

1 ÅéóáãùãÐ

Οι εαβιάνι αδοῦ οἱβææέ οεὸ ἀεάοἱνÝð ἰαὸαίγ οἱῶ FreeBSD ἐάέ οἱῶ Linux þόαἰ ἰÝοἰέ Þ ðñἱ÷ἰñçἱÝñἱé ÷ñÞóðαὸ οἱῶ Linux ἰά ἰðñἱἱý ἁñÞἱñἱἰ ἰά ðñἱῶἁñἱἰοἰἱý ὀοἰὲ ἁαὸέÝð Ýñἱἱεάὸ οἱῶ FreeBSD. Ðñἱêæάοάέ æάἰ ἰεά ὀἱ÷ἰéÞ Þεὸάἁἁἰἰ ὀἱῶ FreeBSD, ἐάέ ἁἱ ἐὰ ἰἰάὸἁñἱἱἰἰἰ ὀἱ ὀð÷ἱἰ “ὀεἰ῱῱῱éÝð” ἀεάοἱνÝð ἰαὸαίγ οἱἱ ἰἱἰ ὀἰἰἰἰἰἰἰ.

Òì èàííàíí áðòù òðìèÝóðáè uðè Ý÷àðà Þäç ääèáðáóðÞóáè òì FreeBSD. Áí ääí Ý÷àðà ääèáðáóðÞóáè òì FreeBSD Þ ÷ñäèÝäèáððá àìÞèäèá íà ðçí äèäèäèáðá ääèáðáóððá òìð, ðñäèäèäèäèá íá äèäèáðáðá òì èàðÝèäèí Áäèäèäèðáðá òì FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/install.html) óòì Áä÷äèñäèí òìð FreeBSD.

2 Êâëýöç: Ääí õõŮñ÷âé Bash;

14οῖς Ἰν-ῖφάας ἀδῦ οἱ Linux ὁ-ῖ ῤῥ ἁδῆῖῖῖῖῖῖῖῖ ὑφάρ ἀφάεῖῖῖῖῖῖῖ ὑφῶ οἱ **Bash** ἁάρ ἁῖῖῖῖ οἱ ὄῖῖῖῖῖῖῖῖῖῖῖῖ ῖῖῖῖῖῖ ὁῖ FreeBSD. Ὀῖῖ ὄῖῖῖῖῖῖῖῖῖῖῖῖῖ, οἱ **Bash** ἁάρ ὁῖῖῖῖ-ῖῖ ἑάρ ὁῖῖ ἁῖῖῖῖ ἁῖῖῖῖ ὁῖῖ FreeBSD. Ἀῖῖῖῖῖῖ, οἱ FreeBSD ῖ-ῖῖῖῖῖῖῖῖῖ ὁῖ tcsh(1) ὑῖ οἱ ὄῖῖῖῖῖῖῖῖῖῖῖῖ ῖῖῖῖῖῖῖ. Ὀἱ **Bash** ἑῖῖῖ ἑῖῖ ὘ῖῖῖ ἑῖῖῖῖ ὁῖῖ ὁῖῖῖ ῖῖῖῖῖῖ ῖῖ ἁῖῖῖῖῖῖ ῖῖ ἁῖῖῖῖῖῖῖῖῖῖῖ, ἁῖῖῖῖ ἁῖῖῖῖῖῖῖ ὁῖῖ Ὀῖῖῖῖῖῖ Ὀῖῖῖῖῖῖ ἑῖῖ Ports (article.html#SOFTWARE) ὁῖῖ FreeBSD.

