

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÷õñüíÝĩí àìðĩñééü öýíáĩēĩ ôĩö FreeBSD Foundation.
Ôĩ Linux âßíáé Ýíá éáôĩ÷õñüíÝíá àìðĩñééü öýíáĩēĩ ôĩö Linus Torvalds óéò ÇíüíÝíáò Đĩēéôåßåò.
İé ēÝíáéò Intel, Celeron, EtherExpress, i386, i486, Itanium, Pentium, éáé Xeon âßíáé àìðĩñééÜ öýíáĩēá P
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éáé óá Üēēåò ÷pñåò.
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Ç ēÝíç UNIX âßíáé éáôĩ÷õñüíÝĩí àìðĩñééü öýíáĩēĩ ôĩö Open Group óéò ÇíüíÝíáò Đĩēéôåßåò éáé óá
Üēēåò ÷pñåò.
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ðüēçôÝò ôĩö äéá íá äéäēñßĩĩĩ óá ðñĩüüíóá ôĩö èäüñĩýíóáé àìðĩñééÜ öýíáĩēá. ¼ðĩö áðôÝò
àìðáĩßäēĩíóáé óá áðôü ôĩ èäßáĩĩ éáé äéá üóåò áðü áðôÝò äĩüñßæäé ç İİÜää ÄĩÜðôçò ôĩö FreeBSD üòé
âßíáé ðēéáĩüí íá âßíáé àìðĩñééÜ öýíáĩēá, éå ååßåá Ýíá áðü óá öýíáĩēá: “™” P “®”.

Ôĩ èäßáĩĩ áðôü Ý÷äē öēĩðü íá äĩçèPóåé óç ãñPãĩñç äĩēéåßüç ÷ñçóôpĩ Linux® İÝóĩö / ðñĩ÷üñçĩÝĩĩö
åðēðÝäĩö İå ðéò åáóéēÝò Ýĩñēåò ôĩö FreeBSD

Đßíáēåò Đañéå÷ĩÝĩüí

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1 ÅéóáãùãƆ

Οι εαβλαίη άόδου οίηβææέ όέδ άεάοιηÝό ιάόάίý όιό FreeBSD έάέ όιό Linux ίόόά ιÝόιέ Þ όñι÷ ùñçιÝñíé ÷ ñÞόόάδ όιό Linux ίά ιόññíýí ãñÞáññά ίά όññιόáññιόόιýí όόόέ ááόέέÝό Ýíñíεάδ όιό FreeBSD. Óññüέáόάέ áéá ιέά όá÷ ίέέÞ áéόάáñüáÞ όόι FreeBSD, έάέ ááι έά áíáόáñèñýìá όá όó÷ ùí “όέέιόιόέéÝό” áéάοιηÝό ιάόάίý όùι áýí όόόόçιÝόóùι.

Oĩ êãñĩãĩĩ ãõõũ õõĩẽYõãẽ uõẽ Y ÷ ãõã Pãç ããẽãõãõõPõãẽ õĩ FreeBSD. Áĩ ããĩ Y ÷ ãõã ããẽãõãõõPõãẽ õĩ FreeBSD P ÷ ããẽUẽãõõã ãĩPẽãẽã ãã õçĩ ãẽããẽãõããããããõõõõõõõ õĩõ, õããããẽãĩĩã ãã ãẽããUõõãõã õĩ êãõUẽãẽĩ ããẽãẽẽõõõĩõãõ õĩ FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/install.html) õõĩ ãã ÷ ãẽñĩãẽĩ õĩõ FreeBSD.

2 Êâëýöç: Ääí õďŰñ÷âé Bash;

[illegible]

