

1

2 Ðñþòç ÅãêáôÛóóáόç

Ðñíáêäìðìðçόç: Άβίáê êáêþ éäÝá íá áêóáêÝóáôá áêá ðñþòç ðññÛ áóòþ òç áêááêêáóá þñçóêìðìêðíóáò Ýíá êáíü äìêêíáóóêêü repository, áêá íá áβίáê áÝááêí üòê êá êáóáíñþóáôá üêáò óêò óóíÝðáêáò. Ðñêí íáêêíþóáôá óêáíñáòóáðá üòê Ý÷áôá ðñüóóáóá backups, óá ðìðá ááãóçÝíá äìòêáýìí!

2.1 Άñ÷êêìðìðçόç ôìò repository

Ôì ðñþò ðññÛáä ðìò êá ðñÝðáê íá êñíáôá üòáí óòþíáôá Ýíá íÝí repository áβίáê íá ðáðáò óòí CVS íá ôì áñ÷êêìðìêþóê:

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

Áóòü êÝáê óòí CVS íá äçìêññáþóáê ôñí òÛêáêí áêá÷áβñêóòð CVSROOT, üðìò óòíááβñíòí üêáò íê ðáñáíáòñìðìêþóáêò.

2.2 Ç ñÛáá ôìò repository

Ôþñá êá äçìêññáþóíòíá òçí ñÛáá óòçí ðìðá êá áíþêáê ôì repository. ¼êìê íê committers êá ðñÝðáê íá áíþêíòí óá áóòþ òçí ñÛáá, þóðá íá ðìññýí íá ãñÛíòí óòí repository. Άêá ôì óêìðü áóòü êá ðñçóêìðìêþóíòíá òçí βáêá ñÛáá ðìò ðñçóêìðìêáá êê' áóòü ôì óêìðü êáê ôì FreeBSD, òçí ñÛáá ncvs.

```
# pw groupadd ncvs
```

ÌáòÛ, êá ðñÝðáê íá áêóáêÝóáôá òçí áíðìêþ chown(8) óòí òÛêáêí íá ðáññíáòñí òçí ñÛáá ðìò íüêò ðñíóêÝóáôá, êÝòñíóáò Ýóóê òçí ñÛáá óòçí ðìðá áíþêáê í êáòÛêñäò:

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

Áóòü áíáóóáêþáê üòê êáíáðò ááí êá ðìññáβ íá ãñÛáê óòí repository áí ááí áíþêáê òçí óòóòþ ñÛáá.

2.3 Ðáβññíóáò ôñí ðçááβí êþáêêá

Ôþñá êá ðñÝðáê íá áðìêòþóáôá ôñí êáòÛêñäí CVSROOT áðü ôì repository ôìò FreeBSD. Áóòü áβíáóáê áýêìêá, êÛñíóáò check out áðü Ýíá áñê÷òðò ðñüóáóòð FreeBSD CVS mirror. Άáðá ôì ó÷áóêêü êáòÛêáêí óòí áá÷áêñáêí (http://www.FreeBSD.org/doc/el_GR.ISO8859-7/books/handbook/anoncvs.html) áêá ðáñêóóüðáñáò ðêçññíòñáò. Áò ððìêÝóíòíá üòê í ðçááβíò êþáêêáò êá áðìêêêáòóáð óòí êáòÛêñäí CVSROOT-freebsd ðìò áñβóêáóáê íÝóá óòí òñÝ÷ííóá êáòÛêñäí.

2.4 ÁíóêãñÛííóáò óá scripts ôìò FreeBSD

¼óóáñá, áíóêãñÛíòíá ôñí ðçááβí êþáêêá áðü ôñí CVSROOT êáòÛêñäí ôìò FreeBSD óòí áêêü íáò repository. Áí áβóðá óòçêêóíÝñð íá ôì CVS, βóòð íá óáò ðáñÛóáê áðü ôì íóáêü íá ðñíóðáêþóáôá íá êñíáôá import óá scripts, óá íêá ðñíóðÛêáêá íá áβíáê ýóóáñá í óóá÷ñíêóíðð íá óêò êáòìðêíÝð áêáüóáêò áðêñüðáñíð. Ûóòüóí, áðñááêñýíáóáê üòê ôì CVS ðáññíóêÛáê íêá áóóêáêòññáβá óòçí ðáñêí÷þ áóòþ: ¼óáí áêóÛááòá ðçááβí êþáêêá ÝÝóá óòí CVSROOT òÛêáêí, ááí êá áçíáññêñýí óá áðáñáβçóá áñ÷áβá áêá÷áβñêóòð. Άêá íá ðññÝóáôá íá ôì êñíáôá íá óá áíáñññáóáê, êá ðñÝðáê

íá εÜíáðá checkin íá÷ ùñέóóÜ εÜεά άñ÷άβï áöüý Ý÷άðá ðáεάέþóáé íá ðçí áέóάáüāþ, ÷ Üñíðáð Ýðóέ ðçí áíβá ðïð cvs import. ΆðñÝüð, ç ðñïðáέíüíáíç ïÝεíäïð áβíáé áðεÜ íá áíðέάñÜðáðá ðá scripts.

