôì Åã÷æñßæéí ôið  
FreeBSD: ×ñçóëiððéþiόάó ôi Óýóôçiá 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 αáyðáñç ÿÝëíáñð áëá ðçí ááëáðÛððáðç áðáñíñáñí ððí FreeBSD áβíáë ç Óðëëíáβ ðñí Ports. Ç Óðëëíáβ ðñí Ports áβíáë Ýíá ðëáβðéí εάëðíðñáëñí ðñí áðñðáëáβðáë áðñ Makefiles éáë áñ÷ áβá áëáðññí (patches) ðá ïðñíá Ý÷íðí áçíëíðñáçëáβ áëáëëÛ, þððá ïá áβíáë áññáðβ ç ááëáðÛððáðç áëÛñññí áðáñíñáñí ððí FreeBSD áðñ ðñí ðçááβí ëþáëéá ðñðð. ¼ðáí ááëáëëóðÛðá Ýíá port, ðí óýððçíá éá éáðááÛðáë ðñí ðçááβí ëþáëéá, éá áðáñññóáë ùëáð ðëð áðáëðñíñáñð áëëááÝð ðñçðñíðñíëñíðáð ðá patches, éá ïáðááëùðððáë ðñí ëþáëéá, éáë ðÝëñð éá ááëáðáðððáë ðçí áðáñíñáβ. Éá áëñíëðððáë ðçí βáëá áëááëéáðáβ éáë áëá ïðñéááβðñðá ðð÷ ùí áñáñðñíáñá ðññáñÛññáðá.

Ἰδιῆῆῆῆῆῆ ἰᾶ ἁῆῆῆῆῆ ὀῆῆ Ὀῆῆῆῆῆῆ ὀῆῆ Ports (ῆ ἰῆῆῆῆ ἰᾶῆῆῆῆ ὀῆῆῆ ἰᾶῆῆῆῆῆῆ ἰᾶῆ ὀῆῆ “ᾶῆῆῆῆ ὀῆῆ ports”), ὀῆῆ ἰᾶῆῆῆῆῆ /usr/ports. Ἀῆῆ ᾶῆῆῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ ἁῆῆῆῆῆῆῆῆῆῆῆ ὀῆῆ Ὀῆῆῆῆῆῆ ὀῆῆ Ports ἰᾶῆῆ ὀῆῆ ἁῆῆῆῆῆῆ ὀῆῆ ἁῆῆῆῆῆῆῆῆ ὀῆῆ FreeBSD. Ἀῆ ἁῆῆ ὀῆῆ ῆῆῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ ὀῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ sysinstall(8) ῆ ἰᾶ ὀῆῆ ἰᾶῆῆῆῆῆῆ ὀῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ FreeBSD ῆῆῆῆῆῆῆῆῆῆῆ ὀῆῆ ἰᾶῆῆῆῆῆῆῆ ὀῆῆ csup(1) ῆ ὀῆῆ ἰᾶῆῆῆῆῆῆῆ portsnap(8). Ἰῆῆῆῆῆῆ ἰᾶ ἁῆῆῆῆῆῆ ἰᾶῆῆῆῆῆῆῆ ἰᾶῆῆῆῆῆῆ ἁῆῆ ὀῆῆ ἁῆῆῆῆῆῆῆῆ ὀῆῆ ὀῆῆῆῆῆῆῆῆ ὀῆῆ Ports ὀῆῆ ἰᾶῆῆῆῆῆ 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)) ὀῆῆ ἁῆῆῆῆῆῆῆῆ.

Ç ääëäóÜóóäóç áíüò port äßíäë ääíëëÜ öüöí äðëP uóí öí íá áéóYëëäöä öüíí éäöÜëíäí öíö éäë íá íäëëíPóäöä öçí äëääëéäößá íäöääëpöðëöçò. Ööí äëüëíöëí ðänÜäëëíä äßíäöäë ääëäóÜóóäóç öíö **Apache 2.2** äðu öçí ÖöëëíäP öüí Ports:

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

```

já óçíáíóéëü ðëáñíÝéôçíá ôçð ÷ ñÞóçð ports óôçí áäëáðÛóóáóç ëíäéóíëéíý áßíáé ç éëáíúôçóá ðñíóáñíñáÞð òùí áðëëëäþí
áäëáðÛóóáóçð. Áéá ðáñÛáäëäíá, ùóáí áäëáëéóóðÛóá òíí Apache 2.2 áðü óá ports ðíññáßóá íá áíáññáðíëíóáðóá ôçí
áðëëëäþ mod ldap èÝóñíóáð áðëþð óëíþ óôç íáðáäëçðÞ WITH_LDAP òíð make(1):

```

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

ΆεάáŨóôâ ôçí áíuôçôá 4.5 ôĩô Åã÷:áéñéãβĩô ôĩô FreeBSD, ×ñçóëĩĩôĩéπĩóáô 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)), ãéá ðãñéóóũôãñãô ðëçñĩĩôĩñβãô ó÷:âôëêŨ ìâ ôç ÓôëëĩãP ôuĩ Ports.

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

[illegible]

## ĐáeÝôá (Ýôïèiá àêôãëÝóéiá)

- [illegible]

## Ports (ðçãáßïò êpäéêáò)

- [illegible]

[illegible]

#### 4 ΑέεΒίçóç ôĩõ ÓóóôΠιάôĩò: Ðĩõ áβίαέ ôá run-levels;

Οι Linux ÷ ηςοείηθιέαβ οι όγούοία âêêßícòð SysV, âñ οι FreeBSD ÷ ηςοείηθιέαβ οι θάηάηιόεαêü όγούοία âêêßícòð BSD. Όοι όγούοία init(8) όγθï BSD, ââí òðÛñ÷ïí run-levels, ïýòâ òí âñ÷âßí /etc/inittab. Áíòß âέα äòðÛ, ç âêêßícòç âêÛâ÷âòâέ äðu Ýíá script âêêßícòç, òí rc(8). Το script /etc/rc âέαÛÛæâέ òí âñ÷âßí /etc/defaults/rc.conf êάέ òí âñ÷âßí /etc/rc.conf âέα íá êâèñßòâέ θιέâð òðçñâòßâð ðñùêâέòâέ íá ïâέéíßóíïí. Íé òðçñâòßâð äòðÝð ïâέéíÛíá ïâ òçí êêòÛέâòç ðñí áíòßòíê÷÷ñí script âêêßícòç ðíò âñßòêñíòâέ òòíð êáðáêüâñòð /etc/rc.d/ êάέ /usr/local/etc/rc.d/. Óá scripts äòðÛ âßíάέ ðáñññíέα ïâ òá scripts ðíò âñßòêñíòâέ òòñí êáððÛêññ /etc/init.d/ òâ òðòðßíðά Linux.

Ἀέάββ ὀδῦñ÷ῖοι ἄγρ ὀδιῖῖῖῖῖῖῖ ἁέα ὀά scripts ἁέῖῖῖῖῖῖ ὀυῖ ὀδῖῖῖῖῖῖ; Ὀά scripts ὀῖῖ ἁῖῖῖῖῖῖῖῖ ὀῖῖῖ ἁῖῖῖῖῖῖῖ /etc/rc.d/ ἁῖῖῖῖ ἁέα ἁῖῖῖῖῖῖῖῖ ὀῖῖ ἁῖῖῖῖῖῖ ὀῖῖ “ἁῖῖῖῖῖῖ” ὀῖῖῖῖῖῖ. (ἁέα ὀῖῖῖῖῖῖῖῖ, ὀῖῖ cron(8), sshd(8), syslog(3), ἁέα ῖῖῖῖῖῖῖῖ). Ὀά scripts ὀῖῖ ἁῖῖῖῖῖῖῖῖ ὀῖῖῖ ἁῖῖῖῖῖῖῖῖ /usr/local/etc/rc.d/ ἁῖῖῖῖ ἁέα ἁῖῖῖῖῖῖῖῖ ὀῖῖ ῖῖ÷ῖῖῖ ἁῖῖῖῖῖῖῖῖῖῖ ἁῖῖ ὀῖῖῖ ÷ ῖῖῖῖῖῖῖ, ῖῖῖῖ ἁέα ὀῖῖῖῖῖῖῖῖῖ ῖ **Apache**, ὀῖ **Squid**, ἔ.ἔ.ῖ.