Άρ ἀεῖαόαόόΠόαόα ἀεῖοῖνἀόεῦ ἑἰεῖοϋ, ἰδῖνᾱβόᾱ ἰᾱ ÷ηϋόεῖνἰδῖεΠόαόᾱ ὁϋ ἰᾱἰεῖΠ chsh(1) ἁεᾱ ἰᾱ ἁεῦῦἰᾱόᾱ ὠῖ
 ὀνᾱἰἰεἑἁἱ ῖν ἑῖ῔εοῖοἰ εῦἰἰεῖο ÷ηΠόόϋ. Ὀᾱ ὁῖεῖοῖοῖῖᾱ ἡόὠῖ ἰᾱ ἁὀΠόᾱά ὠῖ ἑῖ῔εοῖοἰ ὠῖο root ὁῖῖ ὀνᾱἰἰεἑἁἱ ῖν.
 Ἰ εῦᾱῖ ἁεᾱ ἁὁῖᾱ ἁβῖᾱε ἡὁε ὁᾱ ἑἰεῖοϋ ὀῖῖ ἁᾱ ὀᾱῖεἑἁἱᾱῦἡῖᾱὁᾱε ὁὁϋ ἁᾱόεῖΠ ἁεᾱῖΠ ὠῖῖ FreeBSD, ἁᾱεᾱεβόάᾱῖάε ὁὁϋ
 ὠἰἰεᾱβόᾱ /usr/local/bin Π /usr/bin. Ὀᾱ ὀᾱῖβὀὠὠϋ ὀνᾱἑΠᾱάά, ἁβῖᾱε ὀεἑᾱῖῖ ὁᾱ ὁὁὀὀΠᾱάᾱ ἁῖ ÷ᾱβῖῖ ἡάά
 ἁῖβάεῖῖάε ὁᾱ /usr/local/bin ἑᾱε /usr/bin ἰᾱ ἰϋῖ ἰάῖῖῖ ἰᾱ ὀνᾱάᾱάάεῖῖ. Ὀὁϋ ὀᾱῖβὀὠὠϋ ἁὁὀΠ, ἰ root ἁᾱ ἑᾱ
 ἁβ ÷ᾱ ὀνῡάᾱάϋ ὁῖῖ ὀνᾱἰἰεἑἁἱ ῖν ὠῖῖ ἑῖ῔εοῖοἰ, ἁἰάᾱεῖᾱῖάά ῖάάε ἑᾱε ὁϋ ἁβάᾱῖ ὠῖῖ ὁῖῖ άάάάᾱ. ἁεᾱ ὠῖ εῦᾱῖ ἁὁὠ.
 ὀὀῖΠ ÷ᾱ ῖᾱά ἁᾱάάᾱῖά εῖᾱᾱᾱεᾱάά ἡῖῖά ἰᾱ ὠῖῖ root, ἰtoor, ἰἰάἰά ἁϋῖῖάᾱάεάᾱ ἁεᾱεῦ ἁεᾱ ἰᾱ
 ÷ηϋόεῖνἰδῖεᾱβάε ἰᾱ εῦἰἰεῖ ῖεῖῖ ἑῖ῔εοῖοἰ. Ἀᾱβάᾱ ὀεά Ὀὀ ÷ῖῖ Ἀῖῖάὀᾱάά Ἀάάεᾱᾱά ὀ ÷ᾱάεῦ ἰᾱ ὠῖῖ εῖᾱᾱᾱεᾱάά
 toor (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/faq/security.html#TOOR-ACCOUNT).

3 ĐáêÝôá êáé Ports: ĐñĩôéÝôĩĩôáò ěĩăéóĩéēũ óôĩ FreeBSD

Ἄεθου ἀδὺ ὄγι θανάτιοεἰεἰβ Ἰεῖται ἡεἰάοῦόοάοοδ εἰεἰεἰεἰεἰ οἰο UNIX® (εἰοῖῖῖῖῖ οἰο δῖῖῖῖῖ ἔπαεἰεἰ, ἀθῖοἰῖῖῖῖ οἰο ἂν ÷ ἂῖῖ, ἂῖῖῖῖῖῖῖῖ ἕεἰ ἡῖῖῖῖῖῖῖῖῖ), οἰ FreeBSD θῖῖῖῖῖῖ ἕῖ ἕῖῖῖ ἡῖῖῖῖῖῖ ἕεἰ ὄγι ἡῖῖῖῖῖῖῖῖῖ: ὄἰ ῖῖῖῖῖ ἕεἰ ὄἰ ports. ἤεἰ ἡῖ ῖῖῖῖ ἕῖῖῖ ἡῖῖ ὄἰ ἕεἰῖῖῖῖῖ ῖῖῖῖῖῖ ἕεἰ ports, ἡῖῖῖ ἡῖ (<http://www.freebsd.org/ports/master-index.html>).