Άάí áβíáé έάé ðüóï ççíáíðέέü ðï áí ç ðáñáðÜñ ðáñÜñáóïð ááí óáð üáβíáðáé ðïý íáεÜεάñ—ðï ðáέέéü áðïðÝεÝóíá áβíáé ðï βáέí. ΆðεÜ áεÝáíðá ðïí CVSROOT ðÜεáέí έάé áíðέάñÜðáðá ðá FreeBSD άñ÷άβá ðÜñ áðü ðá áέéÜ óáð ðïðέéÜ (áðáβñá÷ðá) áíðβáñáðá:

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

Όçíáέþóá üέé ðέέáíüðáðá έá ðÜñáðá íáñέéÝð ðñíáέüðïέþóáέð ó÷άóέéÜ íá ðï üέé íáñέéíβ üÜεáέéü ááí έá áíðέάñáóïýí. Άáí ðáέñÜεáé. Άáí ðïðð ÷ñáéÜεáóðá áððüýð ðïðð έáðáέüüáíðð.

2.5 Tá scripts

Όþñá Ý÷άðá óóïí üÜεáέí áñááóβáð óáð Ýíá áέñέáÝð áíðβáñáðï ðüí scripts ðïð ðï βáέí ðï FreeBSD project ÷ñçóέíðïέáβ ðïí áέéü ðïð repository. Íέá ðáñβέççç ðïð óá ðé ÷ñçóέíáýáé ðï εÜεά άñ÷άβï ðáñέέáíáÜíáðáé ðáñáéÜðü.

- `access` - ðï άñ÷άβï áðüü ááí ÷ñçóέíðïέáβðáé óóéð óóíçέéóíÝíáð ááέáðáóóÜðáéð ðïð CVS. ×ñçóέíðïέáβðáé üñí óóçí áέáέéþ ááέáðÜðóóç ðïð FreeBSD project, áέá íá áεÝá÷άðáé ç ðñüóááóç ðïí repository. Íðñáβðá íá áóáέñÝóáðá áðüü ðï άñ÷άβï áí ááí óáð áíáέáðÝñáé íá ÷ñçóέíðïέþóáðá εÜðé ðÝðïέí óóç áέéþ óáð ááέáðÜðóóç.
- `avail` - ðï άñ÷άβï áðüü áεÝá÷άé ðçí ðñüóááóç ðïí repository áíÜ έáðÜεíäí þ άñ÷άβï. ÍÝóá óá áðüü, ïðñáβðá íá έáέíñβóáðá ñÜáð ÷ñçóðñí óóïðð ïðñíðð εÝεáðá íá þþóáðá ðñüóááóç ðïí repository, üðüð áðβóçð έáé íá áðááñÝóáðá commits óá áðβðááí έáðáέüüáíð þ άñ÷άβïð. Έá ðñÝðáé íá ðï ðñíóáñüüóáðá þóðá íá ðáñéÝ÷άé ðéð ñÜáð ÷ñçóðñí έáé ðïðð óáéÝéïðð ðïð έá ððÜñ÷ïíí óóí áέéü óáð repository.
- `cfg.pm` - ðï άñ÷άβï áðüü áñíçíáýáé ðéð ñðéíβóáéð óáð έáé ðáñÝ÷άé ðéð áí' ññέóïý ñðéíβóáéð. Άáí ðñÝðáé íá áέéÜíáðá áðüü ðï άñ÷άβï. Áíðβέáðá, έá ðñÝðáé íá ðïðéáðþóáðá ðéð áέéÝð óáð áέéááÝð óóéð ñðéíβóáéð ðïí άñ÷άβï `cfg_local.pm`.
- `cfg_local.pm` - ðï άñ÷άβï áðüü ðáñéÝ÷άé üéáð ðéð ñðéíέæüíáíáð ðáñáíÝðñïð ðïð óóóðþáðïð. Έá ðñÝðáé íá εÜíáðá ïðéáóáβðïðá ñðéíβóáéð óáð áäþ, üðüð óá ðïέá áέáýéðïíóç έá óóÝéñíóáé ðá email áðü εÜεά commit, óá ðïέïðð hosts έá áðéðñÝðáðáé íá áβñíóáé commit, έέð. ðáñέóóüðáñáð ðέçñíöïñβáð ó÷άóέéÜ íá áðüü έá áñáβðá ðáñáéÜðü.
- `checkoutlist` - ðï άñ÷άβï áðüü ðáñέέáíáÜíáé üεá ðá άñ÷άβá ðïð áñβóέñíðáé εÜðü áðü ðïí Ýεää÷ï ðïð CVS óóïí έáðÜεíäí áðüü—üεá áέðüð áðü ðá ðñíέáέíñέóíÝíá άñ÷άβá ðïð áçïέíðñááβ ç áíðïέþ cvs init. Έá ðñÝðáé íá ðï áέéÜíáðá áέá íá áóáέñÝóáðá íáñέéÜ, ó÷άóέéÜ üñí íá ðï FreeBSD, άñ÷άβá.
- `commit_prep.pl` - ðï script áðüü áέðáέáβ áéÜöïñíðð áεÝá÷ïðð ðñέí áðü εÜεά commit, áíÜεíäí íá ðéð ñðéíβóáéð ðïð Ý÷άðá εÜíáé ðïí άñ÷άβï `cfg_local.pm`. Άáí έá ÷ñáέáóðáβ íá ðáέñÜíáðá áðüü ðï άñ÷άβï.
- `commitcheck` - ðï script áðüü έáέáβðáé áðáðéáβáð áðü ðï CVS. ðñþóá áεÝá÷άé, ÷ñçóέíðïέþíóáð ðï ðñüáñáíá cvs_acls.pl, áí ï committer Ý÷άé ðñüóááóç ðïí óðáέáðñέíÝñí ïÝñïð ðïð áÝíóñïð ðïð éþáέéá, έáé íáðÜ áέðáέáβ ðï `commit_prep.pl` ðïð áέðáέáβ ðïðð áéÜöïñíðð pre-commit áεÝá÷ïðð. Áí ááí ððÜñíáé εÜðïέí ðñüáέçíá óóïðð áεÝá÷ïðð áððüýð, ðüðá ðï CVS έá áðéðñÝðáé ðïí commit íá óóíá÷βóáé. Άáí έá ÷ñáέáóðáβ íá ðáέñÜíáðá áðüü ðï άñ÷άβï.