Διέα ἀβιάε ς εἰάοῖνῸ ἰαόάτῃ οῖο “ἀαόεῖῃ” οδοόΠιάοῖο ἐάε οὐὶ ἀοάνῃῃῃ ÷ ñPόός; Οῖ FreeBSD αἰάόόόαόάε ὑὸ ὕῖα δῆPῃᾶ εἰάοῖοῃᾶεῖ οὔόόόῖα. Ἰᾶ Ὑεἶᾶ εὔᾶἶ, ἰ δῶῃPῖᾶ, ἰε ᾶἶἶἶἶἶἶᾶ οῖο οδοόΠιάοῖο, ἰε ᾶαόἶἶἶ ᾶῖοῖἶἶ (userland, ὁᾶ δῃῃᾶῃῖῃᾶ ὑδῖο δῖ ls(1), cat(1), cp(1) ἔἔδ.), αἰάόόόοῖῖῖῖῖ ἔᾶἶ ᾶῖῖῖῖῖῖῖῖῖῖῖ ἰᾶᾶᾶ, ὑδῖ οὔῃῃῖ. Ἀόοῖ αἰάόῖῃῃᾶἶ ἔᾶἶ ὑδῖ “ᾶαόἶῃ” οὔόόῖα. Ἰἶ ᾶοᾶῃῖῖῖῖ ὅῖο ᾶἶἶᾶᾶᾶᾶᾶᾶᾶ ᾶδῖ οῖοδ ÷ ñPόᾶᾶ, ᾶᾶ ᾶῖῖῖῖ ὁῖο “ᾶαόἶῃ” οὔόόῖα, ἔᾶἶ ὁῖῖῖῖᾶ ᾶῖᾶἶ ᾶἶᾶ δᾶῃῖῖῖῖῖῖ ἰ **Apache**, οῖ **X11**, ἰ **Mozilla Firefox**, ἔἔδ. Ἀόῖῃ ὅῖο ᾶῖᾶῖο ἰἶ ᾶοᾶῃῖῖῖῖ, ᾶῖῖῖῖ ᾶἶἶᾶᾶᾶᾶᾶᾶ ἰᾶ ὁς ÷ ñPός ὁςδ Ὀῖῖῖῖᾶᾶ Ὤᾶἶῖῖῖ ἔᾶἶ Ports (article.html#SOFTWARE) οῖο FreeBSD. Ἀἶᾶ ἰᾶ ἰᾶ÷ῃῃᾶῖῖ ᾶδῖ οῖ ὁδῖῖῖῖῖ “ᾶαόἶῃ” οὔόόῖα, ἰἶ ᾶοᾶῃῖῖῖ ÷ ñPόός ὁῖῖῖῖ ᾶἶἶᾶᾶᾶᾶᾶᾶ ὁᾶ ὁδῖᾶᾶᾶᾶᾶᾶᾶ οῖο /usr/local/. ῖῖῖ ὁᾶ ᾶἶᾶῖῖῖῖῖῖ δῃῃᾶῃῖῖῖῖ ὁῖ ÷ ῃςὁῖᾶ ᾶῃᾶῖῖῖῖῖ ὁῖῖῖῖ ᾶἶᾶᾶᾶᾶᾶᾶ ὁᾶ ὁδῖᾶᾶᾶᾶᾶᾶᾶ οῖο /usr/local/. ῖῖῖ ὁᾶ ᾶἶᾶᾶᾶᾶᾶᾶ ᾶᾶ ÷ ᾶᾶ ῃᾶᾶᾶᾶᾶᾶ ὁῖο ὁῖῖῖῖ ᾶἶᾶᾶᾶᾶᾶᾶ /usr/local/etc/, ἔ.ἰ.ἔ.

[illegible]

Οἱ ἀεὺεῖρεῖ ἀδὺοδᾶοῖᾶ ἀδὺ οἱ ἀν÷ᾶβι /etc/rc.conf ἀἰᾶᾶἰδῖεᾶβ ὁγῖ ὀδγᾶοᾶ sshd(8) ἐᾶε οἱ **Apache 2.2**. Ἀδβόγδ  
ἐᾶεἰᾶεᾶ ὡεῖ ἰ **Apache** ἐᾶ ἰᾶεῖᾶοᾶ ἰᾶ ἀἰᾶᾶἰδῖεᾶῖῖῖ ὁγ ᾶοῖᾶοὺδγᾶ SSL.

