

ÃâêáôÛóôáóç áíüò CVS Repository — ï ôñüðïò ôïõ FreeBSD

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\$FreeBSD: release/8.4.0/el_GR.ISO8859-7/articles/cvs-freebsd/article.xml 39632
2012-10-01 11:56:00Z gabor \$

ÐíãðíáôêêÛ Äêêáêþíáôá © 2001, 2002, 2003 Stijn Hoop

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Ôï FreeBSD áβíáê Ýíá êáôï÷ ðñüìÝíï àìðñêêêü óýíáíêï òïõ FreeBSD Foundation.

ÐñêêÝò áðü òêò êÝíáêò þ òñÛóáêò íê ïðíáð ÷ ñçóêíïðñêíýíóáê áðü òïõ êáóáóêáóáóôÝò þ òïõ ðñêçôÝò òïõ áêá íá áêáêñβíïí óá ðñíüüíóá òïõ êáññíýíóáê àìðñêêêÛ óýíáíêá. ¼ðïò áðôÝò àìðáíβæííóáê óá áðü òï êáβíáí êáê áêá ùóàò áðü áðôÝò áíüñβæáê ç ìíÛáá ÁíÛððïçò òïõ FreeBSD ùêê áβíáê ðêêáíüí íá áβíáê àìðñêêêÛ óýíáíêá, êá ááβóá Ýíá áðü óá óýíáíêá: “TM” þ “®”.

Ôï Ûñêñí áðü ðãñêáñÛóáê óá áβíáôá ðïò Ýêáíá áêá íá áêáóáóôþóü Ýíá CVS repository ðï ÷ ñçóêíïðñêíáβ óá βáêá áñ÷áβá äÝçðò áñðñêñ (scripts) íá áðôÛ ðï ÷ ñçóêíïðñêíáβ êáê òï FreeBSD project óçç áêêþ ðïò áêáóôÛóáóç. Ç óðáêêñêñÝç ðñíóÝáêóç Ý÷êê áñêáò ðêáííáêòβíáôá Ýíáíêê íêáð ðððñêçýÝçð CVS áêáóôÛóáóçð, ùðð ðñ êáððñáñþ Ýêá÷ ðñüóááóçð óðí äÝíïñ òïò êþáêá êáêþ êáê áðüñíáð ðãñááñþ áðáíÛáñóóñí email íá êáððñÝñáêò áêá êÛêá áêêáþ óðñ ðçááβí êþáêá (commit).

1 Áêóáñüñþ

Ôá ðãñêóóüðãñá projects áêáýêáññï êñáêíêñý (free software) êáê áñê÷÷ïñ êþáêá (open source) ÷ ñçóêíïðñêíýí òï CVS óáí óýóçíá áêÝá÷÷ïò òïò êþáêêÛ òïò. Ðáññêñ ðï òï CVS áβíáê ðñêý êáêü óá áðüñí òï òñÝá Ý÷êê êê áðü òï ìáñβáêü òïò óá áêáóðβíáôá êáê ááðñáíβáð. Íêá áðü áðôÝò òêò ááðñáíβáð áβíáê òï ùêê ç êñêñþ ÷ ñþç êþáêá ìðñáβ áñþáíñá íá ìáçáþáê óá Ýíáí áêá÷ áêñêóðêêü áðêÛêç, áêáêêÛ áí òðÛñ÷ê ç áðêêòíá íá ðñíóáóáððïñýí ìêóíÝíá êñíÛóêá òïò äÝíïñ òïò êþáêá áðü êñêñþ ðñüóááóç.

Ç ìíÛáá ÁíÛððïçò òïõ FreeBSD ÷ ñçóêíïðñêíáβ áêðáñþ òï CVS. ÁêáêÝðáê áðβçðò íêá ìáÛêçç áÛçç áðü ðñáññáíáðêóóÝò áðü ðñêÝò áêáñíáðêêÝò ÷ þñáð. Áíáððý÷÷êêáí êñêðñí ìáñêêÛ áñ÷áβá äÝçðò áñðñêñ áêá íá êÛññí ðçí áêá÷ áβñêóç òïò repository ðñ áýêñêç. Ðñüóááóá óá áñ÷áβá áðôÛ áíáêáññþêêáí êáê êáññêñðñêçáí áðü òïñ Josef Karthausser <joe@FreeBSD.org> áêá íá áβíáê ðñ áýêñêñ íá ÷ ñçóêíïðñêçýí êáê óá Ûêêá Ýñáá. Ôï Ûñêñí áðü ðãñêáñÛóáê íêá ìÝêñí ÷ ñþçð áððñ ðñí íÝñí áñ÷áβáí äÝçðò áñðñêñ.

[illegible]

2 Đñþôç ÃẽêáôÛóôáóç

[illegible]

2.1 Áñ÷éêïðïßçóç ôïõ repository

Οι ὁηρῶι ὁηῦᾶι ὁῶ εᾶ ὁηῦᾶε ἰᾶ εῦἰᾶῶ ὑῶἰ ὀῶἰᾶῶ ῒἰ ἰῦἰ repository ᾶἰᾶᾶ ἰᾶ ᾶᾶῶ ὀῶἰ CVS ἰᾶ ὀἰ
 ᾶἰ÷εἰἰᾶἰᾶᾶ:

```
% cvs -d path-to-repository init
```

Áðöü ëÝæé öôi **CVS** íá äciéiõñãÞóæé öôi öÜêæi æéá÷ ðñéócò **CVSROOT**, üðïö öðiaáßiïí üêò íé ðánaiaðñiðieÞóæéð.

2.2 C iñÜää ôiõ repository

Όπως έα άγιείονάΠοίονά όςί νΰάά όόςί ιδίβά έα άίΠέάε όί repository. ¼είε ίε committers έα δñÝδαέ ίά άίΠείοί όά άόδΠ όςί νΰάά, πόόά ίά ιδñίίί ίά άñÜοίό όόί repository. Άέά όί όείδñ όόδñ έα ÷ñςόέιδñΠοίονά όςί βάέά νΰάά δñ ÷ñςόέιδñέάβ άέ' άόδñ όί όείδñ έάέ όί FreeBSD, όςί νΰάά ncvs.

```
# pw groupadd ncvs
```

ÌàòÜ, èà ðñÝðàé íá àèòàéÝóàòà òçí áíòíèÞ chown(8) óðíí öÜèàèí ìá ðánÜìàòíí òçí ñÜáá ðíò ìüèèð ðñíòéÝóáòà, èÝòííóáð Ýóóé òçí ñÜáá óòçí ìðíßá áíðèàé ì èáðÜèíàð:

```
# chown -R :ncvs path-to-your-repository
```

Áõôü âíáóöäëβææ üôé êáíáβò äáí èà ìðĩñáβ íá ãñÛøæé óôĩ repository áí äáí áíÐêæé óôcí óúóôÐ ñÛäá.