- `commitinfo` - οἱ ἀν÷ᾱβι ἀδού ÷ñçóεἰῖῑεᾱβόᾱε ᾱδú οἱ **CVS** óοἱ ἰᾱ ᾱῑῑῑᾱóβóᾱε ῑῑεἰ script ἰᾱ ᾱεóᾱεÝᾱε ῑᾱεἰ ᾱδú ἔÜᾱ commit—óðç ᾱεῑᾱ ἰᾱó ῑᾱñβððóóç ᾱóóú οἱ ñüῑ ἔᾱέýððᾱε οἱ `commitcheck`. Ἀᾱἰ ἔᾱ ÷ñᾱεᾱóóᾱβ ἰᾱ ῑᾱεñÜἰᾱóᾱ ᾱóóú οἱ ᾱñ÷ᾱβἰ.
- `config` - οἱ ἀν÷ᾱβἰ ñðῑᾱβóᾱῑ ᾱé' ᾱóóú οἱ repository. Ἐᾱ ῑñÝðᾱé ἰᾱ ἔÜἰᾱóᾱ ᾱεéᾱᾱÝó ó' ᾱóóú οἱ ἀν÷ᾱβἰ ᾱἰÜῑᾱᾱ ἰᾱ óéð ᾱἰÜᾱéᾱð óᾱð, ᾱεῑÜ ἰé ῑᾱñéóóúóᾱñἰé ᾱéᾱ÷ᾱéñéóóÝð ἰῑñἰýἰ ἰᾱ ᾱóβóἰῑῑ óéð ᾱἰ' ἰñéóἰý ñðῑᾱβóᾱéð. ῑᾱñéóóúóᾱñᾱð ðῑçñἰῑῑñβᾱð ᾱéᾱ óéð ᾱéÜῑῑñᾱð ᾱῑᾱóóúðçóᾱð ᾱῑῑῑᾱἰ ðἰῑ Ý÷ᾱóᾱ óóἰ ᾱñ÷ᾱβἰ ᾱóóú ἰῑñᾱβóᾱ ἰᾱ ᾱñᾱβóᾱ óóἰ ᾱᾱ÷ᾱéñβᾱéἰ οἰῑ **CVS**.
- `cvs_acls.pl` - οἱ script ᾱóóú ᾱéÝᾱ÷ᾱé óçἰ óᾱóóúðçóᾱ οἰῑ committer, ἔᾱé ᾱἰ ᾱῑῑῑñÝðᾱᾱé ᾱóóúð ἰᾱ Ý÷ᾱé ῑñúῑᾱᾱóç óóἰ ᾱÝἰῑñἰ οἰῑ ἑἰᾱῑῑᾱ. Ἀóóú ᾱβἰᾱᾱé ἰᾱ ᾱÜóç οἱ ἀν÷ᾱβἰ `avail`. Ἀᾱἰ ἔᾱ ÷ñᾱεᾱóóᾱβ ἰᾱ ῑᾱεñÜἰᾱóᾱ ᾱóóú οἱ ἀν÷ᾱβἰ.
- `cvsignore` - óóἰ ᾱñ÷ᾱβἰ ᾱóóú ἔᾱῑñβᾱῑῑᾱé ᾱᾱ ᾱñ÷ᾱβᾱ ῑῑῑ οἱ **CVS** ᾱᾱἰ ἔᾱ ῑñÝðᾱé ἰᾱ ᾱῑῑῑñÝðᾱé οἱ checkin οἰῑð óóἰ repository. ἰῑñᾱβóᾱ ἰᾱ ᾱῑᾱἰᾱᾱᾱóóᾱβóᾱ ᾱóóú οἱ ἀν÷ᾱβἰ ᾱἰÜῑᾱᾱ ἰᾱ óéð ᾱεῑÝð óᾱð ῑñἰéἰβóᾱéð. ῑᾱñéóóúóᾱñᾱð ðῑçñἰῑῑñβᾱð ᾱéᾱ οἱ ἀν÷ᾱβἰ ᾱóóú ἔᾱ ᾱñᾱβóᾱ óóἰ ᾱᾱ÷ᾱéñβᾱéἰ οἰῑ **CVS**.
- `cvswrappers` - οἱ ἀν÷ᾱβἰ ᾱóóú ÷ñçóεἰῖῑῑῑᾱᾱé ᾱδú οἱ **CVS** ᾱéᾱ óçἰ ᾱἰᾱñᾱἰῑῑβçóç **P** ᾱῑᾱἰᾱñᾱἰῑῑβçóç οἰῑ keyword expansion, **P** ᾱéᾱ οἱ ᾱἰ ἔÜῑῑῑῑ ᾱñ÷ᾱβἰ ἔᾱ ῑñÝðᾱé ἰᾱ ᾱἰóῑᾱóúðῑβᾱᾱᾱé ùð binary. ἰῑñᾱβóᾱ ἰᾱ ᾱῑᾱἰᾱᾱᾱóóᾱβóᾱ ᾱóóú οἱ ἀν÷ᾱβἰ ᾱἰÜῑᾱᾱ ἰᾱ óéð ᾱῑῑῑῑᾱð óᾱð. ῑᾱñéóóúóᾱñᾱð ðῑçñἰῑῑñβᾱð ó÷ᾱóῑÜ ἰᾱ οἱ ἀν÷ᾱβἰ ᾱóóú ἰῑñᾱβóᾱ ἰᾱ ᾱñᾱβóᾱ óóἰ ᾱᾱ÷ᾱéñβᾱéἰ οἰῑ **CVS**. Óçἰᾱῑῑᾱð ðúð ἰé ᾱῑῑῑᾱÝð -t ἔᾱé -f ᾱᾱ ᾱῑῑῑᾱýἰῑῑ óúóóÜ ᾱéᾱ client/server ÷ñβóç οἰῑ **CVS**.