3.1 ĐấêÝôá

Όά θαέΎόά αβίαέ θñĩ-iaóaaèuóóéoiΎíáo áóáñĩāΎó, èá èΎāñāi ôĩ áíóβóóíé÷ĩ áéá ôĩ FreeBSD òuĩ āñ÷āβuĩ .deb óá óóóóPiaóá Debian/Ubuntu éáé òuĩ āñ÷āβuĩ .rpm óá óóóóPiaóá Red Hat/Fedora. Όά θαέΎόά āāēāēβóóáíóáé ÷ñóóēñíēíéPíóáo óci áíóēP pkg_add(1). Áéá óánŨāēēāi, ç āēuēĩōèç áíóēP āāēāēéóóŨ ôĩ **Apache 2.2**:

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

Ç ÷ ñΠός όçò ðáñáÝíññíð - ð ãäçããß öçí pkg_add(1) íá éáóääÜóää áðöùíáðá öüöí öí ðáéÝöí, üöí éáé öéð áíáñðΠóáéð öíð. éáé íá öí ääéáðáóðΠóáé:

```
# 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 íéá “äðßçíç” Ýëäíóç ôíð FreeBSD (6.2, 6.3, 7.0, ëëð. ðíð äáíëëÛ ìðíñáßðá íá ääëáðáðßðáðá äðÛ CD-ROM) ç áíðíëð pkg_add -r ëá ëáðäáÛðáë óá äáëÝðá ðíð ððëÛ÷÷çëáí äëá äððß çç ððäëäëñëíÝíç Ýëäíóç. Óá äáëÝðá äððÛ *ßóóð äáí ðáñëÝ÷íí* ðëð ðëÝíí ðäëäððáßðð äëäÛðáëð ðùí äðáñííäíí. ìðíñáßðá íá ÷ ñçóëííðíëáßðáðá ðçí íáðááäçðß ðáñëáÛëëííððð `PACKAGESITE` äëá íá ðáñáëÛíðáðá äððß ðçí ðñíäðëëäáíÝíç ðóíðáñëëòííÛ. Áëá ðáñÛáäëáíá, ëÝðííðáð ðçí `PACKAGESITE` ðóçí ðëíð <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ëá ëáðäáÛðáëð óá ðéí ðñüððáðá äáëÝðá ðíð ððÛñ÷ííí äëá ðç óáëñÛ 6.X.

Άέά δάνέοούοάναό δέçñïŕñßåð ó÷:âôééÛ îå ôá δάéÝóá, δάνάέάēŕŷîå äéååÛóóå ôçŕ åíüôçóå 4.4 óôŕ Åå÷:åénßäēŕ ôŕö
FreeBSD: ×ñçóéŷîðŕépŷóåð ôŕ Óýóôçŷå Packages
(http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/packages-using.html).

3.2 Ports

Ç ααγδανç ιYειραιδ αεά οçι ααεαδÜδδαοç αδανιραιπι οδι FreeBSD αβιαε ç Óοεειραιβ ονι Ports. Ç Óοεειραιβ ονι Ports αβιαε Yία δεαβοει εαεοιτοναερπι θιο αδριδαεαβδαε αδυ Makefiles εαε αν÷αβα αεαοινιρι (patches) δα ιδριβα Y÷ιρι αçιειτοναçεαβ αεαεεÜ, ιοδα ια αβιαε αοιαδç ç ααεαδÜδδαοç αεÜοινιι αδανιραιπι οδι FreeBSD αδυ ονι δçααβι επαεεα οιδδ. Ιαδαι ααεαεεοδÜδα Yία port, οι ογδδçια εα εαδααÜδαε ονι δçααβι επαεεα, εα αδανιιυαε υεαδ οεδ αδαεδριγιαρδ αεεααYδ ÷ηçοειιδιερπιδδ δα patches, εα ιαδααευδδδβαε ονι επαεεα, εαε οYειδ εα ααεαδαοδβαε οçι αδανιραιβ. Εα αερειδδβαε οçι βαεα αεααεεαδβα εαε αεα ιδριεααβδριδα δσ÷ιι αιανθιαια δνιανÜιιαδα.