Αἱ ἀεῖς ἀοοὶ ποῶσθαι ἀεὶ οἰκονομῶντες, ἰδιῶσθαι ἴα ÷ ἡγοῦντες ἰδιῶσθαι ὅςτις αἰδῶνται chsh(1) ἀεὶ ἴα ἀεὶ Ὑμῶν οἱ
 ὀνῶσθαι αἱ Ὑμῶν ἐϋεσθῶντες ἐϋεσθῶντες ÷ ἡγοῦντες. Ὅσοι οἰκονομῶντες ἴα ὁποῶσθαι οἱ ἐϋεσθῶντες οἱ root οἱ ὀνῶσθαι αἱ Ὑμῶν.
 Ἰ ἐϋαῖν ἀεὶ ἀοοὶ ἀβῖα ἐϋεσθῶντες ὁ ἀεὶ οἰκονομῶντες ὁ ἀεὶ ἀοοῦν ἀεὶ αἱ Free BSD, ἀεὶ ἀοοῦν ἀοοῦν ὅςτις
 οἱ οἰκονομῶντες /usr/local/bin P /usr/bin. Ὅσοι ὀνῶσθαι ὀνῶσθαι, ἀβῖα ἐϋεσθῶντες ὁ ἀοοῦν ἀοοῦν ἀν ÷ ἀβῖα ὁ οἱ
 ἀν ὀνῶσθαι ὁ ἀοοῦν /usr/local/bin ἀεὶ /usr/bin ἴα ἴα ἰδιῶντες ἴα ὀνῶσθαι ὀνῶσθαι. Ὅσοι ὀνῶσθαι ὁ ἀοοῦν, ἰ root ἀν ἐὰ
 ἀν ÷ ἀ ὀνῶσθαι ὁ οἱ ὀνῶσθαι αἱ Ὑμῶν οἱ ἐϋεσθῶντες, ἀν ὀνῶσθαι ὁ ἀοοῦν ὁ ἀοοῦν ὁ ἀοοῦν. Ἀεὶ οἱ ἐϋαῖν ἀοοὶ.
 ὁ ὀνῶσθαι ÷ ἀ Ὑμῶν ἀοοῦν ἀοοῦν ἀοοῦν ὁ οἱ root, ἰ toor, ἰ ἰδιῶντες ἀοοῦν ἀοοῦν ἀοοῦν ἀεὶ ἴα
 ÷ ἡγοῦντες ὀνῶσθαι ἴα ἐϋεσθῶντες Ὑμῶν ἐϋεσθῶντες. Ἀβῖα ὁ ὁ ὁ ÷ Ὑμῶν Ἀν ὁποῶσθαι Ἀοοῦν ἀοοῦν ὁ ÷ ἀοοῦν ἴα οἱ ἀοοῦν
 toor (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/faq/security.html#TOOR-ACCOUNT).

3 ĐáêÝòá êáé Ports: ĐñĩòéÝôĩĩòáò ĩĩăéóĩéêũ óôĩ FreeBSD

[illegible]

3.1 ĐấêÝôá

Όά θαέΥόά αβίαέ θñĩ-ĩαóáæüòóéóĩΥĩáo áóáñĩãΥò, éá ëΥãäĩä öĩ áíóβóóĩé÷ĩ áéá öĩ FreeBSD öùĩ äñ÷ãβüĩ .deb óá öóóóΠĩáoá Debian/Ubuntu éáé öùĩ äñ÷ãβüĩ .rpm óá óóóóΠĩáoá Red Hat/Fedora. Όά θαέΥόά äãæãéβóóáíóáé ÷ñçóéüĩóĩéΠĩáoó öçĩ áíóĩéΠ pkg_add(1). Άéá θánŨäæäĩä, ç äëüëĩöèç áíóĩéΠ äãæäééóóŨ öĩĩ **Apache 2.2**:

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

C ÷ ñPóç õçð ðáñáíÝõñïõ -r íαçääB ôçí pkg_add(1) íá éάόääÜôáé áðõüiaóa òüöí ôí ðáéÝðí, üöí éáé óέò áíáñðPóáέò ðïõ. éáé íá öí ääéáóáóðPóáé:

```
# 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.

Όχι!Βυθός: Αί ÷ η̇ςοείι̇ι̇τι̇ε̇α̇β̇α̇ ι̇ε̇ά "α̇δ̇β̇ό̇ς̇ι̇ς̇" Ύ̇ε̇α̇ί̇ό̇ς̇ ο̇ι̇ο̇ FreeΒD (6.2, 6.3, 7.0, ε̇ε̇δ̇. δ̇ι̇ο̇ α̇α̇ί̇ε̇ε̇Ṿ̇ ι̇δ̇ι̇η̇α̇β̇α̇ ι̇ά α̇α̇ε̇α̇δ̇α̇ο̇δ̇ρ̇α̇δ̇α̇ α̇δ̇Ṿ̇ CD-ROM) ς̇ α̇ί̇ο̇ι̇ε̇Ṿ̇ pkg_add -r ε̇ά ε̇α̇δ̇α̇α̇Ṿ̇ο̇ά̇ ο̇ά δ̇α̇ε̇Υ̇ο̇ά δ̇ι̇ο̇ ο̇δ̇ε̇Ṿ̇÷ο̇ς̇ε̇ά̇ α̇ε̇ά α̇δ̇ο̇Ṿ̇ ο̇ς̇ ο̇δ̇α̇ε̇α̇η̇ε̇ι̇Υ̇ί̇ς̇ Ύ̇ε̇α̇ί̇ό̇ς̇. Ο̇ά δ̇α̇ε̇Υ̇ο̇ά α̇δ̇ο̇Ṿ̇ *Β̇ο̇Ṿ̇δ̇ α̇α̇ί̇ δ̇α̇η̇ε̇Υ̇÷̇ι̇ο̇ι̇* ο̇ε̇δ̇ δ̇ε̇Υ̇ί̇ι̇ ο̇δ̇α̇ε̇α̇δ̇ο̇ά̇β̇α̇δ̇ α̇ε̇α̇Ṿ̇ο̇ά̇ε̇ο̇ ο̇Ṿ̇ι̇ α̇δ̇α̇η̇ι̇Ṿ̇α̇Ṿ̇. ι̇δ̇ι̇η̇α̇β̇α̇ ι̇ά ÷̇ η̇ς̇ο̇εί̇ι̇̇ι̇̇τι̇ε̇̇α̇β̇α̇ ο̇ς̇ι̇ ι̇α̇δ̇α̇α̇ε̇ς̇ο̇Ṿ̇ δ̇α̇η̇ε̇α̇Ṿ̇ε̇ε̇ί̇ο̇ι̇δ̇ο̇ **PACKAGESITE** α̇ε̇ά ι̇ά δ̇α̇η̇α̇ε̇Ṿ̇ι̇ο̇ά̇α̇ α̇δ̇ο̇Ṿ̇ ο̇ς̇ι̇ δ̇η̇ι̇α̇δ̇ε̇ε̇α̇ι̇Υ̇ί̇ς̇ ο̇δ̇ι̇δ̇α̇η̇ε̇ο̇ί̇Ṿ̇. Α̇ε̇ά δ̇α̇η̇Ṿ̇α̇α̇ε̇α̇ι̇α̇, ε̇Υ̇ο̇ι̇ο̇ά̇ ο̇ς̇ι̇ **PACKAGESITE** ο̇ό̇ς̇ι̇ ο̇έ̇ι̇Ṿ̇ <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ε̇ά ε̇α̇δ̇α̇α̇Ṿ̇ο̇ά̇ ο̇ά δ̇ε̇ί̇ δ̇η̇Ṿ̇ο̇ά̇α̇ δ̇α̇ε̇Υ̇ο̇ά δ̇ι̇ο̇ ο̇δ̇Ṿ̇η̇÷̇ι̇ο̇ι̇ α̇ε̇ά ο̇ς̇ ο̇ά̇ε̇η̇Ṿ̇ 6.X.

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

Άέά δάνεόουόαηάο δέçññοιηβáο ò÷âôééÛ ιà ôá δαéÝôá, δάηάεαεγγία áεάáÛóôâ ôçí áíuôçóá 4.4 ôôι Άά÷άεηβáει ôιò
 FreeBSD: ×ñçóéιιðñépíóáò ôι 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 ëþäëä öíöð. ¼öäí ääëäëëöðÜðä Ýíä port, öí öýööçíä ëä ëäöäüÜðäë öíí äçääáíäí ëþäëä, ëä äöäñíüöäë üëäð öëð äðäëöíýíäíäð äëëääÝð ÷ñçöíöíäíëíäíäð öä patches, ëä íäöääëüðöðäë öíí ëþäëä, ëäë öÝëíð ëä ääëäöäöðöäë öçí äöäñíäíäí. Èä äëëëíðëöäë öçí ääëä äëääëäöäíä ëäë äëä íðíëääþíöðä öð÷üí äíäñöþíäíä äñíäñÜíäöä.

[illegible]

Ç ääëäôÜóôäóç áñüò port äßíäë ääíëëÜ öüóí äðëP uóí ôí íá áéóÝëëäôä öóñí ëäôÜëíäí öíô ëäë íá íäëëíPóäôä öçí äëäëëëäôßá 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 ðánÜáäeäíá, úóáí áäeäeéóóÜðá òíí **Apache 2.2** áðü óá ports íðñíáßòá íá íáñáñüðíeÞóáòá óçí
 áðeéäíá **mod ldap** èÝóñíóáo áðeðð òeíÞ óçç íàðáäeçðÞ **WITH_LDAP** òíð **make(1)**:

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