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

Ἄδῡ ὁϙ ὀόεἰἵP ḏiō iéá ὀδϙñáḡḡá áíáññḡḡḡéϙéḡḡ ὀḡḡ ḗñ÷ḗḡḡ /etc/rc.conf, ḡḡḡñḡḡḡ ḡḡ ὁϙḡ ḡḡééḡḡḡḡḡ ḡḡḡḡḡḡḡḡ  
 ḡḡḡ ὁϙ ḗñḡḡḡP ḗḡḡḡḡḡ (÷ḡḡḡḡ ḡḡ ÷ñḡḡḡḡḡḡ ḡḡ ḡḡḡḡḡḡḡḡḡḡḡ ḡḡ ὀḡḡḡḡḡḡ ḡḡḡ):

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

Áí íéá òðçñáòá ááí Ý ÷ áé áíññãñðíéçéáß óóí áñ ÷ áßí áóòü, ìðññáòá íá áíáíáéÜóáòá ôçí áéêßíçòç ôçò áðü ôçí ãñáñì Þ áíòíèþí ìá ôçí áðééñáß forcestart:

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

## 5 Ñýèìéóç Äéeôýĩõ

## 5.1 ÄéåđáöÝò Äéeêôýĩõ

Άϊός άέά ôï άαίέêü áíááññέóóéêü ôýðïò *ethX* ðïò ÷ñçóéïíðïέάß ôï Linux áέá ôçí áíááññέóç íέáð áέáðáðð áέέðýïð, ôï FreeBSD ÷ñçóéïíðïέάß ùð áíááññέóóéêü ôï ùññá ôïð ðññáñÙñáôïð íáßαçóçð áέíεíεíεýíáñ áðü Ýíá áñέέíü. Ç áέúεíεç Ýññáð áðü ôçí áíôïðê ífconfig(8) áάß÷íáέ áýí êÛñðáð áέέðýïð Intel® Pro 1000 (íá áíááññέóóéêéÛ 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 Ἡοὐβόαεὸ Ἀεῖοεῖοαῖ IP

Ἡοὐβόαεὸ ἰα ἰαεῖ ὕοαὸ ἰεῖ ἡεῖοεῖο IP οἱ ἰεῖ ἡεῖοεῖο ἡεῖοεῖο ἰα οἱ ÷ ἡοεὸ οἱ ἰοῖοεῖο ifconfig(8). Ἀεῖ ἰα ἡβῖε ἡεῖοεῖο ἡοῖοεῖο ἡοῖοεῖο ἡεῖοεῖο, ἡεῖ ἰα ἰεῖ ÷ ὕοαεὸ οἱ εῖο ἡοῖοεῖοεῖο, ἡ ἡῖοεῖο ἰα οἱ ἡοῖοεῖοεῖο οἱ ἡ ÷ ἡβῖ /etc/rc.conf. Οἱ ἡεῖοεῖο ἡοῖοεῖο ἡοῖοεῖο ἡεῖοεῖο ἡ ἡοῖοεῖοεῖο ἡοῖοεῖο ἡοῖοεῖο ἡοῖοεῖο ἡοῖοεῖο ἡοῖοεῖο (hostname), οἱ ἡεῖοεῖο IP, ἡεῖο ἡεῖ οἱ ἡοῖοεῖοεῖο ὕοε (defaultrouter):

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

× ἡοῖοεῖοεῖο ἡοῖοεῖο οἱ ἡεῖοεῖοεῖο ἡοῖοεῖο ἡεῖ ἰα ἡεῖοεῖοεῖο ὕοε ἰεῖ ἡεῖοεῖο ἡ ἡοῖοεῖοεῖο ἡοῖοεῖοεῖο ἡοῖοεῖο DHCP:

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

## 6 Firewall

Οἱ Linux ÷ ἡοῖοεῖοεῖοεῖο οἱ **IPTABLES** οἱ ἡοῖοεῖο ἡοῖοεῖο ÷ ἡεῖ οἱοῖοεῖοεῖο firewall οἱ ἡοῖοεῖοεῖο ἡοῖοεῖο. Οἱ FreeBSD ἡοῖοεῖο ÷ ἡεῖ ἡοῖοεῖο firewall ἡοῖοεῖο ἡοῖοεῖο ἡοῖοεῖο. Ἀεῖ οἱ ἡεῖοεῖο, οἱ FreeBSD ἡοῖοεῖο ÷ ἡεῖ ἡοῖοεῖο firewalls:

- 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)

Οἱ **IPFW** ἡ **IPFW** (ἡ ἡοῖοεῖο ÷ ἡεῖοεῖοεῖο οἱ ἡοῖοεῖοεῖο οἱ **IPFW** ἡβῖε ἡ ipfw(8)) ἡβῖε οἱ firewall ἡοῖο ὕ ÷ ἡεῖ ἡοῖοεῖο ÷ ἡεῖ ἡεῖ οἱοῖοεῖοεῖο ἡοῖο οἱ ἡοῖοεῖο ἡοῖοεῖοεῖο οἱ FreeBSD. Οἱ **IPFW** ἡοῖοεῖο ἰα οἱοῖοεῖοεῖο ἡ οἱ dummynt(4) ἡεῖ ἰα ἡοῖοεῖο ÷ ἡεῖ ἡοῖοεῖοεῖοεῖο ἡεῖοεῖοεῖο οἱ οἱοῖοεῖοεῖο ἡεῖοεῖοεῖο ἡεῖ ἰα ἡοῖοεῖοεῖο ἡεῖοεῖοεῖοεῖο ὕοε οἱοῖοεῖοεῖο ἡεῖοεῖοεῖο.

ἡοῖοεῖοεῖο ἡοῖοεῖο οἱ **IPFW** ἡοῖο ἡοῖοεῖοεῖο ἡεῖοεῖο ÷ ἡοῖοεῖο ἡοῖοεῖοεῖο ἡοῖοεῖο οἱ οἱοῖοεῖοεῖο **SSH**:

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

Ὁ **IPFILTER** ἁβίῃ ἱεὶ ἀοάνῖῖῖῖ firewall τοῦ ἀιῖῖῖῖῖῖῖῖ ἁδῖ ὁῖ Darren Reed. Ἀῖ Ἰ ÷ ἁεὶ ὁδῖ ÷ ὁἁβ ἁεῖῖῖῖ ἁεὶ ὁῖ FreeBSD, ἁεὶ Ἰ ÷ ἁεὶ ἱῖῖῖῖῖῖῖ ἁεὶ ὁἁ Ἰ ῖῖῖ ἁεῖῖῖῖῖῖῖῖ, ὁῖῖῖῖῖῖῖῖῖῖ Ἰ ῖῖ ὁῖ NetBSD, OpenBSD, SunOS, HP/UX, ἁεὶ Solaris.

ῖῖῖῖῖῖῖῖ ἁῖῖῖ ἁῖῖῖῖ ἁεὶ ὁῖ **IPFILTER** τοῦ ἀδῖῖῖῖῖῖ ἁεῖῖῖ ÷ ἱῖῖῖῖ ἁῖῖῖ Ἰ ῖῖ ὁῖ ὁῖῖῖῖῖῖ **SSH**:

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

ῖ ὁῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖ firewall, ὁῖ **PF**, ἀιῖῖῖῖῖῖῖ ἁδῖ ὁῖ OpenBSD project. Ὁῖ **PF** ἁῖῖῖῖῖῖῖῖῖ ἁῖ ὁῖῖῖῖῖῖῖῖ ὁῖῖ **IPFILTER**, ἁεὶ Ἰ ὁῖ ῖ ὁῖῖῖῖῖ ὁῖῖ **PF** ἁβίῃ ἁῖῖῖῖῖ ῖῖ ἁῖῖῖ ὁῖῖ **IPFILTER**. Ὁῖ **PF** ἱῖῖῖῖ ἱ ὁῖῖῖῖῖῖῖ ἱ ὁῖ altq(4) ἁεὶ ἱ ῖῖῖ ÷ ἁεὶ ὁῖῖῖῖῖῖ ὁῖῖῖ **QoS**.