Ἰδιῆνᾱβὼᾱ ἰᾱ ἁῆνᾱβὼᾱ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports (ç ἰῑῖᐅᾱ ἰᾱῆῆῖῖᯚ ὀῖῖᯚ ἰᾱᯚᯚᯚᯚᯚᯚᯚᯚᯚ ῆᾱῖ ὐῶ “ᾱῖᯚᯚᯚ ὀὐῖ ports”), ὀᯚῖ ῆᾱᯚᯚᯚᯚ /usr/ports. Ἀᯚᯚ ᾱῖᯚᯚᯚ ὀῖᯚᯚᯚᯚᯚᯚᯚ ὐᯚᯚ ᾱῆᯚᯚᯚᯚᯚᯚᯚᯚᯚ ὀçῖ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports ῆᾱᯚ ὀç ῆᯚᯚᯚᯚᯚᯚ ὀçᯚ ᾱῆᯚᯚᯚᯚᯚᯚᯚ ὀᯚᯚ FreeBSD. Ἀῖ ᾱῖ ὀῖ ῖᯚ÷ᯚᯚ ῆᯚᯚᯚᯚᯚᯚ ἰᾱ ὀçῖ ὀῖᯚᯚᯚᯚᯚᯚᯚ ᾱᯚ ὀῖ CD ᾱῆᯚᯚᯚᯚᯚᯚᯚ ἰᾱ ὀçῖ ᾱῖᯚᯚᯚᯚ ὀᯚᯚ sysinstall(8) ᐅ ἰᾱ ὀçῖ ῆᾱᯚᯚᯚᯚᯚᯚ ᾱᯚ ὀᯚᯚ ᾱᯚᯚᯚᯚᯚᯚᯚᯚᯚ ὀᯚᯚ FreeBSD ÷ᯚᯚᯚᯚᯚᯚᯚᯚᯚ ὀçῖ ᾱᯚᯚᯚᯚᯚᯚᯚ ᐅ ὀçῖ ᾱᯚᯚᯚᯚᯚᯚ portsnap(8). Ἰῑῖᐅᾱβὼᾱ ἰᾱ ἁῆνᾱβὼᾱ ῆᯚᯚᯚᯚᯚᯚᯚ ἰᾱᯚᯚᯚᯚᯚ ῆᯚᯚ ὀçῖ ᾱῆᯚᯚᯚᯚᯚᯚᯚ ὀçᯚ Ὀῶεῖῖᾱᐅ ὀὐῖ Ports ὀçῖ ᾱᯚᯚᯚᯚᯚ 4.5.1 (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html) ὀᯚᯚ ᾱᯚ÷ᯚᯚᯚᯚᯚᯚ.

Ç ääëäóÜóóäóç äíüò port äßíäë ääíëëÜ öüöí äðëP üöí öí íá áéóÝëëäöä öüíí ëäöÜëíäí öíö ëäë íá íäëëíPóäöä öçí äëäëëäöá íäöääëpöóëöçö. Ööí äëüëíöëí äánÜääëíä 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 ðáñÜáäéäñí, uóáí áäéáééóðÜòá òñ **Apache 2.2** áðu óá ports ðñññáßòá íá áñáñññññéÞóáòá óçí
 áðééñäÞ **mod_ldap** èÝññíóáð áðéðð òéñÞ óóç íàðáäéçðÞ **WITH_LDAP** òñò **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), áéá ðãñéóóüôãñãð ðëçñïïñßãð ó÷ãóééÜ ïà ôç Óõëëïãß ðùí Ports.

3.3 Ports Þ ááêÝôá, ôé ðñÝðáé íá ÷ñçóéìðïéÞòù;

Ὁ ἀὰς Ὑδα ἀβίαε ὀούι δῆαῖαδὲεὐδούδα ἀδὲρρ δῆι-ιαδῶαἔεὐδὲοῖ Ὑία ports, Ὑῆα ἀβίαε δῆαῖεόουδῶνι ἐὶ Ὑία ἀδὲεραδὸ αἰ
 ἀβίαε ἀδὲεδούδερρ ϐ ἀαῖαδὺδῶαός αἰυ ὀι δῆαῖβι ἐραῖέα ϐ αἰυ Ὑδὲῖα ἀῖεδῶεὙοῖα. Εὐῖα Ὑῖεραδὺ Ὑ÷αε δῶ
 δῆαῖιαδὲὐδῶα ὀού:

ĐáêÝôá (Ýôïëíà àêôãëÝóéíà)

- [illegible]

Ports (őçääßïò êpäéêáo)

- [illegible]

[illegible]

4 ΑέεΒίçç ôĩõ ÓóóôΠιάôĩò: Ðĩõ áΒιάέ ôá run-levels;

Οι Linux ÷ ηςοείηθιέαθ οι όύοόγια âêßίςόçð SysV, âη ηο FreeBSD ÷ ηςοείηθιέαθ οι θάηάηιόέαêη όύοόγια âêßίςόçð BSD. Όοι όύοόγια init(8) όýθιθ BSD, ââι θðÛñ÷ιθι run-levels, ιýθâ ηι âñ÷âßι /etc/inittab. Αίθß âέα äòðÛ, ç âêßίςόç âêÿâ÷âðáé äðü Ýíá script âêßίςόçð, ηι rc(8). To script /etc/rc âέαâÛæáé ηι âñ÷âßι /etc/defaults/rc.conf êáé ηι âñ÷âßι /etc/rc.conf âέα