ἈέάάṪṵṵṵ ὁῖ ἁίṵṵṵṵṵ 4.5 ὁṵ Ἀṵṵṵṵṵṵṵṵ ὁṵ FreeBSD, ×ṵṵṵṵṵṵṵṵṵṵṵ ὁῖ Ports Collection (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html), ἁṵ ḁṵṵṵṵṵṵṵṵṵ ḁṵṵṵṵṵṵṵṵṵ ὁṵ Ṫṵṵṵṵṵṵṵṵṵ ṵṵ ὁῖ Ṫṵṵṵṵṵṵṵṵṵ ὁṵ Ports.

3.3 Ports Þ ðáéÝôá, ôé ðñÝðáé íá ÷ñçóéìðïéÞòù;

[illegible]

ĐáêÝôá (Ýôïéìá àêôăěÝóéìá)

- [illegible]

Ports (őçääßïò êpäéêáo)

- [illegible]

[illegible]

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

Οι Linux ÷ ηςοείηδιέαβ οι όγούοία âêêβίςοçð SysV, âηρ οι FreeBSD ÷ ηςοείηδιέαβ οι θανάαίόεαêü όγούοία âêêβίςοçð BSD. Όοι όγούοία init(8) όγθῶ BSD, ââί όðŨñ÷ῶί run-levels, ῑγθα όί âñ÷âβί /etc/inittab. Αίόβ âέα áðŬ, ç âêêβίςοç âêŸâ÷âðáε áðü ῑía script âêêβίςοçð, όι rc(8). To script /etc/rc âέαâŸæáε όί âñ÷âβί /etc/defaults/rc.conf êáε όί âñ÷âβί /etc/rc.conf âέα ίá êáèñβóáε ðíεað όðçηάόβað ðñüêáέðáε ίá ίâέέίβóίóί. Íε όðçηάόβað áðŸŸό ίâέέίŸía ίâ όçί âέðŸέáoç ðüί áίόβóίε÷÷üί script âêêβίςοçð ðῖó âñβóèῖῖóáε óóῖðð êáðáëüῖῖðð /etc/rc.d/ êáε /usr/local/etc/rc.d/. Óá scripts áðŸ âβίáέ ðáñüῖῖέα ίâ óá scripts ðῖó âñβóèῖῖóáε óóῖῖ êáðŸèῖῖ /etc/init.d/ óá óðóðβíaðá Linux.

Ἀέας ὁδὺν ÷ ῥῶι αὖρ ὀιδιῶδῶδῶδ ἁέα ὁά scripts ἀεβῆς ὁδὺν ὀδῆς ἁέας; Ὅα scripts ὅθῳ ἁνθῶδῆς ὁά ὁθῶι ἁέας ὕεραι /etc/rc.d/ ἁβῆς ἁέα ἁῶανῆς ὕδ ὅθ ἁβῆς ὁθῶι ὁθῶι “ἁῶῶῶ” ὁῶῶῶ. (ἁέα ὁθῶι ἁῶῶῶ, ὁδῶ cron(8), sshd(8), syslog(3), ἁέα ὕεραι.) Ὅα scripts ὅθῳ ἁνθῶδῆς ὁά ὁθῶι ἁέας ὕεραι /usr/local/etc/rc.d/ ἁβῆς ἁέα ἁῶανῆς ὕδ ὅθ ὕ ÷ ῥῶι ἁῶῶῶῶῶῶ ἁδὺ ὁθῶ ÷ ἁβῶῶῶ, ὕδῶ ἁέα ὁθῶι ἁῶῶῶῶ ἱ **Apache**, ὁι **Squid**, ἔ.ἔ.ἔ.

[illegible][illegible]

Όι άέυεϊρεϊ άδύοδάοιά άδύ όϊ άñ÷άβϊ /etc/rc.conf αϊάñäðïέάβ όçï òðçñάόβά sshd(8) έάέ όϊϊ **Apache 2.2**. Άðβόçò έάέñβæάέ ύòέ ι **Apache** έά ιάέέϊρóaέ ιά αϊάñäðïέçï Ýïç όç äöïáöüòçóá SSL.

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

Ἄδῡ ὁϙ ὀόεἰἵP ḑiō iéá ὀḑᑕñáḑá áíáñāīḑiēéçēḑḑ ὀḑi ḑñ÷ḑḑi /etc/rc.conf, ḑiññḑḑḑ íá ὁϙi íḑééiPḑḑḑḑ ḑḑḑḑḑḑḑ
 ḑḑḑ ὁϙ ḑñḑḑḑP ḑiḑiēḑi (÷ḑñḑḑ íá ÷ñḑḑUḑḑḑḑ íá ḑḑḑḑḑḑḑḑPḑḑḑḑ ḑi ὀýḑḑḑḑḑ ḑḑḑ):

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

Ἀν ἰεᾶ ὀδῆαὸβᾶ ἄᾱ Ὠ ÷ ἄε ἰᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ ὀδῖ ἄᾶ ÷ ἄβῖ ἄὀὀὀ, ἰᾶᾶᾶᾶᾶ ἰᾶ ἰᾶᾶᾶᾶᾶᾶᾶᾶ ὀῆ ἰᾶᾶᾶᾶᾶ ὀᾶ ἰᾶᾶᾶ ὀῆ ἰᾶᾶᾶᾶᾶᾶᾶᾶ
 ἰᾶᾶᾶᾶᾶ ἰᾶ ὀῆ ἰᾶᾶᾶᾶᾶ forcestart:

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

5 Ñýèìéóç Äéeôýĩõ

5.1 ÄéåđáöÝò Äéeôýĩõ