ῖῖῖῖῖῖῖῖ ἁῖῖῖῖ ὁῖῖ **PF** τοῦ ἀδῖῖῖῖῖῖ ἁεῖῖῖ ÷ ἱῖῖῖῖ ἁῖῖῖ Ἰ ῖῖ ὁῖ ὁῖῖῖῖῖῖ **SSH**:

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

## 7 Ἀῖῖῖῖῖῖῖῖῖ ὁῖ FreeBSD

Ὁῖῖῖ ÷ ἱῖῖ ὁῖῖῖ ἱ Ἰ ῖῖῖῖ ἁεὶ ὁῖ ἁῖῖῖῖῖῖῖ ἁῖῖ ὁῖῖῖῖῖῖῖῖ FreeBSD: Ἰ Ἰ ὁῖ ὁῖῖῖῖῖ ῖῖῖῖῖ, Ἰ Ἰ Ἰ ὁῖῖῖῖῖ (binary) ἁῖῖῖῖῖῖῖῖ, ἁεὶ Ἰ Ἰ ὁῖ **CD** ἁῖῖῖῖῖῖῖῖῖῖ.

ῖ ἁῖῖῖῖῖῖῖῖ Ἰ Ἰ ὁῖ ὁῖῖῖῖῖ ῖῖῖῖῖ ἁβίῃ ῖ ὁῖ ὁῖῖῖῖῖῖῖ, ἁεῖῖ ὁῖῖῖῖῖῖ ἁεὶ ὁῖ ἱῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖ. ῖ ἁῖῖῖῖῖῖῖ ἁῖῖῖ ὁῖῖῖῖῖῖῖῖ ὁῖ ὁῖ ÷ ἱῖῖῖῖ ὁῖ ὁῖῖῖῖῖ ἁῖῖῖῖῖῖῖ ὁῖ ὁῖῖῖῖῖ ῖῖῖῖῖῖ ὁῖ FreeBSD ἱ ὁῖ ῖῖῖῖῖ ὁῖ FreeBSD τοῦ ἁῖῖῖῖῖῖῖ ὁῖῖῖ ἁῖῖῖῖῖῖῖῖ **CVS** (Concurrent Versioning System). Ἀῖ ὁῖ ὁῖῖῖῖῖ ὁῖ ὁῖῖῖῖῖ ἁῖῖῖῖῖῖῖ ὁῖῖῖῖῖ ῖῖῖῖῖ ἁβίῃ ἁῖῖῖῖῖῖῖ, ἱῖῖῖῖῖῖ ἱ ἱῖῖῖῖῖῖῖῖῖῖ ἱ ἱῖῖ ἁῖῖῖῖῖῖῖ ὁῖ ὁῖῖῖῖῖ ἁεὶ ὁῖ ἁῖῖῖῖῖ ὁῖῖῖῖῖῖῖῖ. Ἀεὶ ὁῖῖῖῖῖῖῖῖ ὁῖῖῖῖῖῖῖῖ ὁῖ ÷ ἁῖῖῖῖ ἱ ὁῖ ὁῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖῖ ἱ ἱῖῖ ὁῖῖῖῖῖ ῖῖῖῖῖ, ἁῖῖῖ ὁῖ ῖῖῖῖῖῖ Ἀῖῖῖῖῖῖῖ ἁεὶ Ἀῖῖῖῖῖῖῖῖ (http://www.FreeBSD.org/doc/el\_GR.ISO8859-7/books/handbook/updating-upgrading.html) ὁῖ Ἀ ÷ ἁῖῖῖῖῖῖ ὁῖ FreeBSD.

Ἰ Ἰ ὁῖῖῖῖῖ (binary) ἁῖῖῖῖῖῖῖῖῖ, ἁβίῃ ῖῖῖῖῖῖῖ ἱ ὁῖ ÷ ἡΠός ὁῖ ἁῖῖῖῖῖ **yum** **P** **apt-get** ἁεὶ ὁῖ ἁῖῖῖῖῖῖῖῖ ἁῖῖ ὁῖῖῖῖῖῖῖ **Linux**. ῖ ἁῖῖῖῖῖ **freebsd-update(8)** ἁ ἁῖῖῖῖῖῖῖῖ ὁῖ ἁῖῖῖῖῖῖῖῖ ἁεὶ ἁ ὁῖ ἁῖῖῖῖῖῖῖῖῖ. ἱῖῖῖῖῖ ἱ ἁῖῖῖῖῖῖῖ ὁῖ ἁῖῖῖῖῖῖῖ, ἁῖῖ ὁῖῖῖῖ ἁῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖ ὁῖ ÷ ἁῖῖῖῖ ὁῖ **cron(8)**.