2.3 Đáßñĩĩĩôáo ôĩĩ ỏçãáßĩ êpăéeêá

[illegible]

2.4 ÁíóéãñÜöííôáò ôá scripts ôíõ FreeBSD

ἄφωδᾶνα, ἀφωέανῶροισι οἱ ῥααβὶ ἐπαέέα αἰο οἱ CV\$ROOT εἰοῦῆιαι οἷο FreeBSD οἱ ἀέέυ ιᾶο repository. Αἱ ἁβωᾶ ὀφίεέοι ῶρο ιᾶ οἱ CVS, βωοο ιᾶ οᾶο ὄανῶοᾶ αἰο οἱ ιοᾶέι ιᾶ ὄνιᾶᾶεβωᾶο ιᾶ εῦιᾶοᾶ import ὀᾶ scripts, ὀᾶ ιᾶ

[illegible][illegible]

```
% cvs -d path-to-your-repository checkout CVSRROOT
% cd CVSRROOT
% cp ../CVSRROOT-freebsd/* .
% cvs add *
```

[illegible]

2.5 Tá scripts

Ὁπρᾶ Ὡ÷ὰὸα ὁδῆι ὁὔεαῖρ ἁναὰὸβαὸ ὁὰὸ Ὡῖα ἀεῖνᾶῖὸ ἀὶὸβαῖαὶὸ ὁῖ scripts ὁῖ ὁῖ βαῖῖ ὁῖ FreeBSD project ÷ ἡὸὸῖῖῖῖῖῖ ὁῖ ἁῖῖῖ ὁῖ repository. Ἰῖα ὁῖῖῖῖῖ ὁῖ ὁ ὁ ÷ ἡὸὸῖῖῖῖ ὁῖ eὔᾶ ἁῖ ÷ ἁῖ ὁῖῖῖῖῖῖῖῖῖ ὁῖῖῖῖῖῖῖῖῖ.

- `access` - οἱ ἀν÷ἄβι ἀδού ἀὰ ÷ ñçóεἰῖῖεἶἄβδῶἔ ὀδέδ ὀῖçééοἱÝῖἄδ ἄἔἔἄὀὀὀὀὀὀὀ **CVS**. × ñçóεἰῖῖεἶἄβδῶἔ ἱῖῖ ὀὀçῖ ἄἔἔἔἔἔἔἔ ἄἔἔἄὀὀὀὀὀὀ ὀῖῖ FreeBSD project, ἄἔἔ ἰἄ ἄἔÝἄ÷ἄὀἔἔ ç ðñῡὀἄὀὀç ὀὀῖ repository. Ἰὀῖῖἄβδῶ ἰἄ ἄὀἔῖῖÝὀἄὀἄ ἄὀὀὀ ὀῖ ἄñ÷ἄβῖ ἄἰ ἄἄἰ ὀἄὀ ἄἰἔἔἄὀÝῖἄἔ ἰἄ ÷ ñçóεἰῖῖεἶἔἔἔἔἔἔἔ ἔὀὀἔ ὀÝὀἰἔἰ ὀὀç ἄἔἔἔ ὀἄὀ ἄἔἔἄὀὀὀὀὀὀ.
- `avail` - οἱ ἀν÷ἄβι ἀδού ἄἔÝἄ÷ἄἔ ὀçῖ ðñῡὀἄὀὀç ὀὀῖ repository ἄἰὀ ἔἄὀὀἔἔἄἰ **ἔ** ἄñ÷ἄβῖ. ἸÝὀἄ ὀἄ ἄὀὀὀ, ἰὀῖῖἄβδῶ ἰἄ ἔἔἔῖῖἄὀἄὀ ἰὀὀἄὀ ÷ ñçóὀἔἔ ὀὀῖὀὀ ἰὀῖὀὀὀ ἔÝἔἄὀἄ ἰἄ ἄἔὀἄὀἄ ðñῡὀἄὀὀç ὀὀῖ repository, ὀὀὀὀ ἄὀὀὀçὀ ἔἔἔ ἰἄ ἄὀἄἰῖῖÝὀἄὀἄ commits ὀἄ ἄὀὀὀἄἄἰ ἔἄὀἔὀἄἰὀ **ἔ** ἄñ÷ἄβῖὀ. Ἐἄ ὀñÝὀἄἔ ἰἄ ὀῖ ὀñὀἄῖῖὀὀἄὀἄ ἔὀὀἄ ἰἄ ὀἄñἔÝ÷ἄἔ ὀὀὀ ἰὀὀἄὀ ÷ ñçóὀἔἔ ἔἔἔ ὀῖὀὀ ὀἄἔÝἔὀὀὀ ὀῖὀ ἔἄ ὀὀὀñ÷ὀὀἰ ὀὀἰ ἄἔἔὀ ὀἄὀ repository.
- `cfg.pm` - οἱ ἀν÷ἄβι ἀδού ἄñῖçῖἄÝἄἔ ὀὀὀ ñὀἔἰὀὀἄἔὀ ὀἄὀ ἔἔἔ ὀἄñÝ÷ἄἔ ὀὀὀ ἄἰὀ ἰñἔὀῖÝὀ ñὀἔἰὀὀἄἔὀ. Ἀἄἰ ὀñÝὀἄἔ ἰἄ ἄἔἔὀἰἄὀἄ ἄὀὀὀ ὀῖ ἄñ÷ἄβῖ. Ἀἰὀἔἄὀἄ, ἔἄ ὀñÝὀἄἔ ἰἄ ὀῖὀἔἔἄὀὀὀἄὀ ὀὀὀ ἄἔἔÝὀ ὀἄὀ ἄἔἔἄÝὀ ὀὀὀὀ ñὀἔἰὀὀἄἔὀ ὀὀἰ ἄñ÷ἄβῖ `cfg_local.pm`.
- `cfg_local.pm` - οἱ ἀν÷ἄβι ἀδού ὀἄñἔÝ÷ἄἔ ὀἄἔ ὀὀὀἔἔὀἄἰἄἰὀ ὀἄñἄἰÝὀñὀὀὀ ὀῖὀ ὀὀὀὀὀἄὀὀὀ. Ἐἄ ὀñÝὀἄἔ ἰἄ ἔὀὀἰἄὀ ἰὀἔἔἄὀἔὀὀἄ ñὀἔἰὀὀἄἔὀ ὀἄὀ ἄἄἔ, ὀὀὀὀ ὀἄ ὀἰἔἄ ἄἔἄἔὀὀὀç ἔἄ ὀὀÝἔῖῖὀἄἔ ὀἄ email ἄὀὀ ἔὀἔἄ commit, ὀἄ ὀἰἔὀὀὀ ὀἄὀ ἔἄ ἄὀὀὀñÝὀἄὀἄἔ ἰἄ ἄἔῖῖὀἄἔ commit, ἔἔὀ. ὀἄñἔὀὀὀὀἄñἄὀ ὀἔçῖῖὀἰῖἄὀ ὀ÷ἄὀἔἔὀ ἰἄ ἄὀὀὀ ἔἄ ἄñἄὀὀ ὀἄñἄἔὀὀὀ.
- `checkoutlist` - οἱ ἀν÷ἄβι ἀδού ὀἄñἔἔἄἰἄὀἰἄἔ ὀἔἄ ὀἄ ἄñ÷ἄἄἄ ὀῖὀ ἄñὀἔῖῖὀἄἔ ἔὀὀὀ ἄὀὀ ὀῖὀ Ýἔἔἄ÷ἰ ὀῖὀ **CVS** ὀὀῖὀ ἔἄὀὀἔἔἄἰ ἄὀὀὀ—ὀἔἄ ἄἔὀὀὀ ἄὀὀ ὀἄ ὀñἰἔἔῖῖὀἔὀἰÝἰ ἄñ÷ἄἄἄ ὀῖὀ ἄçἰἔὀἰἄἄἄ ç ἄἰὀἔἔ `cvs init`. Ἐἄ ὀñÝὀἄἔ ἰἄ ὀῖ ἄἔἔὀἰἄὀἄ ἄἔἄ ἰἄ ἄὀἔῖῖὀÝὀἄὀἄ ἰἄñἔἔὀ, ὀ÷ἄὀἔἔὀ ἰῖῖἰ ἰἄ ὀῖ FreeBSD, ἄñ÷ἄἄἄ.
- `commit_prep.pl` - οἱ script ἄὀὀὀ ἄἔὀἄἔἄἄ ἄἔὀὀἰῖὀὀ ἄἔÝἄ÷ὀὀὀ ὀñἔἰ ἄὀὀ ἔὀἔἄ commit, ἄἰὀἔἔἄ ἰἄ ὀὀὀ ñὀἔἰὀὀἄἔὀ ὀῖὀ Ý÷ἄὀἄ ἔὀἰἄἔ ὀὀἰ ἄñ÷ἄβῖ `cfg_local.pm`. Ἀἄἰ ἔἄ ÷ ñἄἔἄὀὀἄ ἰἄ ὀἄἔῖὀἰἄὀἄ ἄὀὀὀ ὀῖ ἄñ÷ἄβῖ.
- `commitcheck` - οἱ script ἄὀὀὀ ἔἔἔἄὀἄἔ ἄὀἄὀἔἄἄὀ ἄὀὀ ὀῖ **CVS**. ὀñἔὀἄ ἄἔÝἄ÷ἄἔ, ÷ ñçóεἰῖῖεἶἔἔἔἔἔ ὀῖ ὀñῡἄἄἰἰἄ `cvs_acls.pl`, ἄἰ ἰ committer Ý÷ἄἔ ὀñῡὀἄὀὀç ὀὀἰ ὀὀἔἔἔἔñἔἰÝἰ ἰÝἡἡὀ ὀῖὀ ἄÝἰὀἡὀ ὀῖὀ ἔἔἔἔἔ, ἔἔἔ ἰἄὀὀ ἄἔὀἄἔἄ ὀῖ `commit_prep.pl` ὀῖὀ ἄἔὀἄἔἄἄ ὀῖὀὀ ἄἔὀὀἰῖὀὀὀ ἔἔἔἔἔ ἄἔÝἄ÷ὀὀὀ. Ἀἰ ἄἄἰ ὀὀὀñἡἡἄ ἔὀὀἔἣ ὀñῡἄἔἣἄ ὀὀὀὀ