- `edithook` - οἱ ἀν÷ᾱβἰ ᾱóóú ᾱᾱἰ ÷ñçóεἰῖῑῑῑᾱᾱé ῑῑᾱ, ᾱεῑÜ ᾱἰᾱῑῑῑῑᾱᾱ ἰᾱ óðÜñ÷ᾱé ᾱéᾱ éóῑñῑῑῑýð ἔüᾱῑð. ἰῑñᾱβóᾱ ἰᾱ óᾱβóᾱᾱ ᾱóóú οἱ ἀν÷ᾱβἰ.
- `editinfo` - οἱ **CVS** ÷ñçóεἰῖῑῑῑᾱᾱ ᾱóóú οἱ ἀν÷ᾱβἰ ᾱéᾱ ῑᾱñÜῑᾱἰçç ðúἰ editors. Óἰ FreeBSD ᾱᾱἰ ÷ñçóεἰῖῑῑῑᾱᾱ ᾱóð**P** óçἰ ἔᾱῑῑῑñᾱῑῑῑðçóᾱ ᾱéᾱóḃ ç ᾱñἰçἰᾱᾱ οἰῑ log ἰçἰýἰᾱῑῑ ᾱβἰᾱᾱé ᾱδú ᾱᾱ `verifymsg` ἔᾱé `logcheck` ἀñ÷ᾱβᾱ. ἈῑῑῑÝἰᾱἰ ἰᾱ ᾱβἰᾱᾱé Ýóóé ᾱóóú ᾱῑᾱῑᾱ **P** ç ñβóç οἰῑ `editinfo` Ý÷ᾱé ἔÜῑῑᾱ ῑñἰᾱῑᾱᾱᾱ ἰᾱ ᾱᾱ `commits` ᾱδú ἰᾱῑῑῑÜ ἔᾱé ἰᾱ ᾱᾱ `commits` ῑῑῑ ÷ñçóεἰῖῑῑῑῑῑ ῑῑῑ ᾱῑῑῑᾱÝð -F **P** -F. Ἀᾱἰ ἔᾱ ÷ñᾱεᾱóóᾱβ ἰᾱ ῑᾱεñÜἰᾱóᾱ ᾱóóú οἱ ἀν÷ᾱβἰ.
- `exclude` - οἱ ἀν÷ᾱβἰ ᾱóóú ῑᾱñῑÝ÷ᾱé ἔᾱñἰῑῑῑÝð ᾱῑῑñÜóᾱéð (regular expressions) ῑῑῑ ÷ñçóεἰῖῑῑῑῑῑᾱé ᾱδú οἱ ῑñúᾱñᾱἰᾱ `commit_prep.pl` ᾱéᾱ ἰᾱ ῑñἰᾱῑῑῑῑῑῑῑῑ ᾱᾱ ᾱñ÷ᾱβᾱ ῑῑῑ ᾱᾱἰ ᾱβἰᾱé ᾱῑᾱñᾱβóçοἰ ἰᾱ ῑᾱñῑÝ÷ἰῑ ᾱῑῑῑᾱᾱῑᾱᾱ ᾱῑῑῑῑðçóçð (revision header). Óðçἰ ᾱᾱῑᾱÜóᾱᾱóç οἰῑ FreeBSD, ἡῑᾱ ᾱᾱ ᾱñ÷ᾱβᾱ ἔÜòð ᾱδú Ýῑᾱᾱ÷ἰ ᾱῑῑῑῑðçóçð (revision control) ᾱβἰᾱé ᾱῑᾱñᾱβóçοἰ ἰᾱ ῑᾱñῑÝ÷ἰῑῑ ἰῑᾱ ᾱῑῑῑᾱᾱῑᾱᾱ ᾱῑῑῑῑðçóçð (üðúð \$FreeBSD\$). ἰᾱῑᾱ ᾱᾱ ἰἰἰᾱᾱᾱ ᾱñ÷ᾱβἰῑ ῑῑῑ óᾱῑῑῑÜᾱῑῑ ἰᾱ ῑῑῑÜ÷ᾱῑῑῑ ἰῑᾱ ᾱδú óéð ᾱñᾱἰÝð οἰῑ ᾱñ÷ᾱβἰῑ ᾱóóῑý ᾱἰᾱῑñἰýᾱῑᾱ ᾱδú οἰῑ óᾱῑᾱῑῑῑῑÝἰῑ Ýῑᾱᾱ÷ἰ. Ἐᾱ ῑñÝðᾱé ἰᾱ ῑñἰῑῑÝóᾱð óéð ᾱἰÜῑᾱᾱ ἔᾱñἰῑῑÝð ᾱῑῑñÜóᾱéð óóἰ ᾱñ÷ᾱβἰ ᾱóóú ἡóᾱ

