

Ἰᾱçãüò ÃñƲãĩñçò Âêêßícóçò ôĩō FreeBSD ãéá × ñƲóôåò Linux®

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ḐĩᾱōĩᾱōēēŬ Äēēáēĩᾱᾱᾱ © 2008 Ç ÌìŬᾱᾱ Ôᾱēìçñßùóçò ôĩō FreeBSD

Ôĩ FreeBSD ᾱßĩᾱé Ḃĩᾱ éᾱōĩ÷ òññìŬĩĩ ᾱìḑĩñēēŬ ὀγĩᾱĩēĩ ôĩō FreeBSD Foundation.

Ôĩ Linux ᾱßĩᾱé Ḃĩᾱ éᾱōĩ÷ òññìŬĩĩ ᾱìḑĩñēēŬ ὀγĩᾱĩēĩ ôĩō Linus Torvalds ὀēō ÇĩùĩŬĩᾱᾱ Ḑĩēēōᾱᾱᾱ.

Ἰé ēŬĩᾱēò Intel, Celeron, EtherExpress, i386, i486, Itanium, Pentium, éᾱé Xeon ᾱßĩᾱé ᾱìḑĩñēēŬ ὀγĩᾱĩᾱᾱ Ʋ éᾱōĩ÷ òññìŬĩĩ ᾱìḑĩñēēŬ ὀγĩᾱĩᾱᾱ ὀçò Intel Corporation éᾱé òũĩ ēōᾱᾱñēēēĩ ὀçò ὀēō ÇĩùĩŬĩᾱᾱ Ḑĩēēōᾱᾱᾱ éᾱé ὀᾱ Ŭēēᾱᾱ ÷ Ʋñᾱᾱ.

Ἰé ēŬĩᾱēò Ʋ òñŬᾱᾱᾱ Red Hat, éᾱé RPM ᾱßĩᾱé ᾱìḑĩñēēŬ ὀγĩᾱĩᾱᾱ Ʋ éᾱōĩ÷ òññìŬĩĩ ᾱìḑĩñēēŬ ὀγĩᾱĩᾱᾱ ὀçò Red Hat, Inc. ὀēō ÇĩùĩŬĩᾱᾱ Ḑĩēēōᾱᾱᾱ éᾱé ὀᾱ Ŭēēᾱᾱ ÷ Ʋñᾱᾱ.

Ç ēŬĩç UNIX ᾱßĩᾱé éᾱōĩ÷ òññìŬĩĩ ᾱìḑĩñēēŬ ὀγĩᾱĩēĩ ôĩō Open Group ὀēō ÇĩùĩŬĩᾱᾱ Ḑĩēēōᾱᾱᾱ éᾱé ὀᾱ Ŭēēᾱᾱ ÷ Ʋñᾱᾱ.

ḐĩēēŬᾱ ᾱḑũ ὀēō ēŬĩᾱēò Ʋ òñŬᾱᾱᾱ Ἰé Ἰḑĩᾱᾱ ÷ ñçὀēìḑĩēĩγĩᾱᾱ ᾱḑũ ὀĩḑᾱ éᾱᾱὀēᾱᾱὀᾱὀŬᾱ Ʋ ὀĩḑᾱ ḑũēçὀŬᾱ ὀĩḑᾱ ᾱᾱ Ἰᾱ ᾱᾱᾱñḑĩḑĩ ὀᾱ ḑñĩũũĩᾱᾱ ὀĩḑᾱ ᾱᾱñĩγĩᾱᾱ ᾱìḑĩñēēŬ ὀγĩᾱĩᾱᾱ. ¼ḑĩḑᾱ ᾱὀὀŬᾱ ᾱìḑᾱĩᾱᾱὀᾱᾱ ὀᾱ ᾱὀὀũ ὀĩ ᾱᾱᾱᾱᾱ éᾱé ᾱᾱ ὀᾱᾱ ᾱḑũ ᾱὀὀŬᾱ ᾱĩḑñḑᾱᾱ ç ÌìŬᾱᾱ ἈĩŬḑḑḑĩçò ôĩō FreeBSD ũὀᾱ ᾱßĩᾱé ḑēᾱᾱĩũ Ἰᾱ ᾱßĩᾱé ᾱìḑĩñēēŬ ὀγĩᾱĩᾱᾱ, éᾱ ᾱᾱḑᾱ Ḃĩᾱ ᾱḑũ ὀᾱ ὀγĩᾱĩᾱᾱ: “™” Ʋ “®”.