æſŸa÷iðð æððŸyð, ðuðð ðŸ **CVS** èà àðèðñŸðæè ððŸ commit íà óðfà÷ßóæè. Äáf èà ÷ñæèáóððß íà ðæñŸŸàðð áðð ðŸ àñ÷àßŸ.

- [illegible]

ΌγιαΒυός: Όι script άίάηόÜöáé áðù íεά öíðέéP áέέάäP öíö FreeBSD öóì **CVS:** Ç áέέάäP áðòP íáíááέάáÜæáé öí log íPíöía áóüY áðòù Ý÷-áé öñíöíðíçèçáB áðù öí script. Ç έάííέéP Ýέäíróç öíö **CVS** öñíöáípö äáí eÜíáé eÜöé ðÝóíéí, íðùöá öí **logcheck** ää íðñåB íá eÜíáé íέéñíáéíñepóáéo öóì log íPíöía, áέeÜ íðñåB íá äeÝáíáé üöé öí íPíöía äáí Ý÷-áé öóíóáéöééÜ eÜèç. Áðí öçí Ýέäíróç 1.11.2 έáé íàöÜ öí Báéí öí **CVS** íðñåB íá ñöèíeoáb íá Ý÷-áé öçí Báéá öóíðåñéöíñÜ íá äòðP öíö Ý÷-áé ç Ýέäíróç öíö FreeBSD íà öçí åðééíäP RereadLogAfterVerify=always öóì äñ÷-åBí config.