Άϊός άέά ôï άαίέêù áíááññέóóéêù ôýðïð *ethX* ðïð ÷ñçóéïíðíεάß ôï Linux áέá ôçí áíááññέόç íεάð áέáðáðð áέέðýïð, ôï FreeBSD ÷ñçóéïíðíεάß ùð áíááññέóóéêù ôï ùññά ôïð ðññāñññáðïð ïāßαçóçð áεíεíεíýññ áðù Ýíá áñέέïù. Ç áέúεíεç Ýññäð áðù ôçí áíôïðß ifconfig(8) äāß÷íáε äýí Ëññäðð áέέðýïð Intel® Pro 1000 (ñā áíááññέóóéêëÛ 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 ÑõèìΒóάέò Áέάðèýíóåùí IP

Ìðññãßòå íá áíáèÝóåòå íέά äέáyèðíóϗ IP óå íέά äέåðåöP äέέðýíò íå ôϗ ÷ñPóϗ ôϗò áíôíèPð ifconfig(8). Áέά íá ãßíáέ ìüíèϗ üòðüòí áððP ϗ äέέåãP, έάέ íá íϗí ÷Üíåðåé óå èÜèå áðåíåêèβίϗóϗ, έå ðñÝðåé íá ôϗí ðåñέèÜååðå óòí åñ÷åß /etc/rc.conf. Óòí åèüèòèí ðåñÜåååíåé óåßíåðåé ϗ έåðå÷ñóϗ ðíò ðåñέéåíåÜíåé òí üññå òíò ððíèñåóòð (hostname), ôϗí äέáyèðíóϗ IP, έåèðð έάέ ôϗí ðññåðέéåñíÝíϗ ðýèϗ (defaultrouter):

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

×ñϗóèíðíèPóòå ôϗí åèüèòèèϗ έåðå÷ñóϗ äέά íá έåèññßóåòå üòé íέά äέåðåöP έå έåíåÜíåé ñõèìΒóάέò íÝóò DHCP:

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

6 Firewall

Óòí Linux ÷ñϗóèíðíèñåßóåé òí **IPTABLES** òí ïðíñí ðåñÝ÷åé ððϗñåóßåð firewall óå åðßðåññ ððñPíå. Óí FreeBSD ðåñÝ÷åé åðßóϗð firewall íÝóòò òíò ððñPíå. Áέά ôϗí åèññååé, òí FreeBSD ðåñÝ÷åé òñßå 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)

Óí **IPFIREWALL** P **IPFW** (ϗ áíôíèP ÷åññέóíñý òñí έåíüñí òíò **IPFW** åßíåé ϗ ipfw(8)) åßíåé òí firewall ðíò Ý÷åé áíåðð÷÷έåß έåé óòíôϗñåßóåé åðñí ôϗí ñÜåå áíÜðððíϗð òíò FreeBSD. Óí **IPFW** ïðññåß íá óòíñåóåòåß íå òí dummynet(4) äέά íá ðåñÝ÷åé äòíåðüòϗðåð äέåññññòòòðð ôϗò èβίϗóϗð ðåéÝòñí (traffic shaping) έåé íá åñññέPíåé äέåñññåðέéñýð ðýðíðð óòíåÝóåñí äέέðýíò.

ðåñÜåååíåé áñüð έåññíåé òíò **IPFW** ðíò åðέòñÝðåé áέóåñ÷÷ññíåé ååñññÝíåé ðññò ôϗí ððϗñåóßå **SSH**:

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

Ὁ **IPFILTER** ἁβίᾳ ἱεὶ ἀοάνῖα firewall τοῦ ἀιάδὸγὸόαόε ἀδὺ οἱ Darren Reed. Ἀἱ ὅε ὁεᾶ÷ὁᾶβ ἁεᾶεῦ ἁεὶ οἱ FreeBSD, ἁεὶ ὅε ἱαόαὸᾶᾶᾶ ἁεὶ ὁᾶ Ὑεᾶ ἁεὶοῖᾶᾶεῦ, ὁδῖᾶᾶᾶᾶᾶᾶᾶ Ὑῖ οἱ NetBSD, OpenBSD, SunOS, HP/UX, ἁεὶ Solaris.

ᾶᾶᾶᾶᾶ ἁῖο ἁῖῖᾶ ἁεὶ οἱ **IPFILTER** τοῦ ἀδεὸν Ὑᾶ ἁεὶ ἁᾶᾶ Ὑῖ τοῦ ὁεὶ ὁεᾶᾶᾶ **SSH**:

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

Ἐ ὁεᾶᾶᾶᾶ ἁοάνῖα firewall, οἱ **PF**, ἀιάδὸγὸόαόε ἀδὺ οἱ OpenBSD project. Ὁ **PF** ἁεὶοῖᾶᾶᾶ ἁεὶ ἀίεᾶᾶᾶᾶᾶᾶ ὁεὶ **IPFILTER**, ἁεὶ Ὑᾶ ὅε ὅγῖᾶᾶ ὁεὶ **PF** ἁβίᾳ ἁᾶᾶᾶ ᾶᾶᾶᾶ ἱ ἁᾶᾶ ὁεὶ **IPFILTER**. Ὁ **PF** ἱᾶᾶᾶ ἱ ὁῖᾶᾶᾶᾶ ἱ οἱ altq(4) ἁεὶ ἱ ᾶᾶᾶ÷ἁεὶ ὁεᾶᾶᾶᾶ ὅγῖᾶ QoS.