**Ὁῖῖῖῖῖῖῖῖ:** Ἀῖ ὁῖῖῖῖῖῖῖ ἱ ÷ ἡῖῖῖῖῖῖῖῖῖῖ ὁῖ **cron(8)** ἁεὶ ὁῖῖῖῖῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖῖῖ, ἁῖῖῖῖῖῖῖῖῖῖ ὁῖ ÷ ἡῖῖῖῖῖῖῖῖῖῖ ὁῖ ἁῖῖῖῖῖ **freebsd-update** **cron** ὁῖ ἁῖ ÷ ἁῖῖ **crontab(1)** ἁεὶ ἱ ἁῖ ÷ ὁῖῖῖῖῖῖῖῖ ῖ ὁῖῖῖῖῖῖῖ ἱ ἁῖῖῖῖῖ ἁῖῖῖῖῖῖ ὁῖ **Βῖῖῖ** ὁῖῖῖῖ **P** ἁῖῖ Ἰ ἱῖῖ ἁῖῖῖ ἁῖῖῖῖ ἱ ῖ ÷ ἁῖῖῖῖῖῖῖ.

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

ῖ ὁῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖ ἁῖῖῖῖῖῖῖῖ, Ἰ Ἰ ὁῖ **CD** ἁῖῖῖῖῖῖῖῖῖ, ἁβίῃ ἁῖῖῖῖῖ ἱῖῖῖῖῖ. Ἀῖῖῖ ἁῖῖῖῖῖῖῖ ἁῖ ὁῖ **CD** ἁῖῖῖῖῖῖῖῖ ἁεὶ ἁῖῖῖῖῖῖ ὁῖ ἁῖῖῖῖῖῖ ÷ ῖ ἁῖῖῖῖῖ ἁῖῖῖῖῖῖῖῖ (upgrade).

## 8 **procfs**: ῖῖῖῖῖῖῖ ἁῖῖῖ ὁ ÷ ἱ ῖῖῖῖῖῖ

Ὁῖ **Linux**, ἁ ÷ ἡῖῖῖῖῖῖ ἱ ἁῖῖῖ ὁῖ **/proc/sys/net/ipv4/ip\_forward** ἁεὶ ἱ ἁῖῖῖῖῖῖῖ ἁῖ ἁβίῃ ἁῖῖῖῖῖῖῖῖῖ ῖ ὁῖῖῖῖῖῖ **IP** (IP forwarding). Ὁῖ **FreeBSD** ἁ ὁῖῖῖῖ ἱ ÷ ἡῖῖῖῖῖῖῖῖ ὁῖ **sysctl(8)** ἁεὶ ἱ ἁῖῖῖῖ

ἄοδP εἰς Ὑεῶδ πῶειBοἰᾶόδ οἷο ὁδῶδPἰᾶόδ, εἰεῖδ οἱ procfs(5) εἰᾶᾱᾱBοἰᾶ ὁᾶᾱ÷çἰYῖ ὁᾶ ὁᾶᾱᾱᾶᾶ ἡεᾶᾱᾶᾶ ὁῖῶ  
εἰεῖδῖᾱᾶεῖ. (Ἄς εἰς ç ἰῖῖῖP<sub>sysctl</sub> ἡBῖᾶ ἡδBῶç ἡεᾶYῶεῖ εἰς ὁῖ Linux).