- **loginfo** - οἱ ἀν÷ἀβι ἀδού ÷ ἡγορεύῃδεῖαβόαε ἀδού οἱ **CVS** ἀεά οἱ Ἱεᾶᾶ÷ι οἷο θῖο ἐά οόἹεῖνιόαε ἱε δεῖῃνῖοῖνβᾶο οὐἱ logs. Ἀᾶῖ ἀᾶῖᾶῖδεῖαβόαε οἱ θῖνῖᾶῖᾶἱἱἱ log_accum.pl. Ἀᾶἱ ἐά ÷ ἡᾶεᾶόοᾶβ ἱά θᾶεῖνῖᾶᾶᾶ ἀδού οἱ ἀν÷ἀβι.
- **modules** - οἱ ἀν÷ἀβι ἀδού ᾶεᾶόϋῃᾶβ ὁϋῖ θᾶῖᾶᾶῖόεᾶεᾶ οἷο ὁϋᾶᾶᾶ ὁοἱ **CVS**. Ἐᾶ θῖἹᾶᾶ ἱά ἀᾶᾶῖᾶᾶᾶ ὁᾶ **FreeBSD** modules ἀδού ὁϋῖ ἐᾶῖῖεῖᾶ Ἱεᾶῖοϋ. Ἰθῖῖᾶᾶᾶ ἱά ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ ἀδού οἱ ἀν÷ἀβι ἀῖῖεῖᾶᾶ ἱά ὁεᾶ ᾶδεῖοῖβᾶο ὁᾶᾶ. θᾶῖᾶᾶᾶᾶᾶᾶᾶ δεῖῃῖοῖνβᾶο ᾶεᾶ οἱ ἀν÷ἀβι ἀδού ᾶβῖᾶε ᾶεᾶεἹόεᾶᾶ ὁοἱ ᾶᾶ÷ᾶεῖᾶᾶεἱ οἷο **CVS**.
- **notify** - οἱ ἀν÷ἀβι ἀδού ÷ ἡγορεύῃδεῖαβόαε ἀδού οἱ **CVS** ὁᾶῖ θᾶῖᾶᾶᾶᾶᾶ ᾶῖο εῖῖᾶῖᾶᾶ ὁἱδεῖᾶᾶᾶᾶ ᾶῖᾶῖᾶᾶ ᾶᾶᾶῖῖεῖϋεϋεϋεϋ ὁᾶ εῖῖᾶῖᾶ ἀν÷ἀβι. Ἀᾶἱ ÷ ἡγορεύῃδεῖαβόαε ὁοἱ repository οἷο **FreeBSD**. Ἰθῖῖᾶᾶᾶ ἱά ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ ἀδού οἱ ἀν÷ἀβι ἀῖῖεῖᾶᾶ ἱά ὁεᾶ ᾶδεῖοῖβᾶο ὁᾶᾶ. θᾶῖᾶᾶᾶᾶᾶᾶᾶ δεῖῃῖοῖνβᾶο ᾶεᾶ οἱ ἀν÷ἀβι ἀδού ᾶβῖᾶε ᾶεᾶεἹόεᾶᾶ ὁοἱ ᾶᾶ÷ᾶεῖᾶᾶεἱ οἷο **CVS**.
- **options** - οἱ ἀν÷ἀβι ἀδού ὁ÷ᾶᾶᾶᾶᾶᾶ ῖᾶᾶᾶ ἱά ὁϋῖ **FreeBSD** Ἱεᾶῖοϋ οἷο **CVS** ἐᾶε ὁᾶῖᾶᾶᾶᾶᾶᾶᾶᾶ ἱῖῖῖ ἀδού ἀδᾶᾶ ἔᾶε ὁϋῖ Ἱεᾶῖοϋ οἷο **Debian**. θᾶῖᾶἹ÷ᾶε οἱ keyword ᾶῖο ἐᾶ ᾶβῖᾶᾶᾶ expand ὁᾶᾶ revision headers. Ἐᾶ θῖἹᾶᾶ ἱά ὁῖῖᾶῖᾶῖᾶᾶᾶᾶ οἱ ἀν÷ἀβι ἀδού ᾶεᾶ ἱά ᾶβῖᾶε βᾶεἱ ἱά ὁϋῖ Ἱεᾶῖοϋ ᾶῖο Ἱ÷ᾶᾶ ᾶεᾶῖᾶᾶ ὁοἱ ἀν÷ἀβι `cfg_local.pm` (ᾶἱ ᾶᾶῖᾶᾶᾶᾶᾶ ἱά ÷ ἡγορεύῃδεῖᾶᾶᾶᾶ ἀδᾶᾶ ὁϋῖ ἐᾶεᾶῖᾶᾶᾶᾶ, ᾶῖο θῖῖᾶ ὁἱ θᾶῖῖῖ ᾶῖᾶᾶᾶ ὁᾶᾶᾶᾶ ἱῖῖῖ ἱά ὁϋῖ Ἱεᾶῖοϋ οἷο **CVS** ᾶῖο Ἱ÷ᾶε οἱ **FreeBSD**).
- **rcsinfo** - οἱ ἀν÷ἀβι ἀδού ᾶῖᾶᾶᾶᾶᾶ÷ᾶᾶ ὁᾶἹεἹῖᾶᾶ οἷο repository ὁᾶ ἀν÷ᾶᾶᾶ template, ῖᾶᾶᾶ ᾶ.÷. οἱ `rcs` template. Ἀἱᾶᾶ ἱῖᾶῖῖῖ, οἱ **FreeBSD** ÷ ἡγορεύῃδεῖᾶᾶ Ἱῖᾶ template ᾶεᾶ ῖῖῖῖῖῖῖ οἱ repository. Ἰθῖῖᾶᾶᾶ ἱά θῖῖᾶᾶᾶᾶᾶ ἔᾶε ῖῖῖᾶ ὁοἱ ἀν÷ἀβι ἀδού ᾶἱ οἱ ᾶδεῖοῖᾶᾶᾶ.
- **rcs template - οἱ ἀν÷ἀβι ἀδού ᾶβῖᾶε οἱ template ᾶῖο ἐᾶ ᾶῖῖῖ ὁᾶῖῖῖῖῖ ἱε `committers` ῖᾶᾶᾶ ἔᾶ εῖῖῖῖῖ `checkin`. Ἐᾶ θῖἹᾶᾶ ἱά ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ ἀδού οἱ ἀν÷ἀβι ᾶᾶᾶ ἱά θᾶῖᾶᾶᾶᾶᾶ ὁεᾶ ᾶεῖᾶῖᾶᾶ ᾶδεᾶᾶἹῖᾶ ᾶᾶᾶᾶᾶᾶᾶ ᾶῖο ἱῖᾶᾶᾶᾶ ὁοἱ ἀν÷ᾶᾶἱ `cfg_local.pm`.**
- **tagcheck** - οἱ ἀν÷ᾶᾶἱ ἀδού ᾶεἹᾶ÷ᾶε ὁϋῖ θῖῖᾶᾶᾶᾶ ὁᾶῖᾶ ÷ ᾶᾶᾶ ὁῖᾶ tags ὁοἱ repository. Ὲ ἔᾶῖῖῖᾶᾶ Ἱεᾶῖοϋ οἷο **FreeBSD** ᾶᾶᾶ ᾶδεᾶᾶἹᾶᾶ tags ἱά ἱῖῖῖᾶᾶ ῖᾶᾶᾶ `RELENG*`, εῖῖῖῖ ὁϋᾶ ᾶεᾶᾶῖᾶᾶᾶ ᾶῖᾶῖᾶᾶᾶᾶ ὁῖᾶ ᾶᾶᾶᾶᾶᾶ ᾶεᾶᾶᾶᾶ. Ἐᾶ θῖἹᾶᾶ ἱά ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ οἱ ἀν÷ᾶᾶἱ ἀδού ἀῖῖεῖᾶᾶ ἱά ὁεᾶ ᾶεἹᾶ ὁᾶᾶ ἀῖῖεῖᾶᾶᾶ ᾶῖᾶᾶᾶᾶᾶ.
- **taginfo** - οἱ ἀν÷ᾶᾶἱ ἀδού ᾶῖᾶᾶᾶᾶᾶ÷ᾶᾶ ᾶᾶᾶῖᾶᾶᾶᾶ ὁῖᾶ tags ὁᾶ ὁᾶἹεἹῖᾶᾶ οἷο repository ἱά θῖῖᾶᾶᾶᾶᾶᾶ ᾶεἹᾶ÷ῖᾶ, ῖᾶᾶᾶ οἱ `tagcheck`. Ἀᾶἱ ἐᾶ ÷ ἡᾶεᾶᾶᾶᾶ ἱά ὁῖᾶῖᾶῖᾶῖᾶᾶᾶᾶ ἀδού οἱ ἀν÷ᾶᾶἱ.
- **unwrap** - οἱ ἀν÷ᾶᾶἱ ἀδού ἱᾶῖᾶᾶ ἱά ÷ ἡγορεύῃδεῖᾶᾶᾶ ᾶεᾶ οἱ ἀδᾶᾶᾶᾶᾶᾶᾶ “`unwrap`” ὁῖᾶ binary ἀν÷ᾶᾶῖᾶ (ᾶᾶᾶᾶ `cvswrappers`) ὁοἱ `checkout`. Ἀᾶἱ ÷ ἡγορεύῃδεῖᾶᾶᾶᾶ ὁᾶῖᾶ ὁῖᾶἹ÷ῖᾶᾶ ᾶᾶᾶᾶᾶᾶᾶᾶᾶ ὁἱο **CVS** ᾶεᾶ οἱ **FreeBSD** ᾶᾶᾶᾶᾶ ᾶᾶᾶ ᾶεᾶῖᾶᾶᾶᾶ ὁᾶᾶᾶᾶ ἱά ὁᾶ ᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶᾶ `commits`. Ἀᾶἱ ἐᾶ ÷ ἡᾶεᾶᾶᾶᾶ ἱά ὁῖᾶῖᾶῖᾶῖᾶᾶᾶᾶ οἱ ἀν÷ᾶᾶἱ ἀδού.
- **verifymsg** - οἱ ἀν÷ᾶᾶἱ ἀδού ᾶῖᾶᾶᾶᾶᾶ÷ᾶᾶ ᾶᾶᾶᾶᾶ