Ôĩ ᾱᾱᾱᾱᾱ ᾱὀὀũ Ḃ÷ ᾱᾱ ὀēĩḑũ Ἰᾱ ᾱĩçᾱḑᾱᾱ ὀὀç ᾱñƲᾱĩñç ᾱñᾱᾱᾱᾱᾱ ÷ ñçὀὀĩ Linux® ἸŬὀὀ / ḑñĩ÷ ùñçĩŬĩñᾱ ᾱḑὀŬŬᾱᾱ Ἰᾱ ὀὀ ᾱᾱὀᾱŬᾱ Ḃĩñᾱᾱ ὀĩḑᾱ FreeBSD

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1 ÅéóáãùãƆ

Οι εαβλαίη άόδου οίηβææέ όέδ άεάοιηÝδ ίαδóáý όιθ FreeBSD έάέ όιθ Linux ίόόά ίÝόίέ Þ ðñí÷ ùñçíÝñíé ÷ ñÞόόάδ όιθ Linux ίά ίδññíýí ãñÞáññά ίά ðñíόáññíόόίýí όόέδ ááόέéÝδ Ýñíéáδ όιθ FreeBSD. Ðñüêæάόάé áéá íéá όá÷ íéêÞ áéόάüüáÞ όόí FreeBSD, έάέ ááí éá áíáόáñèýñíá όά όθ÷ úí “όέéíόíόééÝδ” áéάοιηÝδ ίαδóáý όúí áýí όόόόçíÛόúí.

Oĩ êãñĩãĩĩ ãõõũ õõĩẽYõãẽ uõẽ Y ÷ ãõã Pãç ããẽãõãõõPõãẽ õĩ FreeBSD. Áĩ ããĩ Y ÷ ãõã ããẽãõãõõPõãẽ õĩ FreeBSD P ÷ ããẽUẽãõõã ãĩPẽãẽã ãã õçĩ ãẽããẽãõããããããõõãõõõ õĩõ, õãããããĩĩãĩã ãã ãẽããUõãõã õĩ êãõUẽãẽĩ ãããẽãẽõõõĩõãõ 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 ἀεῖοῖνἀόεῖῤ ἑἑῖγός, ἰδῖνᾱβόᾱ ἰᾱ ÷ η̇όόεῖῖδῖεΠόαόᾱ όγῖ ἰᾱῖεῖΠ chsh(1) ἑᾱ ἰᾱ ἑεῤῤᾱόᾱ ὀῖ
 δῖνᾱδῑεἑᾱἰ ῤῖ ἑῤῑοῖοῖ ἑῤῑεῖο ÷ η̇Πόός. Ὅᾱ ὀῖεῖοῖγῖᾱ ἡόὀῖῖ ἰᾱ ἰᾱΠόαόᾱ ὀῖ ἑῤῑοῖοῖ ὀῖο root ὀῖῖ δῖνᾱδῑεἑᾱἰ ῤῖ.
 Ἰ εῦᾱῖ ἑᾱ ἰᾱὀῖ ἰᾱῖᾱ ἡὀ ὀᾱ ἑἑῖγός δῖῖ ἰᾱῖ δᾱῖεἑᾱἰᾱῖῖῖᾱῖ ὀόςῖ ἰᾱὀεῖΠ ἑᾱῖῖΠ ὀῖῖ FreeBSD, ἰᾱἑᾱἑβὀὀᾱῖᾱῖ ὀόςῖ
 ὀῖῖἑᾱὀᾱ /usr/local/bin Π /usr/bin. Ὅᾱ δᾱῖᾱδὀὀῖ δῖνᾱἑΠᾱὀῖ, ἰᾱῖᾱ ὀῑεᾱῖῖ ὀᾱ ὀὀὀΠᾱὀᾱ ἰᾱ ÷ ἰᾱῖῖ ἡὀῖ
 ἰᾱβὀῖῖᾱῖ ὀᾱ /usr/local/bin ἑᾱῖ /usr/bin ἰᾱ ἰῖῖ ἰδῖῖῖ ἰᾱ δῖνᾱὀᾱῖὀῑῖῖ. Ὅόςῖ δᾱῖᾱδὀὀῖ ἰᾱὀΠ, ἰ root ἰᾱῖ ἑᾱ
 ἰᾱ ÷ ᾱ δῖνᾱὀᾱὀός ὀῖῖ δῖνᾱδῑεἑᾱἰ ὀῖῖ ἑῤῑοῖοῖ, ἰδῖᾱἑῖᾱῖᾱὀ ῤὀὀ ἑᾱ ὀῖ ἰᾱὀῖᾱ ὀῖῖ ὀῖ ὀὀὀῖᾱ. ἑᾱ ὀῖ εῦᾱῖ ἰᾱὀὀ.
 ὀὀῤ ÷ ἑ ῤᾱὀ ἰᾱὀᾱῖᾱῖ ἑᾱᾱῖᾱὀῖᾱὀ ἡῖῖὀ ἰᾱ ὀῖῖ root, ἰtoor, ἰ ἰὀῖὀὀ ἰῖῖὀῖᾱἑῖᾱ ἑᾱἑῖῤ ἑᾱ ἰᾱ
 ÷ η̇όόῖῖῖἑᾱὀᾱ ἰᾱ ἑῤῑῖῖ ῤῑῖ ἑῤῑοῖοῖ. ἰᾱὀᾱ ὀὀ Ὅὀ ÷ ῖῤὀ ἈῖῖὀΠᾱὀ Ἀὀὀἑᾱὀ ὀ ÷ ἰὀῖῖ ἰᾱ ὀῖῖ ἑᾱᾱῖᾱὀῖ
 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® (εἰάῖἡἡἡἡ οἰο δῆἡἡἡἡ εἰεἰεἡ, ἀθῡοἡἡἡἡ οἰο ἡἡ ÷ ἡἡἡ, ἡἡἡἡἡἡἡἡ ἡἡ ἡἡἡἡἡἡἡἡ), οἡ FreeBSD ἡἡἡἡἡἡ ἡἡ ἡἡἡἡ ἡἡἡἡἡἡ ἡἡ ὄγι ἡἡἡἡἡἡἡἡ: ὡ ἡἡἡἡ ἡἡ ὡ ports. ἡἡ ἡἡ ἡἡἡἡ ἡἡἡἡ ἡἡ ἡἡἡἡἡἡ ἡἡἡἡἡἡ ἡἡ ἡἡἡἡἡἡ ἡἡ ports, ἡἡἡἡ ἡἡ (<http://www.freebsd.org/ports/master-index.html>).