ΌγιαΒυός: Όι script άίάηόΌόάέ άδύ ίεά όιόέέP άέέάP όιό FreeBSD όόι **CVS:** Ç άέέάP άόόP ίάίάάέάάUάέέ όι log ιPιόίά άόίY άόόU Ý÷άέ όηιόιόίέçέάB άδύ όι script. Ç έάίίέέP Ýέάιός όιό **CVS** όηιόάίP άάί εUίάέ εUόέ όYόίέί, ιδύόά όι **logcheck** άά ιδίηάB ίά εUίάέ ίέέηίάέίηέPόάέό όόι log ιPιόίά, άέέU ιδίηάB ίά άέYάίάέ υόέ όι ιPιόίά άάί Ý÷άέ όόίόάέόέU εUέç. Άόι όçι Ýέάιός 1.11.2 έάέ ίάόU όι Bάέί όι **CVS** ιδίηάB ίά ηόέιέόόάB ίά Ý÷άέ όçι Bάέά όόιόάηέόιηU ίά άόόP όιό Ý÷άέ ç Ýέάιός όιό FreeBSD ίά όçι άέέέίάP RereadLogAfterVerify=always όόι άñ÷άBι config.

- [illegible]

2.6 Ôñïðïðïépíôáò ôá scripts

[illegible]

1. Áí aái ēYēāōā íá ÷ñçóéúíðíēíPóāōā óēō ēāēōíōñāāōō óúí scripts íē íðíāō ÷ñçóéúíðíēíYíōāē āðíēēāēóōēēŪ āðū òí FreeBSD, íðíñāōā íá āōāēñYóāōā íā āóōŪēāēā òí āñ ÷āñí access:

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

- [illegible]

[illegible]

3. Αέινεηπόά οί άν÷άβι cfg_local.pm πόά ίά άανέΥ÷άέ οέό άδέεραΥό ότö άδέεοιαβόά. Δεί οάάέάεινέΥία, έά όηΥάέ ίά άέΥάαόά οέό άάηάέÜü όηιόιόέπόέιαό άδέεραΥό:

- `%TEMPLATE_HEADERS` - ΆόόΥό ιέ άόέέάόάέβääό άάάάάάΥάέίόάέ άάύ όά 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 άóάέñÝόάόά όέό έάόά÷üñΠόάέό PR έάέ MFC after—άόίΥ άόóÝό ό÷ άόβάέίόάέ ίά όί bug tracking όýόόçíά όίό FreeBSD έάέ όίí όñüóí όίό áéá÷áέñβάάόάέ όί FreeBSD όά branches όίό repository όίό. Έάέ όóóéέÜ ίόíñάβόά ίά όñíόέÝόάόά όέό áééÝό όάó.
- `$MAIL_BRANCH_HDR` - Άί έÝέάόά ίά όñíόóβέάόάέ άóóüíάόά ίέά άóééάόάέβää όά έÜέά commit íΠíόíά mail, ç íόíβά έά όāééñÜóáé όί branch όόί íόíβí Ýáéíά όί όóāéáéñéíÝíí commit, íñβόόά όçí όéíΠ άόóΠ ίά όáéñéÜæáé ίά όçí áééΠ όάó áāéáóÜóóάόç. ΆóΠόόά όçí έάρΠ άί άάí άóééóíάβόά ίά όñíόóβέάόάέ άóóüíάόά ίέά όÝόíéά άóééάόάέβää.
- `@COMMIT_HOSTS` - Íñβόόά όçí όéíΠ άόóΠ όά ίέά έβóόά άάú όóóóΠíάόά (hosts), άάú όά ίόíβά άóéóñÝόáόáέ ίά āβíííόáέ commits.
- `$MAILADDRS` - Ñóéíβóόά άόóΠ όçí όéíΠ όόί email όίό áéá÷áέñéóóΠ Π όά ίέά áéáyèóíόç έβóόáó όóçí íόíβά έÝέάόά ίά όçāáβííóí όά mail óüí commit íçíóíÜóüí.
- `@LOG_FILE_MAP` - ΆέéÜíόά άóóü όí array üóüó άóééóíάβóóá. ÊÜέά regexp áíóéóóíé÷άβ όóí óóāéáéñéíÝíí óÜéáéí όóíí íόíβí áβíάόáέ όí commit, έάέ όí log íΠíόíά όίό commit άóíεçéáyάόáέ έÜòú άάú όíí έáóÜéíāí CVSROOT, óóíí όóíéáóÜéíāí commitlogs, óóí āñ÷άβí όίό áíáóÝñáόáέ όóçí áíóβóóíé÷ç áāāñáóΠ όίό όβíáéá @LOG_FILE_MAP.
- `$COMMITCHECK_EXTRA` - Άί άάí έÝέάόά ίά ÷ñçóéííóíéΠóáóá όίóó βáéíóó áéÝā÷íóó όñüóááόçó ίá όí FreeBSD, έá όñÝόáé ίά áóáéñÝóáóá όíí íñéóíü όçó όéíΠó \$COMMITCHECK_EXTRA άάú όí āñ÷άβí άóóü.

Όχι!Βουό: Ç äëäãP öçø ðãñáíYõññø §IDHEADER äßíäë äãäçgíYññ üöë èä äñöëYðäë üññ óä ðëäðöñññäð FreeBSD. ÄñäñÜðäë äðü äëäëëYð ïäðäðñññYð öñø FreeBSD öññ **CVS**.

Ἰδιναβόα ἰά ἀεΨάιαόα ὀι ἀν÷αβι cfg. pm ἀέα ἰά ἀαβόα θιεΨό Ὑεεαό θἀναΨόνιποό ἰθιναβόα ἰά ἀεεΨιαόα, ἀεεΨ ἰε θἀναθΨύῃ ἀβίαε ἰε θει ὀοΨεαέό ἀδεεΨαΨό.

4. Άðáíññááóðáðá ðí áñ÷áßí exclude áéá íá áóáέñÝóáðá ðéð áέáέέÝð éáðá÷ññðóáέð ðíð FreeBSD (üðüð üéáð ðéð ãñáñÝð ðíð íáέέñíýí íá ^ports/ éðé.). Άέðüð áððíý, áÜéðá óá ó÷üééá ðéð ãñáñÝð ðíð íáέέñíýí íá ^CVSROOT/, éáé ðñíóèÝóðá íéá ãñáñP ðíð éá ðáñéÝ÷áé íüñí ðí ^CVSROOT/. Áóíý ááέáðáóðáέáß í wrapper, ïðíñáðá íá ðñíóèÝóðá ðí áέéü óáð header óðá áñ÷áßá ðíð ãñáðéñíóáé ïÝóá óðíí éáðÜéíáí CVSROOT éáé íá áðáíáðÝñáðá ðéð ãñáñÝð áððÝð, áέéÜ ðñíð ðí ðáñüí áðéÜ éá óáð áçíéíðñáðóíðí ðñíáéðíáðá üðáí éá ðñíóðáèðóáðá íá éÜíáðá commit áñüðáñá.
5. Áñíßíðá ðí áñ÷áßí modules, éáé áóáέñÝóðá üéáð ðéð ó÷áðééÝð íá ðí FreeBSD éáðá÷ññðóáέð. ðñíóèÝóðá óá áέéÜ óáð modules áí ðí áðéèðíáðá.
- 6.

Óçíáßüóç: Õí áðíá áððü áßíáé áðáñáððçðí íüñí áí Ý÷áðá ïñáðáé éÜðíéá ðéíP óðçí ðáñÜíáðñí \$IDHEADER ðíð áñ÷áßíð `cfg_local.pm` (ç íðíßá äíðéáýáé íüñí áðüóíí ÷ñçóéííðíéáðá ðçí ðñíðíðíéçíÝç Ýéäíóç ðíð CVS ðíð Ý÷áé ðí FreeBSD).

Άέíñèðóðá ðí áñ÷áßí options þóðá íá óáέñéÜáéé íá ðí tag ðíð ïñáðáðá óðí áñ÷áßí `cfg_local.pm`. Íéá áíáæPðçç éáé áíðééáðÜóðáóç ðíð FreeBSD óá üéí ðí áñ÷áßí áßíáé áñéáðP.