2.6 Ôñïðïðïépíôáò ôá scripts

[illegible]

1. Áí aái ēYēāōā íá ÷ñçóéúíðíēíPóāōā óēō ēāēōíōñāñāō ðúí scripts íē íðíBāō ÷ñçóéúíðíēíYíōāē āðíēēāēóōēēŪ āðú ðí FreeBSD, íðíñāBōā íá āōāēñYōāōā íā āōōŪēāēā ðí āñ ÷āBí access:

```
% cvs rm -f access
```

- [illegible]

[illegible]

3. Αέινεηπόά οί άν÷άβι cfg_local.pm πόά ίά άάνεΨ÷άε όέό άδέεραΨό όίό άδέεοιαβόά. Δεί οάάεάεηείΨία, έά όηΨάε ίά άεΨάαόά όέό άάηάεΨού όηόόίόέόέόάό άδέεραΨό:

- `%TEMPLATE_HEADERS` - ΆόόΥό ιέ άόέέάόάέβääά άάάάάάΥάέίόάέ άάύ άά log scripts, έάέ όίόέάόίόάέ έÜòú άάú όί mail όίό έÜέά commit άί όóÜñ÷íόί έάέ άάί άβίάέ έάρΥό όόί íΠíόíά όίό commit. ΆάίέέÜ, ίόíñάβόά ίά άόάέñÝόάόά όέό έάόά÷üñΠόάέό PR έάέ MFC after—άόίΥ άόόΥό ό÷ άόβάέίόάέ ίά όί bug tracking όύόόçíά όίό FreeBSD έάέ όίí όñüóí όίό áéá÷áέñβάάόάέ όί FreeBSD όά branches όίό repository όίό. Έάέ όóóéέÜ ίόíñάβόά ίά όñíóéÝόάόά όέό áééÝό όάό.
- `$MAIL_BRANCH_HDR` - Άί έÝέάόά ίά όñíóóβέάόάέ άόóúíάόά ίέά άόέέάόάέβääά όά έÜέά commit íΠíόíά mail, ç íόíβά έά όāééñÜóáé όί branch όόí íόíβí Ýáéíά όί όóāéáéñéíÝíí commit, íñβóόά όçí όéíΠ άόόΠ ίά όáéñéÜæáé ίά όçí áééΠ όάό áāéáóÜóόάόç. ΆόΠόόά όçí έάρΠ άί άáí άόééóíάβóá ίά όñíóóβέάόάέ άόóúíάόά ίέά όÝόíéά άόééáóáέβää.
- `@COMMIT_HOSTS` - Íñβóόά όçí όéíΠ άόόΠ όά ίέά έβóόά άάú όóóóΠíάόά (hosts), άάú όά íόíβά άόéóñÝόáόáέ ίά áβíííόάέ commits.
- `$MAILADDRS` - Ñóéíβóόά άόόΠ όçí όéíΠ όόí email όίό áéá÷áέñéóόΠ Π όά ίέά áéáyèóíόç έβóόáó όόçí íόíβά έÝέάόά ίά όçāáβííóí όά mail óúí commit íçíóíÜóúí.
- `@LOG_FILE_MAP` - ΆέéÜíόά άóóú όí array üóúó άόééóíάβóá. ÊÜέά regexp áíóéóóíé÷άβ όóí óóāéáéñéíÝíí óÜέáéí όóíí íόíβí áβíάόáέ όí commit, έάέ όí log íΠíόíά όίό commit άóíεçéáyάόáέ έÜòú άάú όíí έáóÜέíāí CVSROOT, óóíí όóíéáóÜέíāí commitlogs, óóí áñ÷άβí όίό áíáóÝñáόáέ όόçí áíóβóóíé÷ç áāāñáóΠ όíó όβíáéá @LOG_FILE_MAP.
- `$COMMITCHECK_EXTRA` - Άί άáí έÝέάόά ίά ÷ñçóéííóíéΠóáόá όíóó βáéíóó áéÝā÷íóó όñüóááόçó ίá όí FreeBSD, έá όñÝόáé ίά áóáéñÝóáόá όíí íñéóíü όçó όéíΠó \$COMMITCHECK_EXTRA άáú όí áñ÷άβí άóóú.