3.1 ĐấêÝôá

Όά θαέΎόά αβίαέ θñĩ-iaóaaèuóóéoiΎíáo áóáñĩāΎó, èá ëΎāñāi ôĩ áíóβóóíé÷ĩ áéá ôĩ FreeBSD òuĩ áñ÷āβuĩ .deb óá óóóóβiaóá Debian/Ubuntu éáé òuĩ áñ÷āβuĩ .rpm óá óóóóβiaóá Red Hat/Fedora. Όά θαέΎόά āāēāēβóóáíóáé ÷ñóóēñíēíβíóáo óci áíóēβ pkg_add(1). Áéá θánŪāēēāi, ç āēuēĩōèç áíóēβ āāēāēéóóŪ ôĩñ **Apache 2.2**:

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

Ç ÷ ñΠός όçò ðáñáÝíññíð - ð ãäçããß öçí pkg_add(1) íá éáóääÜóää áðòùíáðá ðùóí ðí ðáéÝðí, ùóí éáé óéð áíáñðΠóáéð ðíð. éáé íá ðí ääéáðáóóðΠóáé:

```
# 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 ÷ η̇ςοείι̇ι̇τιέα̇β̇δ̇ά̇ ιέά̇ “α̇δ̇β̇ό̇ς̇ι̇ς̇” Ὑέ̇α̇ι̇ό̇ς̇ ο̇ι̇ο̇ FreeBṠD (6.2, 6.3, 7.0, ἐ̇ε̇δ̇. δ̇ι̇ο̇ α̇α̇ί̇έ̇ε̇ῶ̇ ἰ̇δ̇ι̇η̇α̇β̇δ̇ά̇ ιά̇ α̇α̇έ̇α̇δ̇α̇ο̇δ̇ρ̇α̇δ̇ά̇ α̇δ̇ῦ̇ CD-ROM) ς̇ α̇ί̇ο̇ι̇ε̇ṗ pkg_add -ṙ ε̇ά̇ ε̇α̇δ̇α̇α̇ῶ̇ο̇ά̇ ε̇ά̇ δ̇α̇έ̇Ὑ̇ό̇ά̇ δ̇ι̇ο̇ ο̇δ̇ε̇ῶ̇÷̇ ο̇ς̇ε̇ά̇ι̇ α̇ε̇ά̇ α̇δ̇ο̇ṗ ο̇ς̇ ο̇δ̇α̇ε̇α̇η̇ε̇ι̇Ὑ̇ί̇ς̇ Ὑέ̇α̇ι̇ό̇ς̇. Ὁ̇ά̇ δ̇α̇έ̇Ὑ̇ό̇ά̇ α̇δ̇ο̇ῶ̇ *β̇ο̇ῦ̇δ̇ α̇α̇ί̇ δ̇α̇η̇έ̇Ὑ̇÷̇ ι̇ῶ̇ι̇* ο̇ε̇δ̇ δ̇ε̇Ὑ̇ί̇ι̇ δ̇α̇ε̇α̇δ̇ο̇ά̇β̇α̇δ̇ α̇ε̇α̇ῦ̇ο̇ά̇ε̇ο̇ ο̇ῦ̇ι̇ α̇δ̇α̇η̇ι̇ι̇α̇ρ̇ί̇. ἰ̇δ̇ι̇η̇α̇β̇δ̇ά̇ ιά̇ ÷̇ η̇ς̇ο̇εί̇ι̇̇ι̇̇τι̇ε̇ρ̇α̇δ̇ά̇ ο̇ς̇ι̇ ἰ̇α̇δ̇α̇α̇ε̇ς̇ȯṗ δ̇α̇η̇έ̇α̇ῶ̇ε̇ε̇ί̇ι̇ο̇δ̇ `PACKAGESITE` α̇ε̇ά̇ ιά̇ δ̇α̇η̇ά̇ε̇ῶ̇ι̇α̇δ̇ά̇ α̇δ̇ο̇ṗ ο̇ς̇ι̇ δ̇η̇ι̇α̇δ̇ε̇ε̇α̇ι̇Ὑ̇ί̇ς̇ ο̇δ̇ι̇δ̇α̇η̇έ̇ο̇ί̇η̇ῶ̇. Ἀ̇ε̇ά̇ δ̇α̇η̇ῶ̇α̇α̇ε̇α̇ί̇α̇, ε̇Ὑ̇ο̇ι̇ῶ̇ά̇ ο̇ς̇ι̇ `PACKAGESITE` ο̇ό̇ς̇ι̇ ο̇έ̇ι̇ṗ <ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/> ε̇ά̇ ε̇α̇δ̇α̇α̇ῶ̇ο̇ά̇ά̇ ο̇ά̇ δ̇ε̇ί̇ δ̇η̇ῦ̇ο̇ά̇ά̇ά̇ δ̇α̇έ̇Ὑ̇ό̇ά̇ δ̇ι̇ο̇ ο̇δ̇ῶ̇η̇÷̇ ι̇ῶ̇ι̇ α̇ε̇ά̇ ο̇ς̇ ο̇ά̇ε̇η̇ῶ̇ 6.X.

Idioma Bôa é a língua nativa dos povos bôas, que vivem na região do rio Negro, no estado do Amazonas. A língua Bôa é uma língua da família das línguas tupi-guarani, mais precisamente da subfamília das línguas tupi. A língua Bôa é uma língua de contato, ou seja, é uma língua que surgiu a partir do contato entre as línguas tupi e guarani. A língua Bôa é uma língua de contato, ou seja, é uma língua que surgiu a partir do contato entre as línguas tupi e guarani. A língua Bôa é uma língua de contato, ou seja, é uma língua que surgiu a partir do contato entre as línguas tupi e guarani.

Άέά δάνεόουόαηάο δέçñíοíηΒάο ó÷:άόέέŨ íà óá δαέŸόά, δάηάέαεíγíá áέάáŨόά όçí áíúόçόά 4.4 όόí Áά÷:άέηΒαέí όíő FreeBSD: ×ñçόέííδīέpíόάό όí Óýόόçíá 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 äíöðäëäüðäë 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 äçäááíäí ëþäëä öíöð. ¼öäí ääëäëëöðÜðä Ýíä port, öí öýööçíä ëä ëäöäüÜðäë öíí äçäááíäí ëþäëä, ëä äöäñíüöäë üëäð öëð äðäëöíýíäíäð äëëäüÝð ÷ñçöíöíäíëíäíäð öä patches, ëä íäöäüäëüðöðäë öíí ëþäëä, ëäë öÝëíð ëä ääëäöäöðöäë öçí äöäñíäíäí. Èä äëëëíðëöäë öçí ääëä äëääëäëäöäíä ëäë äëä íðíëäüðíöðä öð÷üí äíäñöþíäíäí äñíäñÜíäíäðä.

[illegible]

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

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