Όχι δ'ἀνὴρ ἄεσται οὐδὲ δῆμιπες οὐδὲ IP, ἐὰ ÷ ἡς οὐκ εἰδὶ ἐρύοιαι οὐγί ἀεὺ ἐϊοῦθες αἰοῖτ' ἅέα ἱά ἐαεῖν βόιοιαι αἱ γ' αἰοῖα οὐδὲ οἱ ἀοῶν  
ἀβίαέ αἰάναν διέγι' Ὑίς οἶα Ὑία FreeBSD ούόοχιά:

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

Ç åđéeĩãP -a ÷ñçóéiĩđĩéãßôáé ãéá íá đŨñĩõĩã iéá ěßóóá iã üëãò ôéò ñõèĩßóãéò 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: ÊÛðíεάò áðü öéo öéíÝò ðĩö äãß÷íáé ç áíöîÊß<sub>sysctl</sub> áßíáé ìüíí äéá áíÛäíüóç.

Ὁ Ὀὔν ÷ τοῖ ἀναεῖδορῶεδ υἱθὼ ἀδαεὶδορῶεδ οἱ procfs, υἱθὼ ἀεὶ ἀνῶαεαῖα υἱοῖ ἀεὶδορῶα δαεεῦοῖανι εἰαεοῖεε, οἱ ἱθῖβι εὔῖαε ÷ πῶρς ὅρδ ἀῖοῖεδο truss(1) ἀεὶ ὅρῖ ἀβ ÷ ἱαῖορς οἱ εἶδορῶα ὁῶοδ Πιαῖοῖο, εἰε ἀεὶ ὅρῖ Ὀῖαἰαῖοῦῶοδ ἱα Ἀεὶδορῶεῖα οἱῶ 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)). (Ἀῖ εἰε ς Ὀῖαἰαῖοῦῶοδ ἱα Ἀεὶδορῶεῖα οἱῶ Linux ÷ ἡςοεῖῖθῖεἰἰβ οἱ ἀεεῦ ὅρδ procfs, οἱ linprocfs(5)). Ἀῖ ÷ ἡεῖῶαῖαε ἱα ὁῖοἰαῖοδρῶα οἱ procfs, ἱθῖἡβῶα ἱα ὁῖοεῖῶαδ ὅρῖ ἀεεῖοες ἱαἱἡἡαδρ ὁοῖ ἡñ ÷ ἂβι /etc/fstab:

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

**Ὁγιαβυός:** Ὁ ἀδελφεῖς *noauto* ἐὰ ἀιδιᾶβόαε ὁγι ἀδὸυιδόος δῆτοῦ ἡνὸς ὁτῷ /*proc* ἐὰδὺ ὁγι ἀέελβίος ὁτῷ ὁδὸδ Πιᾶδὸτ.

ĐñĩóãñôPóôâ éáôũđéĩ ôçĩ procfs ÷ñçóëĩđĩépiôáò ôçĩ áéũëĩõèç áĩôĩëP:

```
# mount /proc
```



## 9 ÓôίϗέέôìÝíâò ÁíôïëÝò

### 9.1 Äéá÷âβñέόϗ ÐáëÝòùí

| ÁíôïëP ôïò Linux<br>(Red Hat/Debian)                           | Áíôβóôïë÷ç áíôïëP FreeBSD       | Óëïðüò  |
|--|---------------------------------|---|
| <code>yum install package / apt-get<br/>install package</code> | <code>pkg_add -r package</code> | ÄãéáôÜóóáόϗ ÐáëÝòïò áðü<br>áðñáéñòóìÝíñ áïòðçñáòçòP |
| <code>rpm -ivh package / dpkg -i<br/>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<br>ðòñPíá  |
| <code>modprobe</code> | <code>kldload / kldunload</code> | Öññòòóϗ/Áðñüññòòóϗ áñëññüíÜòùí<br>ðòñPíá |
| <code>strace</code>   | <code>truss</code>               | Áíβ÷íáòóϗ êëPóáñüí óóóôPíáôïò            |

## 10 ÓôìðãñÜóíáóá

Äóäéðéóôíýíä üòé áòòü ôí êáβíáñí óáò ðáññáβ÷á áñëáòÝò ðëçññíñβáò ãéá íá íäééíPóáôâ íá ôí FreeBSD. Äéá ðáñéóóüðáñâò éáé ðëí êáðòññáñâò ðëçññíñβáò, ðáñáéáéýíä íá äéááÜóáôâ ôí 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)) ôí ïðññí áðβόçò ðáñéÝ÷áé éáé ðñëëÜ èÝíáóá ðñò äáí éáéýòðçéáí éáéüéïò óôí ðáññüí êáβíáñí.