ΌçiaBuòç: Ç äëëäâP òçò ðãñáíYòññò §IDHEADER äßíäë äääòçíYññ üòë èä äñöëYðäë üññ óä ðëäóðññíäò FreeBSD. ÄíäñòÜòäë äðü äëäëëYð íäðäóñññYð òñò FreeBSD óññ **CVS**.

Ἰδιναβόα ἰά ἀεΨάῖαόα ὀι ἀν÷αβῖ cfg. pm ἀέα ἰά ἀαβόα θῖεΨό Ὑεεαό θἀναΨόνῖρο ἰθῖναβόα ἰά ἀεεῤῖαόα, ἀεεῤ ἰε θἀναθῤῖ ἄβῖαε ἰε θει ὀοῖβεαέο ἀδεεῖαΨό.

4. Άðáíññάάόðáðá ðí áñ÷áßí exclude áέά íά áóáέñÝóáðá ðέð áέáέέÝð έάóá÷ññðóáέð ðíð FreeBSD (üðüð üέáð ðέð ãñáñÝð ðíð íáέέñíýí íá ^ports/ έðέ.). Άέðüð áððíý, áÜέðá óá ó÷üέέá ðέð ãñáñÝð ðíð íáέέñíýí íá ^CVSROOT/, έάέ ðñíóέÝóóá íέά ãñáñP ðíð έá ðáñέÝ÷άέ íüñí ðí ^CVSROOT/. Áóíý ááέάðáóðáέáß í wrapper, íðññáðá íά ðñíóέÝóóá ðí áέέü óáð header óóá áñ÷áßá ðíð ãñáðέñíóáέ íÝóá óóñí έάðÜέíñí CVSROOT έάέ íά áðáíáðÝñáðá ðέð ãñáñÝð áððÝð, áέέÜ ðñíð ðí ðáññí áðέÜ έá óáð áçíέíññáðóíðí ðñíáέðíáðá üðáí έá ðñíóðáέðóáðá íά έÜíáðá commit áññüðáñá.
5. Áñíßíðá ðí áñ÷áßí modules, έάέ áóáέñÝóóá üέáð ðέð ó÷áðέέÝð íá ðí FreeBSD έάóá÷ññðóáέð. ðñíóέÝóóá óá áέέÜ óáð modules áí ðí áðέέðíáðá.
- 6.

Όçíáßüόç: Όí áðíá áððü áßíáέ áðáñáððçðí íüñí áí Ý÷áðá ãñáðáέ έÜðíέá ðέíP óóçí ðáñÜíáðñí \$IDHEADER ðíð áñ÷áßíð `cfg_local.pm` (ç íðíßá äíðέáýáέ íüñí áðüóñí ÷ñçóέñíðíέáßáðá óçí ðñíðíðíέçíÝÝç Ýέáñόç ðíð CVS ðíð Ý÷άέ ðí FreeBSD).

Άέíñέðóáð ðí áñ÷áßí `options` þóðá íά óáέñέÜáέ íá ðí tag ðíð ãñáðáðá óðí áñ÷áßí `cfg_local.pm`. Íέά áíáάPðçόç έάέ áíðέέáðÜóóáόç ðíð FreeBSD óá üέí ðí áñ÷áßí áßíáέ áñέáðP.

7. Άðáíññάάόðáðá ðí áñ÷áßí `rcstemplate` þóðá íά ðáñέÝ÷άέ óá ßáέά keywords íá áððÜ ðíð Ý÷áðá ãñáðáέ óðí `cfg_local.pm`.
8. ðñíáέñáðέέÜ, áóáέñÝóóá ðíðð áέÝá÷íðð ðíð FreeBSD áðü ðí áñ÷áßí `tagcheck`. Íðññáðá áðέÜ íά ðñíóέÝóóáðá `exit 0` óóçí áñ÷P ðíð áñ÷áßíð áέά íά áðáíññáñðíέPóáðá üέíðð ðíðð áέÝá÷íðð óðí tagging.
9. Όí óáέáððáßí ðñÜñíá ðíð ðñÝðáέ íά áßíáέ, áßíáέ íά óέáññáððóáðá üέέ óá commitlogs íðñíýí íά áðíέçέáððíýí. Óá CVS scripts ðíð FreeBSD áðíέçέáýíðí áððÜ óá logs óðñí ððíέáðÜέíñí commitlogs ðíð έáðáέüññ CVSROOT. Áððüð í ðÜέáέðð ðñÝðáέ íά áçíέíññáçέáß, íðüðá έÜíðá óá áέüέíðέá:

```
% mkdir commitlogs
% cvs add commitlogs
```

Όðñá, áóíý áέÝáñáðá óá ðÜíðá ðñíóáέðέέÜ, έá ðñÝðáέ íά έÜíðáðá commit ðέð áέέááÝð óáð. Öññíðóóá íά áßóóá óßáññíέ üέέ Ý÷áðá áðóáέ óðñí ááððü óáð ðñüóááόç óðñí ðÜέáέí CVSROOT íÝóá áðü ðí áñ÷áßí `avail` ðñέí έÜíðáð íðέáððíðá, áðüóñí óóçí áíðßέáðç ðáñßððüόç έá έέáέððóáðá ðñí ááððü óáð Ýñ. Íðüðá, ðññíðóóáðá óá ðÜíðá íά áßíáέ üðüð áðέέðíáðá, έάέ íüñí ðüðá áðóðá óá áέüέíðέá:

```
% cvs commit -m '- Initial FreeBSD scripts commit'
```

2.7 ΆñέέíÜáέííðáð óçí ΆáέáðÜóóáόç

Άßóðá Ýóíέíñέ áέá óçí ðñðçç óáð äñέέíP: íά forced commit óðí áñ÷áßí `avail`, áέά íά óέáññáððóáðá üέέ üέá äñέέáýíðí üðüð έá Ýðñáðá.

```
% cvs commit -f -m 'Forced commit to test the new CVSROOT scripts' avail
```

¶í üέá ðÜíá έáέÜ, óðá÷áñçðPñέá! ,÷áðá έáðáóÝñáέ íά óððóáðá íέά ðέPññð έáέíññáέέP ááέáðÜóóáόç ðñí FreeBSD scripts áέá ðí repository óáð. Óóçí ðáñßððüόç ðíð ðí CVS áñáέíñέáß íά ðáñáðñíέÝóáέ áέá έÜðέ, áðέóðñÝððá óóέð ðñíçáñýíñáð áñüðçðáð έάέ áέÝáñðá íáíÜ üέέ Ý÷áðá áέðáέÝóáέ óüóðÜ üέá óá ðñíçáñýíñá íáðíáðá.

