

Ἀέαιũñöùόç Ἀδῖεçêãðôéêπί ἸΎούι ἁέα ×ñÞόç ìå ôῖ FreeBSD

ἰάò óýíôῖῖò ἰäçãüò

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ἰÜñôéïò 1997

Ôῖ FreeBSD ἁβῖάé Ἰά éáôῖ÷ðñùῖΥῖ ἁἰδῖñéêÜ óýἰäῖῖ ôῖò FreeBSD Foundation.
Ἰé èΥἰäéò lomega, Zip, éáé Jaz ἁβῖάé ἁβôḁ éáôῖ÷ðñùῖΥἰ ἁἰδῖñéêÜ óýἰäῖῖḁ Þ ἁἰδῖñéêÜ óýἰäῖῖḁ ôçò
lomega Corporation óðéò ÇῖùῖΥἰäò ÐῖḁḁḁḁÞò Þ/ḁḁé óḁ Üḁḁḁ ÷þñḁò.
Ἰé èΥἰäéò Motif, OSF/1, éáé UNIX ἁβῖάé éáôῖ÷ðñùῖΥἰ ἁἰδῖñéêÜ óýἰäῖῖḁ éáé Ἰé èΥἰäéò Þ ðñÜóäéò IT
DialTone éáé The Open Group ἁβῖάé ἁἰδῖñéêÜ óýἰäῖῖḁ ôῖò The Open Group óðéò ÇῖùῖΥἰäò ÐῖḁḁḁḁÞò
éáé óḁ Üḁḁḁ ÷þñḁò.
Ðῖḁḁḁḁḁ ἁðü óéò èΥἰäéò Þ ðñÜóäéò Ἰé ἰðῖḁð ÷ñçóéῖἰðῖḁῖῖḁḁḁ ἁðü ôῖðò éäóäóéḁḁḁḁḁḁḁḁ Þ ôῖðò
ðüḁçòḁḁ ḁῖðò ἁέα ἰḁ ḁéḁḁñḁῖῖḁ ḁḁ ḁñῖüῖḁḁ ḁῖðò éäüñῖῖḁḁḁ ἁἰδῖñéêÜ óýἰäῖῖḁ. ¼ðῖò ἁðòḁḁ
ἁἰðḁῖḁḁḁḁḁ ḁḁ ἁðòü ôῖ éḁḁḁḁḁ éáé ἁέα üóḁḁ ἁðü ἁðòḁḁ ḁῖḁñḁḁḁ ç ἰḁÜḁḁ ἈῖÜðððῖçò ôῖò FreeBSD üðé
ἁβῖάé ðéḁḁῖḁ ἰḁ ἁβῖάé ἁἰδῖñéêÜ óýἰäῖῖḁ, éḁ ḁḁḁḁ Ἰά ἁðü ḁḁ óýἰäῖῖḁ: “TM” Þ “®”.

Ôῖ ḁḁñῖ Ḃḁḁḁḁḁ ḁḁñḁḁñÜóḁḁ ḁþò ἰḁ èüðḁḁ ḁḁ ðῖḁḁḁ (slices), èñῖḁðéÜóḁḁḁ (partition) éáé
ῖñḁῖðῖḁḁḁḁ (format/ḁéḁῖḁñöùòç) óḁḁçñῖḁḁ ἁβóḁῖðò éáé ḁḁñῖḁḁ ἰΥóḁ ḁῖò ḁñῖñḁḁḁḁḁ ḁέα ÷ñÞόç ἰḁ ôῖ
FreeBSD. Ôḁ ḁḁñḁḁḁḁḁḁḁ ḁῖḁῖÜóðçḁḁ ḁḁῖ FreeBSD 2.2 ḁḁḁÜ ḁῖḁḁḁḁ ḁῖḁḁḁḁḁḁ éáé óðéò Üḁḁḁ
ḁḁḁḁḁḁḁ. Ôῖ éḁḁḁḁ Ḃ÷ḁḁ ḁῖçḁñḁḁḁ ḁέα ôçῖ Ḃḁḁḁç 4 ôῖò FreeBSD.