7. Άðáíññááóðáðá ðí áñ÷áßí `rcstemplate` þóðá íá ðáñéÝ÷áé óá ßáéá keywords íá áððÜ ðíð Ý÷áðá ïñáðáé óðí `cfg_local.pm`.
8. ðñíáέñáðééÜ, áóáέñÝóðá ðíðð áéÝá÷íðð ðíð FreeBSD áðü ðí áñ÷áßí `tagcheck`. ïðíñáðá áðéÜ íá ðñíóèÝóðá `exit 0` óðçí áñ÷P ðíð áñ÷áßíð áéá íá áðáíññáíðíéðóáðá üéíðð ðíðð áéÝá÷íðð óðí tagging.
9. Õí óáéáððáßí ðñÜáíá ðíð ðñÝðáé íá áßíáé, áßíáé íá óéáíðñáððáðá üðé óá commitlogs ïðíñíý íá áðíèçéáððíýí. Õá CVS scripts ðíð FreeBSD áðíèçéáýíðí áððÜ óá logs óðíí ððíéáðÜéíáí commitlogs ðíð éáðáéüáíð CVSROOT. Áððüð í ðÜéáèðð ðñÝðáé íá áçíéíðñáçèáß, ïðüðá éÜíðá óá áéüéíðéá:

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

Õðñá, áóíý áéÝáíðá óá ðÜíðá ðñíóáéðééÜ, éá ðñÝðáé íá éÜíðá commit ðéð áέéááÝð óáð. Õñííðóðá íá áßóðá óßáíðñíé üðé Ý÷áðá áðáé óðíí ááððü óáð ðñüóááóç óðíí ðÜéáè CVSROOT ïÝóá áðü ðí áñ÷áßí `avail` ðñéí éÜíðá ïðéáððíðá, áðüóíí óðçí áíðèèáðç ðáñðððüóç éá ééáéððáðá ðíí ááððü óáð Ýñ. ïðüðá, ðñííðóðá óá ðÜíðá íá áßíáé üðüð áðéèðíáðá, éáé íüñí ðüðá áðóðá óá áéüéíðéá:

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

2.7 ΆíééíÜáéíðáð ðçí ΆáéáðÜóðáóç

Άßóðá Ýðíéíé áéá ðçí ðñðçç óáð äíééíP: íá forced commit óðí áñ÷áßí `avail`, áéá íá óéáíðñáððáðá üðé üéá äíðéáýíðí üðüð éá Ýðñáðá.

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

¶í üéá ðÜíá éáéÜ, óðá÷áñçðPñéá! ,÷áðá éáðáðÝñáé íá óððáðá íéá ðèPñüð éáéíðñáéèP ááέáðÜóðáóç ðñí FreeBSD scripts áéá ðí repository óáð. Óðçí ðáñðððüóç ðíð ðí CVS áíáéíðéèáß íá ðáñáðíéÝóáé áéá éÜðé, áðéóðñÝððá óðéð ðñíçáíýíáíð áíüðçðáð éáé áéÝáíðá íáíÜ üðé Ý÷áðá áéðáéÝóáé óüóðÜ üéá óá ðñíçáíýíáíá áðíáðá.

3 Άεάέê Þ ÅæäáÜóóάόç ðïð FreeBSD Project

Ôï Þäéï ðï FreeBSD project ÷ñçóéïïðïéåß íéå æéåðñð æéåðññåðéê ÞæäáÜóóάόç, ç ïðïßá ÷ñçóéïïðïéåß åðßóçð åñ÷åßå äðü ðïï ððïðÜéåïï freebsd ðïð CVSROOT ðïð ÷ñçóéïïðïéåßððåé óðï FreeBSD. Ôï project ÷ñåÜæåðåé êÜðé ðÝðïéï euåü ðïð íååÜéïð åñééïïý ðüï committers, ðïð æéåðññåðéêÜ åå Ýðñåðå íå áñÞéïïï ïéïé óðï Þäéï group. Þóé, åçïéïñåÞççå Ýíåð äðüð wrapper ï ïðïßð áðïï ðñðåå åñåððæßæåé ðå óüóðÜ æéåðéóðåððñéå ðüï committers, æéêÜæåé íåðÝðåéðå ðï group id ðå äððü ðïð repository.

Áí éåé ðï æéêü óåð repository ÷ñåÜæåðåé êÜðé áñÜéïïï, ðå åÞåðå ðïð åå ðñÝðåé íå æéïéðéÞóåðå æéïéðéïïý ðåñåéÜðü. ÅéêÜ ðñðåå äð êÜïïïå íéå óýïïñç åðéóéüðçóç ðüï ó÷åðéÞí åñ÷åßå.