3 Åéäêþ ÄãéáôÛóâáç ôïõ FreeBSD Project

Οι Βαέι οι FreeBSD project ÷ ηςοείηθιέας ιέα άεάοηθο άεάοιηθόέεθ άεάόÜóóáoς, ς ιθίβα ÷ ηςοείηθιέας άδθόçò
 άη÷άβα άδθ οιθ οθροÜεάει freebsd οιθ CVSROOT θιθ ÷ ηςοείηθιέαςόάε όοι FreeBSD. Οι project ÷ ηάεÜεάόάε εÜóε
 óÝοιέι ευάθ οιθ ιάάÜειθ άηέειρý όυι committers, θιθ άεάοιηθόέεÜ εά Ýθηάθ ιά άίθειθι υέιέ όοι Βαέι group. ρόέ,
 άçιέιθηάθεçεά Ýιáo άδευó wrapper ι ιθίβιθ όοιρ θηθόά άιáoóάεθάε όά όυόóÜ άεάέόόάθόθηέά όυι committers,
 άεεÜεάε ιάóÝθάέόά όι group id óά άόόυ οιθ repository.

Ἄν ἐὰν οἱ ἀέεῦ ὁὰδ repository ÷ nāēŬāāḁāē eŬōē árŬērai, ὁὰ āPiáḁā ḁiō eā ḁnŬāē íā āēterōēPḁāḁā āēterōēŕí
 ḁānāēŬōū. ÁēēŬ ḁnḁḁā ḁḁ eŬññā íēā ḁŕiōñc āḁēḁēuḁcḁc ḁūi ḁ÷ āḁēēŕi āñ÷ āāŭi.

3.1 Άν÷άΒα ðĩ ÷ñçóèìïðíéíýíôáé óôçí áéáéêþ åãéáôÛóôáóc ôĩ FreeBSD

- `access` - `οἱ ἀν÷ὰβι ἀδού` ἀέ Ἰα÷ἀέ οέδ δέçññöññßàð áéá óá áééáéñíáðá ðñúóááóçð. Èá ðñÝðáé íá οἱ áðáñáñááóóáßðá áñÙεἰάá Ἰóóé þóðá íá ðáñέέáñáÙíáé üéá óá ìÝέç öñð project óáð.
- `freebsd/commitmail.pl` - `οἱ ἀν÷ὰβι ἀδού` ááñ ÷ñçóεἰðñέáßðáé ðéá, áέέÙ ðáñáñÝíáé áéá éóóññέéñýð éúáñðð. Ááñ éá ÷ñáéáóóáß íá áðáñáñááóóáßðá áδού οἱ ἀν÷ὰβι.
- `freebsd/cvswrap.c` - ðñüéáéðáé áéá οἱ ðçááβι éþáééá öñð CVS wrapper ðñð éá ðñÝðáé íá ááéáóáóðþóáðá áéá íá ìðñÝóñññ üεἰé íé Ἰέáá÷íé ðñúóááóçð ðáééέÙ íá áññéÝñññ. Ðáñέóóúðñáðð δέçññöññßàð áéá ðç áéááééáóáá áððð éá áñáßðá ðáñáέÙðù. Èá ðñÝðáé íá áéññéþóáðá óá paths óóéð ACCESS éáé REALCVS ìáéññáñññéÝð þóðá íá óáéññέÙáñññ ìá ðç áέέþ óáð ááéáðÙóóáóç.
- `freebsd/mailsend.c` - `οἱ ἀν÷ὰβι ἀδού` ÷ñáέÙáðóáé áéá ðçñ ó÷áðéέþ ìá óéð éßóóáðð óá÷ðáñññáßññ ááéáðÙóóáóç öñð FreeBSD. Ááñ éá ÷ñáéáóóáß íá ðáέñÙíáðá οἱ ἀν÷ὰβι ἀδού.