ᾶᾶᾶᾶᾶ ἁῖο οἱ **PF** τοῦ ἀδεὸν Ὑᾶ ἁεὶ ἁᾶᾶ Ὑῖ τοῦ ὁεὶ ὁεᾶᾶᾶ **SSH**:

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

7 Ἀἱᾶᾶᾶᾶᾶ οἱ FreeBSD

Ὁδῖᾶ÷ῖοἱ ὁᾶᾶ ἱ Ὑεᾶᾶ ἁεὶ ὁεὶ ἀἱᾶᾶᾶᾶᾶ ἁῖο ὁᾶᾶᾶᾶᾶᾶ FreeBSD: ἸὙᾶ ὁεὶ ὁεᾶᾶᾶ ἁᾶᾶᾶ, ἱὙᾶ Ὑᾶᾶᾶ (binary) ἀἱᾶᾶᾶᾶᾶ, ἁεὶ ἱὙᾶ οἱ CD ἁᾶᾶᾶᾶᾶᾶᾶ.

Ἐ ἁᾶᾶᾶᾶᾶᾶ ἱὙᾶ ὁεὶ ὁεᾶᾶᾶ ἁᾶᾶ ὅε ὁεᾶᾶᾶᾶ, ἁεῦ ὁᾶᾶᾶᾶ ἁεὶ ὅε ἱᾶᾶᾶᾶᾶ ᾶᾶᾶᾶᾶ. Ἐ ἁᾶᾶᾶᾶᾶ ᾶᾶᾶ ᾶᾶᾶᾶᾶᾶ ὁεὶ ὁᾶ÷ᾶᾶᾶ ὁεὶ ὁᾶᾶᾶ ᾶᾶᾶᾶᾶᾶ ὁεὶ ὁεᾶᾶᾶ ὁεᾶᾶᾶ ὁεᾶᾶᾶᾶᾶ ὁεᾶᾶᾶ ὁεᾶᾶᾶᾶᾶ ὁεᾶᾶᾶ ὁεᾶᾶᾶᾶᾶ ὁεᾶᾶᾶᾶᾶᾶ **CVS** (Concurrent Versioning System). Ἀδὺ ὅε ὁᾶᾶᾶ ὁεὶ ὁᾶᾶᾶ ᾶᾶᾶᾶᾶᾶ ὁεᾶᾶᾶ ἁᾶᾶ ἀἱᾶᾶᾶᾶᾶ, ἱᾶᾶᾶᾶ ἱ ἱᾶᾶᾶᾶᾶᾶᾶ ἱᾶᾶ ἁᾶᾶᾶᾶ ὁεὶ ὁᾶᾶᾶ ἁεὶ οἱ ᾶᾶᾶᾶᾶ ὁᾶᾶᾶᾶᾶᾶ. Ἀᾶ ᾶᾶᾶᾶᾶᾶ ὁεᾶᾶᾶᾶᾶ ὁ÷ᾶᾶᾶ ἱ ὁεὶ ὅγᾶᾶᾶ ἀἱᾶᾶᾶᾶᾶ ἱὙᾶ ὁεᾶᾶᾶ ἁᾶᾶᾶ, ἁᾶᾶ ὁεὶ ἁᾶᾶᾶᾶ Ἀῖᾶᾶᾶᾶ ἁᾶᾶ Ἀἱᾶᾶᾶᾶᾶ (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html) ὁᾶ Ἀ÷ᾶᾶᾶᾶᾶ ὁεὶ FreeBSD.

Ἰε Ὑᾶᾶᾶ (binary) ἀἱᾶᾶᾶᾶᾶ, ἁᾶᾶ ᾶᾶᾶᾶᾶ ἱ ὅε ÷ᾶᾶ ὅε ᾶᾶᾶᾶ yum P apt-get ἁεὶ ὁεὶ ἀἱᾶᾶᾶᾶᾶ ἁῖο ὁᾶᾶᾶᾶᾶᾶ Linux. Ἐ ᾶᾶᾶᾶᾶᾶᾶ(8) ἁ ἁᾶᾶᾶᾶᾶ ὁεὶ ἀἱᾶᾶᾶᾶᾶ ἁεὶ ἁ ὁεὶ ἁᾶᾶᾶᾶᾶᾶ. Ἰᾶᾶᾶᾶ ἱ ἁᾶᾶᾶᾶᾶ ὁεὶ ᾶᾶᾶᾶᾶ, ᾶᾶ ὁᾶᾶᾶ ἁᾶᾶᾶᾶᾶ ᾶᾶᾶᾶᾶ ὅε Ὑᾶᾶ ὅε, ἱ ὅε ÷ᾶᾶ ὁεὶ cron(8).

Ὁεᾶᾶᾶ: Ἀἱ ὁᾶᾶᾶᾶ ἱ ÷ᾶᾶᾶᾶᾶᾶ ὁεὶ cron(8) ἁεὶ ὁᾶᾶᾶᾶᾶᾶᾶᾶ ἱᾶᾶ ἀἱᾶᾶᾶᾶᾶᾶ, ἁᾶᾶᾶᾶᾶᾶ ὁε ÷ᾶᾶᾶᾶᾶᾶ ὁεὶ ᾶᾶᾶᾶᾶᾶᾶ cron ὁᾶ ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ(1) ἁεὶ ἱ ἁᾶ÷ᾶᾶᾶᾶᾶᾶ ὅεᾶᾶᾶᾶᾶ ἱ ᾶᾶᾶᾶ ἁἱᾶᾶᾶ ὁεὶ ᾶᾶ ὁᾶᾶᾶ ᾶᾶᾶ ὁεᾶᾶᾶ ᾶᾶ Ὑῖ ἱᾶᾶᾶ ᾶᾶᾶᾶ ὁε÷ᾶᾶᾶᾶᾶᾶ.

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

Ἐ ὁᾶᾶᾶᾶᾶ ᾶᾶᾶᾶᾶ ἀἱᾶᾶᾶᾶᾶ, ἱὙᾶ οἱ CD ἁᾶᾶᾶᾶᾶᾶ, ἁᾶᾶ ᾶᾶᾶᾶ ἱᾶᾶᾶᾶ. Ἀᾶᾶ ἁᾶᾶᾶᾶ ᾶᾶ ὁεὶ CD ἁᾶᾶᾶᾶᾶᾶ ἁεὶ ᾶᾶᾶᾶᾶ ὁεὶ ᾶᾶᾶᾶᾶ÷ᾶ ᾶᾶᾶᾶᾶ ἀἱᾶᾶᾶᾶᾶ (upgrade).

8 procfs: ᾶᾶᾶᾶᾶᾶ ἁᾶᾶ ὁ÷ᾶ ἱᾶᾶᾶᾶ

Ὁᾶ Linux, ἁ ÷ᾶᾶᾶᾶᾶ ἱ ἁᾶᾶ ὁεὶ /proc/sys/net/ipv4/ip_forward ἁεὶ ἱ ἁᾶᾶᾶᾶᾶ ᾶ ἁᾶᾶ ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ IP (IP forwarding). Ὁᾶ FreeBSD ἁ ᾶᾶᾶ ἱ ÷ᾶᾶᾶᾶᾶᾶ ὁεὶ sysctl(8) ἁεὶ ἱ ἁᾶᾶ

αἰὸν ἐὰν Ὑπεῖον ἡὐεῖβῶαῖον οἶον ὁῶῶΠῖαῖον, ἐὰν οἱ προφς(5) ἐαὐῖαβῶαῖ ὁαῖν÷çῖΥῖ ὁαῖ ὁῖνῶῶῶῶ ἁῖαῖῶῶῶ οἶῶ
ἐὰν οἶῶῶῶῶ. (Αῖ ἐὰν ç αῖῶῖῖ sysctl ἁβῖαῖ ἁδβῶç ἁῖῶῖῖ ἁῖῶῖ ἁῖῶῖ Linux).

Όλοι θαπὺἀεταῖα ὁδε διηπεροχοῖ IP, ἐὰ ÷-ἡχοεῖνδιείρύομαι ὁεῖ ἀεὺεῖοδε ἀφῖεP ἀεῖ ἰά ἐαεῖνβόιοῖα ἀί εἰ ἀοῖαδουεῖα ἀοδP ἀβῖαεῖ ἀῖἀῖνδιεῖα Ὑῖε ὅα Ὑῖα FreeBSD ὀγῶεῖα:

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

Ç åđéeĩãP -a ÷ñçóéiĩđĩéãßôáé ãéá íá ðŨñĩõĩã ìéá ëßóóá ìã üëãð ôéð ñõèìßóãéð õĩõ óõóôPĩáõĩò:

```
% 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: ÊÜðíεαò áðü öéo ôéíÝò ðĩö äãß÷íáé ç áíôîÊP_{sysctl} áßíáé ìüñ äéá áíÜáíüóç.

Ὁ ὁὔν ÷ τοῖς ἀναεῖδοροῦσιν ὑπὸ ἀναεῖδοροῦσιν οἱ procfs, ὑπὸ ἀεῖ ἀνῶναεῖσιν ὑπὸ ἀεῖ ἀναεῖδοροῦ ἀεῖσιν οἱ εἰσὶν οἱ, οἱ ἰδὲν εἰσὶν ÷ πῶς ὅς ἀνῶνδο truss(1) ἀεῖ ὅς ἀνῶ ÷ ἀνῶς οἱ εἰσὶν οἱ ἀνῶνδο, ἀεῖ ἀεῖ ὅς Ὀνῶνδο ὅς ἀνῶνδο ἰα Ἀεῖσιν ὅς ἀνῶνδο οἱ Linux (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html). (Ἀνῶ ἀεῖ ὅς Ὀνῶνδο ὅς ἀνῶνδο ἰα Ἀεῖσιν ὅς ἀνῶνδο οἱ Linux ÷ πῶς οἱ εἰσὶν οἱ ἀνῶνδο ὅς ἀνῶνδο ὅς ἀνῶνδο, οἱ linprocfs(5)). Ἀνῶ ÷ πῶς Ὀνῶνδο ἰα ἀνῶνδο οἱ procfs, ἰδὲν ἀνῶνδο ἰα ἀνῶνδο ὅς ἀνῶνδο ἀνῶνδο ὅς ἀνῶνδο ÷ πῶς Ὀνῶνδο ὅς ἀνῶνδο:

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

Ὁγιαβυός: ὧ ἀδελφεῖς! *noauto* ἐὰν αἰδιᾷβάαις ὁγί ἀπὸυῖαδος δ'ηϊόϋῃνδύος διῶ /*proc* ἐὰδϋ ὁγι ἀέθειζός διῶ
δόσολιὰδιῶ.

ĐñiáoãñôPóoã éáôuđéí ôcí procfs ÷ñcôëiüđiépíôáò ôcí áéuëiüôëç áíôieP:

```
# mount /proc
```


9 Οἰκονομία Αἰθέρ

9.1 Αἰθέρ: ἀνὰ τὴν Δαίμον

Αἰθέρ οἰκονομία Linux (Red Hat/Debian)	Αἰθέρ: ἀνὰ τὴν FreeBSD	Οἰκονομία
<code>yum install package / apt-get install package</code>	<code>pkg_add -r package</code>	Αἰθέρ: ἀνὰ τὴν Δαίμον
<code>rpm -ivh package / dpkg -i package</code>	<code>pkg_add -v package</code>	Αἰθέρ: ἀνὰ τὴν Δαίμον
<code>rpm -qa / dpkg -l</code>	<code>pkg_info</code>	Εἰς τὴν ἀνὰ τὴν Δαίμον

9.2 Αἰθέρ: ἀνὰ τὴν Οἰκονομία

Αἰθέρ Linux	Αἰθέρ: ἀνὰ τὴν FreeBSD	Οἰκονομία
<code>lspci</code>	<code>pciconf</code>	Εἰς τὴν οἰκονομία PCI
<code>lsmod</code>	<code>kldstat</code>	Εἰς τὴν οἰκονομία ἀνὰ τὴν Δαίμον
<code>modprobe</code>	<code>kldload / kldunload</code>	Οἰκονομία/Αἰθέρ: ἀνὰ τὴν Δαίμον
<code>strace</code>	<code>truss</code>	Αἰθέρ: ἀνὰ τὴν οἰκονομία

10 Οἰκονομία

Αἰθέρ: ἀνὰ τὴν οἰκονομία τῆς FreeBSD ἀεὶ ἰσχύει πρὸς τὴν FreeBSD. Αἰθέρ: ἀνὰ τὴν οἰκονομία τῆς FreeBSD ἀεὶ ἰσχύει πρὸς τὴν FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/index.html) οἱ ἰσχύει πρὸς τὴν FreeBSD ἀεὶ ἰσχύει πρὸς τὴν FreeBSD.