íá êáèηñßóáé θιέäθ ððçηâóßäθ θηηêáéðáé íá íáêêηθιθι. Íé ððçηâóßäθ äòðÿð íáêêêÿíá íâ ðçι âêðÿέäόç ðηι áιθßóθι÷÷ηι script âêßίςόçð θιθ âñßóêηθíóáé óθιθð êáðáêüηιθð /etc/rc.d/ êáé /usr/local/etc/rc.d/. Όá scripts äòðÛ âßíáé θáñηιιέα íâ ðá scripts θιθ âñßóêηθíóáé óθιθ êáððÿêêηι /etc/init.d/ óâ óðóðßιäá Linux.

Ἀεάβοδ ὁδῦñ÷ῖοι αὐῖ ὀιδιῖεῖοβῶδ ἁεῖ ὁᾶ scripts ἁεῖβῖςῶς ὁυῖ ὁδῶñᾶῖοῖ; Ὁᾶ scripts ὁῖο ἁñβῶῖῖῖῖῖῖ ὁῖῖ ἑᾶῖῖῖῖῖ /etc/rc.d/ ἁῖῖῖῖ ἁεῖ ἁῖῖῖῖῖῖῖῖῖ ὁῖῖ ἁῖῖῖῖῖῖ ὁῖῖ “ἁᾶῖῖῖῖ” ῶῶῶῶῶῶ. (Ἄεᾶ ὁᾶñῖῖῖῖῖῖῖ, ὁεῖ cron(8), sshd(8), syslog(3), ἑᾶῖ ῖῖῖῖῖῖῖῖῖ). Ὁᾶ scripts ὁῖο ἁñβῶῖῖῖῖῖῖ ὁῖῖ ἑᾶῖῖῖῖῖῖ /usr/local/etc/rc.d/ ἁῖῖῖῖ ἁεῖ ἁῖῖῖῖῖῖῖῖῖ ὁῖῖ ῖῖ÷ῖῖῖ ἁῖῖῖῖῖῖῖῖῖῖῖ ἁῖῖ ὁῖῖῖ ÷ñῖῖῖῖῖῖ, ῖῖῖῖ ἁεῖ ὁᾶñῖῖῖῖῖῖῖ ῖ **Apache**, ὁῖ **Squid**, ἑ.ῖ.ῖ.

[illegible][illegible]

Όι άέυήρηόη άδύοόάοία άδύ όι άñ÷÷βι /etc/rc.conf άίάññήόιέάβ όçí όόçñάόβά sshd(8) έάέ όήί **Apache 2.2**. Άόβόçό έάέñβæάέ ύόέ í **Apache** έά ίάέέíßόάέ ίά άίάññήόιέçí Ýíç όç άόίάόύόçόά SSL.

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

Ἄδῡ ὁϗ ὀόεαιῖP ḁiō iéá ὀδϗñáḱá áíáñáĩḁiέέϗáḱ ὀóĩ áñ÷ḁḱĩ /etc/rc.conf, ðĩñáḱḱá íá ὁϗĩ íáééĩPḱáḱá ḁḁḱéáḱáḱ
 ḁḁḱ ὁϗ ḁñáñḱP áĩḱḱḱĩ (÷ũñḱ ḱá ÷ñáéÜæáḱáé íá ḁḁáíáéééĩPḱáḱá ḱĩ ὀýḱḱḱá ḱáḱ):

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

Áí íéá òðçñáòßá ááí Ý ÷ áé áíáññäíðíéçéáß óóí áñ ÷ áßí áóòü, ìðíñáßòá íá áíáíáäéÚóáòá ôçí áêêßíçòç ôçò áðü ôçí áñáñíP
áíòíèþí íá ôçí áðééñäP forcestart:

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

5 Ñýèìéóç Äéêôýïõ

5.1 ÄéåđáöÝò Äéeôýĩõ

Άϊόβ άέα ôï ääíέü ãíaãññέóóéü öýðĩö ethX ðĩö ÷ñçóéüîðíεáß ôï Linux áέα öçí áíaãññέός íεáo áέαðáòÐò áέέôýĩö, ôï FreeBSD ÷ñçóéüîðíεάß ùò áíaãññέóóéü ôï üññá öĩö ðññāñÜñáöĩö íāÞαçóçð áεíεíöεĩýāñ äü Üýá āñέèü. Ç áεúεíöεç Ýññäö äüö öçí áíöĩēß ifconfig(8) äāß÷íáε äýí ÊÜñåðä åέέôýĩö Intel® Pro 1000 (ñā áíaãññέóóéëÜ 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

[illegible]

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

×ñçóëiïðiéΠóôâ ôçí áêüëiøëç êáôá÷þñçóç áéá íá êáëiñßóáôâ üôê iéá äéáðáöÞ éá êáiâÛiáé ñõëißóáèð iÝòù DHCP:

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

6 Firewall

Όλοι Linux → η-configurēi tēa bōaē oi **IPTABLES** oi i dībi dānY → aē dōch nāo bāo firewall oā a dō bāāi dōnPrā. Oi FreeBSD dānY → aē a dō bōcō firewall i Yōu oi dō dōnPrā. Aēa oci aēn bāaēa, oi FreeBSD dānY → aē o n bā 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)

Õι **IPFWALL** η **IPFW** (ç áîõëð ÷ äëëëõíñ õùí ëáíùíñ òñ **IPFW** ááíáë ç ipfw(8)) ááíáë õì firewall ðñ Æ ÷ áë áíáððð ÷ ëáë ëáë òðõçñááðáë áðu õçí ñÛáá áíÛððõçð òñ FreeBSD. Õì **IPFW** ìðñáá íá òñáðáóóðáá íá õì dummynet(4) áëá íá ðáñÛ ÷ áë áðíáóùõçðáð áëáíñòùõçð òçð ëáíççðð ðáëÛòùí (traffic shaping) ëáë íá áññíëðíáë áëáõíñáðéëñýð òýðñð òðñáÛóáñ áëëðýñð.

DánÜäëàìá áúò éáíuíá ôïð IPFW ðïð aðëônÝðäé áéoãñ÷ùìáíá äääñÝía ðñïð ôçí òðçñáoßá SSH:

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

Ôi **IPFILTER** ábíáé íéá áóánííáP firewall ðíó áíáðýóóáóáé áðú ôíí Darren Reed. Äáí Ý÷-áé ööéá÷-ðáß áéáéÜ áéá ôí FreeBSD, éáé Ý÷-áé íáðóáñéáß éáé óá Üëéá éáéðíññáéÜ, óðíðñééäíááííÝíúí ôúi NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàíà áíüò êáíuíá ãéá ôí **IPFILTER** ðĩõ ãđéõñÝđăé áéóăñ÷:ùiáíá áăăñÝíá ðñĩò ôçí òđçñăóóă **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** açìéròñãPèçèà ùò áíòééáòáóòÜòçò òìò **IPFILTER**, éáé Ýòóé ç óýíòáç òìò **PF** ááíáé áñèãòÜ ðañüüíéá íá áóòP òìò **IPFILTER**. Ôì **PF** ìðññáá íá óóíáòáóóòáá íà òì altq(4) áéá íá ðánÝ ÷ áé òðçñáóáò òýðìò QoS.

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

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

7 Άίαâáèìβæïïôáò ôï FreeBSD

ÖðÜñ÷ïïí ññáéð ìÝèràíè áéá ôçí áíááÜèìéóç áíuò óóóóPíáðìò FreeBSD: ÌÝòù òìò ðçááßìò èpáééá, ìÝòù Ýðìèììì (binary) áíáááèìßóáìì, éáé ìÝòù òùì CD áãéáðÜóóáóçð.