3.2 Ç äéáäëêáóßá

1. $\tilde{\text{A}}\epsilon\iota\eta\epsilon\pi\acute{o}\delta\alpha\ \acute{o}\iota\ \acute{\alpha}\eta\div\tilde{\text{A}}\beta\iota\ \text{access}\ \mu\acute{o}\delta\alpha\ \acute{\iota}\acute{\alpha}\ \delta\alpha\eta\epsilon\acute{\Upsilon}\div\acute{\alpha}\epsilon\ \acute{\iota}\upsilon\acute{\iota}\iota\ \acute{o}\iota\ \acute{\alpha}\epsilon\acute{\epsilon}\upsilon\ \acute{o}\acute{\alpha}\delta\ \text{username}.$
2. $\tilde{\text{A}}\epsilon\iota\eta\epsilon\pi\acute{o}\delta\alpha\ \acute{o}\iota\ \acute{\alpha}\eta\div\tilde{\text{A}}\beta\iota\ \text{cvswrap.c}\ \mu\acute{o}\delta\alpha\ \acute{\iota}\acute{\alpha}\ \delta\alpha\eta\epsilon\acute{\Upsilon}\div\acute{\alpha}\epsilon\ \acute{o}\iota\ \acute{o}\upsilon\acute{o}\upsilon\ \text{path}\ \acute{\alpha}\acute{\epsilon}\acute{\alpha}\ \acute{o}\zeta\ \acute{\alpha}\epsilon\epsilon\text{P}\ \acute{o}\acute{\alpha}\delta\ \acute{\alpha}\acute{\alpha}\acute{\epsilon}\acute{\alpha}\acute{o}\tilde{\Upsilon}\acute{o}\acute{o}\acute{\alpha}\acute{o}\zeta. \acute{\text{A}}\acute{o}\delta\upsilon\ \acute{\iota}\eta\text{B}\acute{\alpha}\acute{o}\acute{\alpha}\acute{\epsilon}\ \acute{\iota}\delta\ \acute{\iota}\acute{\epsilon}\acute{\alpha}\ \acute{\iota}\acute{\alpha}\epsilon\eta\acute{\iota}\acute{\alpha}\acute{\iota}\acute{o}\iota\epsilon\text{P}\ \acute{o}\iota\acute{o}\ \acute{\iota}\eta\tilde{\Upsilon}\acute{\alpha}\acute{o}\acute{\alpha}\acute{\epsilon}\ \text{ACCESS}. \acute{\text{E}}\acute{\alpha}\ \delta\eta\acute{\Upsilon}\delta\acute{\alpha}\epsilon\ \acute{\alpha}\delta\text{B}\acute{o}\zeta\ \acute{\iota}\acute{\alpha}\ \acute{\alpha}\acute{\epsilon}\acute{\epsilon}\tilde{\Upsilon}\acute{\iota}\acute{\alpha}\acute{o}\acute{\alpha}\ \acute{\epsilon}\acute{\alpha}\epsilon\ \acute{o}\iota\ \acute{\iota}\upsilon\eta\acute{\alpha}\ \acute{\alpha}\eta\div\tilde{\text{A}}\beta\iota\acute{o}\ \acute{o}\iota\acute{o}\ \delta\eta\acute{\alpha}\acute{\iota}\acute{\alpha}\acute{o}\acute{\epsilon}\acute{o}\acute{\epsilon}\acute{\Upsilon}\ \text{cvs}\ \text{binary}\ \acute{\alpha}\acute{\iota}\ \acute{\alpha}\acute{o}\delta\text{P}\ \acute{o}\iota\acute{o}\ \acute{o}\delta\tilde{\Upsilon}\tilde{\text{N}}\div\acute{\alpha}\epsilon\ \acute{\alpha}\acute{\alpha}\ \acute{\alpha}\beta\acute{\iota}\acute{\alpha}\acute{\epsilon}\ \zeta\ \acute{o}\upsilon\acute{o}\text{P}\ \acute{\alpha}\acute{\epsilon}\acute{\alpha}\ \acute{o}\zeta\ \acute{\alpha}\epsilon\epsilon\text{P}\ \acute{o}\acute{\alpha}\delta\ \delta\acute{\alpha}\eta\text{B}\delta\acute{o}\upsilon\acute{o}\zeta. \acute{\text{O}}\acute{\iota}\ \acute{\epsilon}\acute{\alpha}\eta\acute{\iota}\acute{\epsilon}\acute{\epsilon}\upsilon\ \text{cvswrap.c}\ \acute{\epsilon}\acute{\alpha}\upsilon\eta\eta\acute{\alpha}\ \delta\upsilon\delta\ \acute{\epsilon}\acute{\alpha}\ \acute{\alpha}\acute{\iota}\acute{o}\acute{\epsilon}\acute{\alpha}\acute{o}\acute{\alpha}\acute{o}\text{P}\mu\acute{o}\acute{o}\acute{\alpha}\ \acute{o}\zeta\acute{\iota}\ \acute{\alpha}\acute{\iota}\acute{o}\iota\epsilon\text{P}\ \text{cvs}\ \acute{o}\acute{\alpha}\ \acute{\alpha}\delta\text{B}\delta\acute{\alpha}\acute{\alpha}\ \acute{o}\acute{o}\acute{o}\text{P}\acute{\iota}\acute{\alpha}\acute{o}\iota\ \acute{\iota}\acute{\alpha}\ \acute{o}\iota\ \text{cvwrap}, \acute{\epsilon}\acute{\epsilon}\ \zeta\ \acute{\alpha}\eta\div\acute{\epsilon}\epsilon\text{P}\ \acute{\alpha}\acute{\iota}\acute{o}\iota\epsilon\text{P}\ \text{cvs}\ \acute{\epsilon}\acute{\alpha}\ \acute{\iota}\acute{\alpha}\acute{o}\acute{\alpha}\acute{o}\acute{\alpha}\eta\acute{\alpha}\ \acute{o}\acute{o}\iota\ \acute{\alpha}\eta\div\tilde{\text{A}}\beta\iota\ /\text{usr/bin/ncvs}.$

Ôi áéêü iîõ áíôßôõðî ôîõ ãñ÷ãßîõ cvswrap.c Ý÷áé ôá áéüëîëá:

```
#define ACCESS "/local/cvsroot/CVSR00T/access"
#define REALCVS "/usr/bin/ncvs"
```

- [illegible]

l̥aôãæuôôßôâ ôiî êpãêêä ðiō Ý÷:âôâ Þac æeĩñèþóãé þóôâ íá ðãñéÝ÷:æé ôá ouôôÜ paths:

```
% cc -o cvs cvswrap.c
```


Ὁδὸς ὁδοῦ ὙΨ-ἀέα ἀεῖαὸἀόδῶδῶα οἱ ἱΥῖ cvs ἀεὶαῖΨοείῖ ἀεῖεῖῖοῖῖῖῖῖῖ ὁἀ ἀεῖεῖῖῖῖῖῖ ἀῖῖῖῖῖῖ (εἰ ὁῖΥῖῖῖ ἰά ἀῖῖῖῖῖ root ἀέα οἱ ἀῖῖῖῖ ἰῖῖῖ):

```
# mv /usr/bin/cvs /usr/bin/ncvs
# mv cvs /usr/bin/cvs
# chown root:ncvs /usr/bin/cvs /usr/bin/ncvs
# chmod o-rx /usr/bin/ncvs
# chmod u-w,g+s /usr/bin/cvs
```

Ἄδου ἀαεάεεοόῦ οἷ wrapper óái ôçí âî ñéοἷῡ cvs âíοēP, eÜñíοάο Ὑóóε óβārōñi uóε ïðíεíοáPðíòá èâεPóáε íá ÷ñçóεñíðíεPóáε òì repository, èá ðñÝðáε íá Ὑ÷âε óá éáoÜèεçéá αðβðááα ðñuóááoçð.

4. Ἰδιναβὼα ὀπνά ἰά ἀοάεν Ὑῶαδὰ ὑεῖοδ ὀιοδ ÷ ἡβῶαδ ἀδὺ οἱ repository group ὁάδ. 1/4εῖε ἰε Ὑεᾶα ÷ ἰε ὄνῡῶαῶοç èá ᾱβῖῖῖῖῶάε ἀδὺ οἷῖ wrapper, ἐάε ἰ Βᾶεῖδ ἰ wrapper èá è Ὑῶάε οἱ ἀῖ Ὑεῖᾱῖ group ἰᾶ οἱ ἰδῖβῖ èá ᾱβῖᾱῶάε ἐάε ç ὀᾶεέεβ ὄνῡῶαῶοç.

3.3 ÅĖÝã÷ííôáò ôçí åãêáôÛóôáóç

İ wrapper ðñÝðǎé ðēÝñí íá áßíáé Ýðíēñò. İðññáßòá ööóéêÛ íá ôî äñēēìÛóáòâ êÛññíóáò Ýíá forced commit óôî äñ÷âßî access:

```
% cvs commit -f -m 'Forced commit to test the new CVSROOT scripts' access
```

ÎáíÛ, áí áõõü áðïõ÷÷æ, æÝãîã üöë üéã ôã ðãñãÛüü âÞíãã Ý÷ïï æêãæãóôãß óúóôÛ.