```

já ócíaíóééú ðeáííÝéóciá óçð ÷ ñÞóçð ports óóçí áāēáoÜóóáoç ēīāēíóēēīŷ āíāé ç éēáíuóçóā ðñíóáñīāÞò òuī āðēēāþī
āāēáoÜóóáoçð. Āéá ðāñÜāāēāīā, uóáí āāēāēéóóÜōā òīī Apache 2.2 áðū óā ports īðñāñōā íā íāñāñāīōīēÞóāōā óçí
āðēēāþ mod_ldap ēÝōīīóáo āðēþò ðēīÞ óóç íāðāāēçðÞ WITH_LDAP òīō make(1):

```

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

Ἀεὶάποδα ὁπρὶ ἀνὸς 4.5 τοῦ Ἀ-ἀεῖα τοῦ FreeBSD, × ἡσέησέπιδόα ὁπρὶ Ports Collection (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/ports-using.html), ἁεὶ δᾶέοοῦἀνὰ δέησῖνβὰ ο-ἀέέῦ ἰα ὁ Οἰεῖα οὐ Ports.

3.3 Ports π δαέΥοά, οέ δῆΥδαέ ἰα ÷ ἡσέησέπιδόα;

Ὁ δαέΥοά ἀβίάε ὁπρὶ δῆσῖνδὲοά ἀδὲπ δῆ-ἰαάεῦδὲοῖΥἰα ports, ὕνα ἀβίάε δᾶέοοῦἀνὰ ἐΥἰα ἀδὲεῖα ἀβίάε ἀδὲοῖδπ ὅ ἀεῖαδὲοά αἰ οἰ δῆσῖν ἐπᾶέα π αἰ Υἰεῖα ἀεῖαΥοεία. Ἐῦεα ἰΥεῖα ὕ-ἀε ὁ δᾶῖαδὲπιδόα ὁπρὶ:

ΔαέΥοά (Υἰεῖα ἀεῖαΥοεία)

- Δεῖ ἀνδρῆς ἀεῖαδὲοά (ὅ ἰαάεπδὲοῖ ἰαῦεῖ ἀσῖνπ ἰδῖνβ ἰα ἀεῖαΥοά ἀνᾶδπ πῆα).
- Ἀἰ ÷ ἡεῦαδὲ ἰα εἰαῖβὰ δὺ ἀβίαδὲ ὅ ἰαάεπδὲοῖ τοῦ εἰεῖεῖ.
- Ἀἰ ÷ ἡεῦαδὲ ἰα ἀεῖαδὲοά ἰαάεῦδὲοῖ ὁπρὶ ὁπρὶ οῖα ὁαδ.

Ports (δῆσῖν ἐπᾶέα)

- Εἰαῖοδὲ δῆσῖνπ ἀεῖαδὲοά. (Ὁ δαέΥοά ὁπρὶ ἰαάεῦδὲοῖ ἰα ὁδ δῆσῖνδὲοῖ ἰαδὲεῖα). ἰα ὁ ports ἰδῖνβὰ ἰα δῆσῖνδὲοῖ ἰαῦεῖ ἀδὲεῖαΥ, ὕδὺ ὁπρὶ ἰαάεπδὲοῖ δῆσῖνδὲοῖ ἀνᾶδὲοῖ, π ἀεῖαδὲ ὁπρὶ δῆσῖνδὲοῖ ἰαδὲεῖαΥ ὅδ ἰαδὲεῖαΥ (patches) ἀ ὁ ἀδὲεῖαδ.

Ἀ ἰα ὕ-ἀα ἀεῖαΥ ἀεῖαδὲοῖ, ὁ δαέΥοά δᾶῖν ἐα ὁα εἰεῖοῖ ἰεα ÷ ἀνῦ. Ἀ ὁοῖ ÷ ἡεῦαδὲ ἰα δῆσῖνδὲοῖ εῦδῖεῖ ἀδὲεῖαΥ, οῦδὺ ὅ ἰΥεῖα οὐ ports ἀβίάε ὅ εἰεῖα. (Ἐε ὅεῖαδὲ, ἀ ÷ ἡεῦαδὲ δῆσῖνπ ἀεῖ δῆσῖνδὲοῖ ὁ δαέΥοά, ἰδῖνβὰ ἰαδὲεῖαΥ ὁπρὶ ὁδὲεῖα οὐ ports ἰα ὁεῖαδὲ ὁ ἀεῖ ὁαδ δῆσῖνδὲοῖ ὁ δαέΥοά ÷ ἡσέησέπιδόα ὁπρὶ ἀῖεπ make package εἰ ἀῖεῖαῖοῖ ὁ δαέΥοά τοῦ ἀῖεῖαδὲοῖ ὁ ὕεα ἰ-ἀῖα.)

4 Ἀεὶβίος τοῦ Ὁοῖα: Δῖ ἀβίάε ὁα run-levels;

Ὁ Linux ÷ ἡσέησέπιδόα τοῦ ὁπρὶ SysV, ἀπ τοῦ FreeBSD ÷ ἡσέησέπιδόα τοῦ δᾶῖαῖεῖ ὁπρὶ Ἀεὶβίος BSD. Ὁπρὶ ὁπρὶ init(8) ὁπρὶ BSD, ἀἰ ὁδῖν ÷ τοῖ run-levels, ἰαδὲ οἰ ἀ ÷ ἀβῖ /etc/inittab. Ἀῖβ ἀεὶ ἀδὲ, ὅ Ἀεὶβίος ἀεῖ-ἀδὲ αἰ Υἰα script Ἀεὶβίος, οἰ rc(8). Το script /etc/rc ἀεῖαῖ οἰ ἀ ÷ ἀβῖ /etc/defaults/rc.conf εἰ οἰ ἀ ÷ ἀβῖ /etc/rc.conf ἀεὶ ἰα εἰεῖαδὲ δῖεῖ δῆσῖνδὲοῖ δῆσῖνδὲοῖ ἰα ἰεῖπιδόα. ἰε δῆσῖνδὲοῖ ἀδὲ ἰεῖπιδόα ἰα ὁπρὶ ἀεῖαδὲ οὐ ἀῖβδὲ-ῖ script Ἀεὶβίος τοῦ ἀνᾶεῖαδὲ ὁπρὶ εἰεῖαδὲ /etc/rc.d/ εἰ /usr/local/etc/rc.d/. Ὁ scripts ἀδὲ ἀβίάε δᾶῖαῖ ἰα ὁ scripts τοῦ ἀνᾶεῖαδὲ ὁπρὶ εἰεῖαδὲ /etc/init.d/ ὁ ὁοῖαδὲ Linux.