3.1 Åñ÷åßå ðïð ÷ñçóéïïðïéïïéåé óóçí æéåéê ÞæäáÜóóάόç ðïð FreeBSD

- `access` - ðï åñ÷åßå äððü æéÝá÷æé ðéçñïïññßåð æéå ðå æééåÞðåðå ðñüóååóçð. Èå ðñÝðåé íå ðï åðåññååððåðå áñÜéïïï Ýðéé þðåå íå ðåñééåñåÜíåé ïéå ïéå ðå ïÝçç ðïð project óåð.
- `freebsd/commitmail.pl` - ðï åñ÷åßå äððü ååí ÷ñçóéïïðïéåßððåé ðéå, æéêÜ ðåñåñÝíåé æéå éóðïñééïý euåïðð. Ååí éå ÷ñåéåððåß íå åðåññååððåðå äððü ðï åñ÷åßå.
- `freebsd/cvswrap.c` - ðñüéåéðåé æéå ðïï ðççåßï êÞæééå ðïð CVS wrapper ðïð åå ðñÝðåé íå åæåðåððåðåðå æéå íå ïðñÝðïï ïéïé íé Ýéåå÷é ðñüóååóçð ðæéêÜ íå åïðéÝðïï. Ðåñéóóüðåñåð ðéçñïïññßåð æéå ðç æéåéåéåðå äððé åå åñåðå ðåñåéÜðü. Èå ðñÝðåé íå æéñðåðåðå ðå paths óðéð ACCESS éåé REALCVS íåññåñïéÝð þðåå íå ðåéñéÜéïï íå ðç æéêÞ óåð åæåðÜóóάόç.
- `freebsd/mailex.c` - ðï åñ÷åßå äððü ÷ñåÜæåðåé æéå óçí ó÷åðéê íå ðéð éßððåð ðå÷ðåññåßïð åæåðÜóóάόç ðïð FreeBSD. Ååí éå ÷ñåéåððåß íå ðæñÜíåðå ðï åñ÷åßå äððü.

3.2 Ç æéåééåéåðå

1. Åéñðåðå ðï åñ÷åßå `access` þðåå íå ðåñéÝá÷æé ïïï ðï æéêü óåð username.
2. Åéñðåðå ðï åñ÷åßå `cvswrap.c` þðåå íå ðåñéÝá÷æé ðï óüóðü path æéå ðç æéêÞ óåð åæåðÜóóάόç. Åððü ïñßæåðåé ïð íéå íåññåñïéÞ ðïð ïññÜæåðåé ACCESS. Èå ðñÝðåé åðßóçð íå æéêÜðåé éåé ðï ïññå åñ÷åßå ðïð ðñåñåðééïý cvs binary áñ äððé ðïð ððÜñ÷æé ååí åßåé ç óüóðü æéå ðç æéêÞ óåð ðåññððüç. Ôï éåññéêü `cvswrap.c` èåññåß ðüð åå áíééåðåððåðåðåé ðçí áñïéÞ cvs óå åðßðåñí óððÞðåðïð íå ðï cvwrap, êé ç åñ÷éêÞ áñïéÞ cvs éå íåðåðåññåß ððï åñ÷åßå `/usr/bin/ncvs`.

Ôï æéêü ïïð áñððððï ðïð åñ÷åßå `cvswrap.c` Ýáé ðå æéüéïðéå:

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

3. Ôï åðüåñí åÞå åßåé íå åæåðåððåðïïïå ðïï wrapper æéå íå åßåðåðå ðßåïññéé ïðé åå åßåðåé ç íåðåðñïð ððï óüóðü group ïðåí åßåðåé commit. Ï ççåßïð êÞæééåð æé' äððü åñßóéåðåé ððï åñ÷åßå `cvswrap.c` óðïï éåðÜéïï CVSROOT.

Íåðåæüððððå ðïï êÞæééå ðïð Ýáðå Þæç æéñðåðå þðåå íå ðåñéÝá÷æé ðå óüóðÜ paths:

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


Ὁδὸς ὁδοῦ ὙΨ-ἀέα ἀεῖαὸἀόδῶδῶα οἱ ἱΥῖ cvs ἀεὶαῖΨοείῖ ἀεῖεῖῖῶεῖῖῖῖῖῖ 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 οἱ wrapper οάι οçi αἱ ἱνέοιῖ cvs αἰοῖεP, εῦἱἱοάο Ὑόοε οβἱροῖι uοε ἰοῖεῖοἱPοῖοἱ εἰεPοἱε ἰά
 ÷ἡçοεῖιῖεPοἱε οἱ repository, εἰ ὃἡὙῖἱε ἰά Ὑ ÷ἱε οἱ εἰοῖῖεῖἱ ἰῖῖῖἱἱ ὃἡἡοἱἱῖῖ.

4. Ἰδιναβὼα ὀπνά ἰά ἀοάεν Ὑῶαδῶα ὑεῖοδ ὀιοδ ÷ ἡβῶαδ ἄδῦ ὀι repository group ὀαδ. 1/4εῖε ἰε Ὑεᾶᾶ÷ἰε δῆυῶαῶοçδ ἐὰ ἄβῆῖῖῶᾶε ἄδῦ ὀῖῖ wrapper, ἐὰε ἰ βᾶεῖδ ἰ wrapper ἐὰ εὐῖῶᾶε ὀῖ ἰῖῖῖῖᾶῖ group ἰᾶ ὀῖ ἰδῖῖῖ ἐὰ ἄβῖᾶῶᾶε ἐὰε ç ὀᾶεῖῖῖ δῆυῶαῶοç.

3.3 ÅĖÝã÷ííôáò ôçí åãêáôÛóôáóç

İ wrapper ðñÝðǎé ðēÝñí íá áßíáé Ýðíēñò. Ìðññáßòá 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 üøë üéã ôã ðãñãÛüü âÞíãã Ý÷ïï æøæãóôãß óùóôÛ.