Ç ääëäðÛððáðç ìÝóù òìð ðçäàßìð ëðäëä äßìäé ç ðëì ðìëýðëìç, äëëÛ ðñìòóÝñäé éäé ðç ìäääëýðäñç äðìäðß äðäëëìßä. Ç äëääëäðäßä äððß ðäñëëäìäÛìäé òì ððä÷ñìíëéðìù òìð òìðëëëý áìðéäñÛìòì òìð ðçääßìð ëðäëä òìð FreeBSD ìä òìí ëðäëä òìð FreeBSD ðìò äñßðéäðäé ðóìðð äìððçñäðçðÝð CVS (Concurrent Versioning System). Äðù ðç ðóéäìß ðìò òì òìðëëù áìðßäñäðì ðçääßìð ëðäëä äßìäé äìäìäùìÝñì, ìðñìäßðä ìä ìäðääëùððßðäðä ìÝäð äëäùäðäéð òìò ððñßìä éäé ðùì ääðéëßì ðñìäñäìÛðùì. Äëä ðäñëéðóùðäñäðð ðççñìòìñßäð ð÷÷äðéëÛ ìä òì ðýððçìä äìääÛëìéðçð ìÝóù ðçääßìð ëðäëä, ääßðä òì éäðÛëäëì ÄìçìÝñùðç éäé ÄìääÛëìéðç (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html) ðóì Ää÷äëñäëì òìò FreeBSD.

Ίε Υοιείαò (binary) áíááæèíòáæò, áβíáé ðáñüüíéáò íá òç ÷ñÞòç òçò áíòíèÞò yum Þ apt-get áéá òçí áíááÙèíéòç áíüò ðòòòÞíáòíð Linux. Ç áíòíèÞ freebsd-update(8) èá èáòááÙòáé òèò áíááæèíòáæò éáé èá òèò ááéáòáóòÞòáé. Ìðíñáòá íá èáèíñòáòá òçí áòðüüíáòç, áíÙ òáèòÙ äéáóòÞÞíáá äèòÝéáòç òçò, íá òç ÷ñÞòç òíð cron(8).

Όγιὰβυός: Αί δñüēάέόάέ íá ÷ ñçόέííðíēΠόάðå ðí cron(8) áέá ðñĩāñáííàðéóíÝíàð áíáááèíßóáéó, ááááéüèåßððå üðé ÷ ñçόέííðíēåßðå ðçí áíðíēΠ freebsd-update cron ððí áñ÷:åßí crontab(1) áέá íá åēå÷:éóðíðíēçēåß ç ðēéáíüðçðå íá åßíáðáé áíáÝýóç ðçí ßéåá óðēåíΠ åðü Ýíá íååÜēí åñēèü ïç÷:áíçÜðüí.

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

Ç öâëãöôâáá äðëëïãP áíááÛëíóçð, ìÝòù òùì CD äãëáðÛóóáóçð, âáíáë äñëãðÛ íäëÛëãñ. Áðëð ãëëëíPóðã áðü òì CD äãëáðÛóóáóçð ëáë äðëëÝíòá òçì áíðòòíë÷ç äðëëïãP áíááÛëíóçð (upgrade).

8 procfs: ĐăñáóìÝĩ áëëÜ ü÷é Îă÷áóìÝĩ

Óôî Linux, èà ÷ñàéáôâß íá äâßôâ ôî /proc/sys/net/ipv4/ip_forward áéá íá èâèññóáôâ áí âíáíé áíâññôíðéçíÝíc ç ðñíèèçóç IP (IP forwarding). Óôî FreeBSD èà ðñÝðáé íá ÷ñçóéíðèéóáôâ ôî sysctl(8) áéá íá äâßôâ

ἀόδῖ ἐὰ Ὑεῶδ ἡεῖβόαέδ οἷο ὁόόδῖαόῖδ, ἐὰεῖδ οἷ procfs(5) ἐαῦἡαβόαέ δᾶἡ÷çìÝἡ ὁᾶ δἡῦόόαόᾶδ ἀεῦῖόαέδ οἷο ἐᾶέοἡἡᾶεῖ. (Αἱ ἐὰέ ç ἰόῖεῖῖ sysctl ἁβῖάέ ἁδβόçδ ἀέᾶέÝóεῖç ἐὰέ ὁἷ Linux).

Ὀἷ δᾶἡῖᾶᾶᾶ ὁçδ δἡἡεçόçδ IP, ἐᾶ ÷ἡçóεἡἡἡἡῖόᾶἡ ὁçἱ ἁεῦἡἡἡç ἰόῖεῖῖ ἀέᾶ ἱᾶ ἐᾶἡἡβῖἡἡἡἡ ἱᾶ ç ἁἡἡᾶῖᾶῖᾶ ἁἡῖῖ ἁβῖάέ ἱᾶἡἡἡἡἡἡἡἡἡἡἡ ὁᾶ Ὑἡἡ FreeBSD ὁῖᾶῖᾶ:

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

Ç ἁἡἡῖᾶῖ -a ÷ἡçóεἡἡἡἡἡἡἡἡἡἡἡ ἁἡᾶ ἱᾶ δῖἡἡἡἡἡ ἱᾶ ἡῖᾶδ ὁἡῖ ἡἡἡἡἡᾶῖδ οἷο ὁόόδῖαόῖδ:

```
% 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
...
```

Ὀçἡᾶῖᾶῖ: Ἐῖἡἡᾶῖ ἁἡῖ ὁἡῖ ὁἡἡῖδ ἡἡῖ ἁᾶῖᾶ÷ἡᾶέ ç ἰόῖεῖῖ sysctl ἁβῖάέ ἱῖἡἡ ἁἡᾶ ἱῖᾶἡῖᾶῖᾶ.

Ὀδῖἡ÷ἡἡἡ δᾶἡἡἡῖᾶῖδ ὑἡἡῖ ἁἡᾶῖᾶᾶᾶ ὁἷ procfs, ὑἡῖῖ ἁἡᾶ δᾶἡῖᾶᾶᾶᾶ ὑἡᾶἱ ἁἡῖᾶᾶᾶᾶᾶ δᾶἡἡῖᾶἡἡἡἡἡἡἡἡἡἡἡἡ, ὁἷ ἡἡἡἡἡ ἡῖᾶᾶ ÷ἡᾶῖᾶ ὁçδ ἰόῖεῖῖδ truss(1) ἁἡᾶ ὁçἱ ἱᾶῖ÷ἱᾶῖᾶ ὁἡἡ ἡἡᾶῖᾶἡἡ ὁόόδῖαόῖδ, ἐὰέ ἁἡᾶ ὁçἱ Ὀἡἡᾶῖᾶῖᾶῖᾶ ἱᾶ Ἀἡῖᾶᾶᾶᾶᾶ ὁἷ Linux (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html). (Αἱ ἐὰέ ç Ὀἡἡᾶῖᾶῖᾶῖᾶ ἱᾶ Ἀἡῖᾶᾶᾶᾶᾶ ὁἷ Linux ÷ἡçóεἡἡἡἡἡἡ ὁἷ ἁἡἡῖ ὁçδ procfs, ὁἷ linprocfs(5)). Αἱ ÷ἡᾶἡᾶᾶᾶ ἱᾶ δἡἡῖᾶᾶᾶᾶᾶ ὁἷ procfs, ἡἡἡᾶᾶᾶ ἱᾶ δἡἡῖᾶᾶᾶᾶ ὁçἱ ἁἡἡἡἡᾶᾶ ἁᾶἡᾶᾶᾶ ὁἷ ἁἡ÷ᾶἡἡ /etc/fstab:

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

Ὀçἡᾶῖᾶῖ: Ç ἁἡἡῖᾶῖ noauto ἐᾶ ἁἡἡᾶᾶᾶ ὁçἱ ἁἡῖᾶᾶᾶᾶ δἡἡῖᾶᾶᾶᾶ ὁἷ /proc ἡᾶῖ ὁçἱ ἁἡἡᾶᾶᾶ ὁἷ ὁόόδῖαόῖδ.

δἡἡῖᾶᾶᾶᾶᾶ ἡᾶῖᾶᾶᾶ ὁçἱ procfs ÷ἡçóεἡἡἡἡᾶᾶᾶ ὁçἱ ἁἡἡἡἡᾶᾶ ἰόῖεῖῖ:

```
# 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 áïòççñáòçòP
<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 äãéáôáóóçÝíñí 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 ôñòòùíÝíñí áñëññüÜòùí ðòñPíá
<code>modprobe</code>	<code>kldload / kldunload</code>	Öññòòòç/Áðñüññòòòç áñëññüÜòùí ðòñPíá
<code>strace</code>	<code>truss</code>	Áíβ÷íáòòç êëPóáñí óóóôPíáôïò

10 ÓôìðãñÜóíáóá

Äóäêðéóôíýíä üòé áòòü ôí êáβíáñí óáò ðáññáβ÷á áñëáòÝò ðëçññíññáò ãéá íá íäééPóáôá íá ôí FreeBSD. Äéá ðáñéóóüðáñâò éáé ðëí êáðòñáññáò ðëçññíññáò, ðáñáéáéýíä íá äéááÜóáôá ôí Äã÷áéñβáéí ôïò FreeBSD (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/index.html) ôí ïðñí ãðβόçò ðáñéÝ÷áé éáé ðñéëÜ èÝíáóá ðñò äáí éáéýòèçéáí éáéüéïò óôí ðáññíí êáβíáñí.