*Ἀεάβοδ ὀδὺν ÷ τῶι αὐτῷ οἰδιρεὰσβὰδ ἀέα ὀά scripts ἀεβεῖςζόζοδ οὐι ὀδζῆσἀοέρη; Ὀά scripts δῖο ἀνθόειρήαέ ὀοίρ ἐάοὺεῖται /etc/rc.d/ ἀβίαέ ἀέα ἀοάνητᾺδ δῖο ἀΠεῖτοῖ ὀοί “ἀάοέου” ὀύοζζιά. (Ἀέα δάνὔΑαέαιά, ὀεδ cron(8), sshd(8), syslog(3), ἐάέ ὙεᾺδ.) Ὀά scripts δῖο ἀνθόειρήαέ ὀοίρ ἐάοὺεῖται /usr/local/etc/rc.d/ ἀβίαέ ἀέα ἀοάνητᾺδ δῖο Ὡ ÷ τῶι ἀαέαὀάὀάεᾺβ ἀδὺ οἰῶδ ÷ νΠῶὀὰδ, υδὺδ ἀέα δάνὔΑαέαιά ἱ **Apache**, οἱ **Squid**, ἐ.ἐ.δ.*

[illegible][illegible]

Όι άέυήρηήι άδύοδάοία άδύ όι άñ÷άβι /etc/rc.conf άίάñήήιέάβ όçí όδçñάόβά sshd(8) έάέ όήί **Apache 2.2**. Άδβόçό έάέñβæάέ ύόέ í **Apache** έά ήάέήίόάέ ήά άίάñήήιέçí Ýíç όç άόίάόύόçά SSL.

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

Ἄδῡ ὁϙ ὀόεαιῖP ḑiō iéá ὀδϙñáḑá áíáññāḑiēéçēáḑ ὀḑi áñ÷ḑḑi /etc/rc.conf, ḑiññáḑḑá íá ὁϙi íáééíPḑḑḑá ḑḑḑḑḑḑḑ
 ḑḑḑ ὁϙ ḑñáñḑP ḑiḑiēḑi (÷ññḑḑ íá ÷ñáéÜæḑḑḑ íá ḑḑḑíáéééíPḑḑḑ ὀi 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 Äéeôýĩõ

Άϊόβ άέα ôï ääíέü äíaáññéóóéü öýðĩö ethX ðĩö ÷ñçóéíðĩεάß ôï Linux áέα öçí äíaáññéóç íεáo äέαðáòÐò äéeôýĩö, ôï FreeBSD ÷ñçóéíðĩεάß üò äíaáññéóóéü ôï üññá öĩö ðññāÜñáöĩö íαÐαçóçð áεíεíöεíýáñ äü Üía ánέèü. Ç áεúεíöç Ýññáð äü öçí äíöĩεß ifconfig(8) äåß÷íáε äýí ÊÜñðáo äéeôýĩö Intel® Pro 1000 (ñä äíaáññéóóéëÜ 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 áëüëiðëç êáôâ÷þñçóç áéá íá êáëiñßóáôâ üôë iéá äéáðáöþ éá éäiâÛiáë ñöëißóáëð iÝóù DHCP:

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

6 Firewall

Όλοι Linux → ηνζοείνιείάβθαά οι **IPTABLES** οι ιδιβι θάνΥ → άε οδζηάοβθο firewall οά άδβθάάι δθνΠρί. Οι FreeBSD θάνΥ → άε άδβθόδ firewall ιΥού οιο δθνΠρί. Άέα οζι 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)

Òì **IPFWALL** ò **IPFW** (ç áfòrèÞ ÷ ðéñéóíñý ðùí éáíúíú òñ **IPFW** áðíáé ç ipfw(8)) áðíáé òí firewall ðñ Ò ÷ áé áíáððð ÷ èàð éáé òfòçñáððáé áðú òçí ñÜáá áíÜððòçð òíò FreeBSD. Òì **IPFW** íðññáð íá òfáðáóóðáð íá òí dummynet(4) áéá íá ðánÝ ÷ áé áfóíáðòðçððá ðéáíññòùòçð òçð èðíçççð ðáéÝðùí (traffic shaping) éáé íá áññíéðíáé áéáðñáðééíñð òýðñð òfáÝóáíñ áééðýíð.

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

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

Ôi **IPFILTER** ábíáé íéá áóáníāP firewall ðīō áíáðýóóāóáé áðū ôīī Darren Reed. Äāí Ý÷áé ööéá÷ðāß áéáéÜ áéá ôī FreeBSD, éáé Ý÷áé íāóāōāñēāß éáé óā Üēēā éáéðīōñāēÜ, óōīðñāēēāīāāāmÝýūi ôūī NetBSD, OpenBSD, SunOS, HP/UX, éáé Solaris.

ĐánŨäâëàíà áíüò êáíuíá ãéá ôí **IPFILTER** ðĩõ ãđéõñÝđăé áéóăñ÷:ùìáíá áăăñÝíá ðñĩò 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** açìérìòñãPèçèà ùò áíòééáòáóòÜòçò òìò **IPFILTER**, éáé Ýòóé ç óýíòáç òìò **PF** áñíáé 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 āāāiñÝiá đñiò ôçí õđçñăóóá **SSH**:

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

7 Άίάâáèìβæïĩôáò 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 ðçäááðì òðäëä äáíäé ç ðér ðíëýðèíêç, äëëÛ ðñìòóÝñäé éäé òç ìäääëýðäñç äðíäðÐ äðäëéíá. Ç äéääëéäðá äððÐ ðäñéëäìäÛíäé òì òðä÷ñííéðìù òìð òìðéëéý áíðéäñÛòìð òìð ðçäááðì òðäëä òìð FreeBSD ìä òìí òðäëä òìð FreeBSD ðìð äñáðéäðäé òðìð äìððçñäðçÝð CVS (Concurrent Versioning System). Äðù òç òðéäìÐ ðìð òì òìðéëù áíðáñäìð ðçäááðì òðäëä äáíäé äíáíäùÝñ, ìðññáððä ìä ìäðäëëùððáððä ìÝäð äëäùäðäð òìð ððñðíä éäé òìí ääðéëðì ðñìñäñìÛðùí. Äéä ðäñéðóóðäñäð ðççñìòìñáðð ò÷÷äðéëÛ ìä òì òýððçíä äíáäÛèìéðçð ìÝóù ðçäááðì òðäëä, äáððä òì èäðÛèäéí ÄíçìÝñòóç éäé ÄíáäÛèìéðç (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/updating-upgrading.html) òðì Ää÷äéñáëí òìð FreeBSD.

Ίε Υοιείαò (binary) áíááæèíòáæò, áβíáé ðáñüüíéàò ìá òç ÷ñÞòç òçò áíòíèÞò yum Þ apt-get áéá òçí áíááÙèíéòç áíüò ðòòòÞíáòíò Linux. Ç áíòíèÞ freebsd-update(8) èá èáòááÙòáé òèò áíááæèíòáæò éáé èá òèò áâéáòáóòÞòáé. Ìðíñáòá íá èáèñíòáòá òçí áòðüüíáòç, áíÙ òáèòÙ äéáóòÞíáóá áèòÝéáòç òçò, ìá òç ÷ñÞòç òíò cron(8).

Όγιὰβυός: Αί δñüēάέόάέ íá ÷ ñçόέííðíēΠόάðå ðí cron(8) áέá ðñĩāñáííáðέόéÝíäð áíáááèíßóáέó, ááááéüèåßððå ðé ÷ ñçόέííðíēåßðå όγι áíðíēΠ freebsd-update cron όðí áñ÷:åßí crontab(1) áέá íá åέå÷:έóóíðíēçèåßß ç ðééáíüðçðå íá åßíáóáé áíáÝýóç όγι Βέέå óééåìΠ åðü Ýíá íååÜēí åñéèü 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 áíððóðíë÷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 áíáññïðéçíÝíc ç ðñîèèçóç IP (IP forwarding). Óôî FreeBSD èà ðñÝðáé íá ÷ñçóéíððéóóáôâ ôî sysctl(8) áéá íá äâßôâ

ἀόδῖ ἐὰ Ὑεῖαδ ἡεὶβόαέδ οἷο ὁόόδῖαδῖο, ἐὰεῖδ οἷ procfs(5) ἐαῦἡαβόαέ δᾶἡ÷çìÝἡ ὁᾶ δἡῦόόαδᾶδ ᾶεῦῖόαέδ οἷο ἐᾶέοἡἡᾶεῖ. (Αἱ ἐὰε ç ᾶἰῖεῖῖ sysctl ᾶβἱᾶέ ᾶδβόçδ ᾶέᾶέÝῖέἱ ἐὰέ ὁἷ Linux).

Ὀἷ δᾶἡῖᾶᾶᾶ ὁçδ δἡἡεçόçδ IP, ἐᾶ ÷ἡçóέἡἡἡἡῖῖ ὁçἱ ᾶέῦἡἡἡἡ ᾶἰῖεῖῖ ᾶέᾶ ἱᾶ ἐᾶἡἡἡἡἡἡ ᾶἱ ç ᾶἡἡἡἡἡἡ ᾶἡἡῖ ᾶβἱᾶέ ᾶἡἡἡἡἡἡἡἡἡἡ ὁᾶ Ὑἱᾶ FreeBSD ὁῖὁçἱᾶ:

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

Ç ᾶἡἡῖᾶῖ -a ÷ἡçóέἡἡἡἡἡἡ ᾶέᾶ ἱᾶ δῖἡἡἡἡ ἱᾶ ἡβόᾶ ἱᾶ ὑεῖαδ ὁέδ ἡεὶβόαέδ οἷο ὁόόδῖαδῖο:

```
% 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
...
```

Ὀçἱᾶβῖὁç: Ἐῖἡἡᾶδ ᾶἡῖ ὁέδ ὁέἱῖὁ δἡῖ ᾶᾶῖᾶç ÷ἱᾶε ç ᾶἰῖεῖῖ sysctl ᾶβἱᾶέ ἱῦἡἡ ᾶέᾶ ᾶἱῖᾶἡὁç.

Ὀδῖἡ÷ἡἡἡ δᾶἡἡδῖὁᾶέδ ὑἡἡὁ ᾶδᾶέὁᾶβὁᾶέ ὁἱ procfs, ὑἡὑὁ ᾶέᾶ δᾶἡῖᾶᾶᾶᾶ ὑὁᾶἱ ᾶέὁᾶἡᾶᾶᾶ δᾶἡἡὑὁᾶἡἡ ἡἡᾶἡἡἡἡ, ὁἱ ἡἡἡἡ ἡῖἡᾶέ ÷ἡᾶὁç ὁçδ ᾶἰῖεῖῖδ truss(1) ᾶέᾶ ὁçἱ ᾶἡῖ÷ἱᾶὁç ὁἡἱ ἡἡᾶᾶἡἡ ὁόόδῖαδῖο, ἐὰε ᾶέᾶ ὁçἱ Ὀἡἡᾶὁὑὁçὁᾶ ἱᾶ Ἀἡὁᾶἡῖὁἡἡ ὁἡὁ Linux (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/linuxemu.html). (Αἱ ἐὰε ç Ὀἡἡᾶὁὑὁçὁᾶ ἱᾶ Ἀἡὁᾶἡῖὁἡἡ ὁἡὁ Linux ÷ἡçóέἡἡἡἡἡ ὁἱ ᾶἡἡὁçδ procfs, ὁἱ linprocfs(5)). Αἱ ÷ἡᾶἡῖᾶᾶᾶ ἱᾶ δἡἡὁᾶἡᾶᾶᾶ ὁἱ procfs, ἡἡἡᾶᾶᾶ ἱᾶ δἡἡὁἡῖὁᾶᾶ ὁçἱ ᾶἡἡἡἡἡἡ ᾶᾶἡᾶὁᾶ ὁἷ ᾶἡ÷ᾶἡἡ /etc/fstab:

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

Ὀçἱᾶβῖὁç: Ç ᾶἡἡῖᾶῖ noauto ἐᾶ ᾶἡἡᾶᾶᾶ ὁçἱ ᾶὁὁἡἡᾶὁç δἡἡὁῖἡὁç ὁἡὁ /proc ἐᾶὁῖ ὁçἱ ᾶἡἡἡἡὁç ὁἡὁ ὁόόδῖαδῖο.

δἡἡὁᾶἡᾶᾶᾶ ἡᾶὁὑἡἡἡ ὁçἱ procfs ÷ἡçóέἡἡἡἡἡᾶὁ ὁçἱ ᾶἡἡἡἡἡἡ ᾶἰῖεῖῖ:

```
# mount /proc
```


9 ÓõĩçèéóìÝíàò ÅíôïëÝò

9.1 Äéá÷åßñéóç ÐáêÝòùí

Άιότῆρ όϊό Linux (Red Hat/Debian)	ΆίόΒόοίέ÷ç αίόίερ FreeBSD	Όείθύο
yum install package / apt-get install package	pkg_add -r package	ΑάεάóŬόάόç δάéÝόίő άδñ άðñáēñόίÝñ áñδçñāόçòß
rpm -ivh package / dpkg -i package	pkg_add -v package	ΑάεάóŬόάόç δάéÝόίő
rpm -qa / dpkg -l	pkg_info	Ēβόάά āēēάόāόçìÝíúí δάéÝóúí

9.2 Äéá÷βñéóç ÓõóôÞíáôïò

ΆίόίεP Linux	Άίόβόόίε÷ç αίόίεP FreeBSD	Όείòùò
lspci	pciconf	ΈΒόόά όόόέâóí PCI
lsmod	kldstat	ΈΒόόά öïñòùíÝíúí áñèñùìÛòùí ðõñPíá
modprobe	kldload / kldunload	Öüñòùòç/Áðïöüññòùòç áñèñùìÛòùí ðõñPíá
strace	truss	Άίβ÷íâóóç êëPóâùí óóóóPíáôïò

10 ÓõìďǎñŮóìáôá

[illegible]