1 ἈέóḁḁḁḁÞ éáé Ἰñéóῖῖḁ

1.1 ἈḁῖḁḁÜ

Ôῖ ἰḁ ḁñῖóéΥóḁḁ ἁβóḁῖðò ἰḁ ḁðéò÷Þḁ ḁḁ Ἰά ḁðÜñ÷ῖῖ óýóðçḁ ἁβῖάé ÷ḁñḁðçñéóðéêü ḁῖðò Ḃḁḁḁñῖ ḁέα÷ḁḁḁḁḁḁ
óðòðῖḁḁḁ. Ôῖ èüðḁḁ, ôῖ èñῖÜðéḁḁḁ éáé ç ḁñῖóéÞç ἁβóḁḁ ḁðḁḁḁḁ éḁḁḁḁḁñç ḁñῖḁῖ÷Þ éáé òüóðÞ óýἰḁḁḁ ḁῖðḁḁḁ.
ἰḁ ḁḁḁḁḁ èÜḁḁ ἰðῖñḁḁ ἰḁ ḁῖḁḁḁḁḁ Ἰάḁḁ ῖḁḁḁḁñῖ ἁβóḁḁ ḁḁ ḁḁðḁñḁḁḁḁḁḁ. Ἀðòü ôῖ Ḃḁḁḁḁḁ ḁñÜóðçḁḁ ùò
ðñῖððÜḁḁḁ ἰḁ ḁðῖḁḁḁḁḁ ç ḁéḁḁḁḁḁḁ éáé ἰḁ ḁðῖḁð÷ḁῖḁ ḁðò÷Þḁḁḁ. Ἀðòð÷þð, ḁῖḁḁḁḁḁḁ ḁðḁñ÷ḁῖðῖḁ
ḁñḁḁḁḁḁḁḁ (ḁḁñḁḁ ḁῖò sysinstall), óðéò ḁñḁóḁḁḁḁ ḁḁḁḁḁḁḁ ḁῖò FreeBSD, Ḃ÷ῖḁḁ ḁḁḁḁḁḁḁ ḁçῖ ḁéḁḁḁḁḁḁḁ.

ÔðÜñ÷ῖḁḁ ḁῖḁḁ ḁḁḁḁḁ ḁñḁḁḁ (modes) ῖñḁḁḁḁḁḁḁ:

- *ὁδοῖαδὸP εἰσδοῖνῆβᾶ (compatibility mode)*: Ἀεῖαῖνῆουός οἷο Ἀβῶεῖο ἡοῶᾶ ἰά Ὶ ÷ ἁε Ὶᾶ ὀβῖᾶᾶ ὀἰπῖᾶοῖ (slice table) ἑᾶᾶ ἰά ἰδῖᾶᾶ ἰᾶ ÷ ἡῥῥῥῖῖῥῥῥῥᾶ ὀᾶῖῖῖῥῥῥῥᾶ ᾶῖῖ Ὶῥῥᾶ εᾶῥῥῥῥᾶῥῥῖ ὀῥῥῥῖᾶῥᾶ.
- *ᾶδῖῥῥᾶῥῥῥῥῥῥP εᾶῥῥῥῖᾶῥᾶ (dedicated mode)*, ἰᾶῖῥῥῥῖ ὀῖῖῖῖ ῥῚῚᾶῥᾶ ἑᾶᾶ ᾶδῖῥῥῖᾶῥῖᾶ ᾶδῖῥῥᾶῥῥῥῥῥῥP εᾶῥῥῥῖᾶῥᾶ: Ἀεῖαῖνῆουός ᾶῖῖὀ Ἀβῶεῖο ÷ ῖῖῖὀ ὀβῖᾶᾶ partitions. Ἀὀὀῖ ῥῚῚᾶ ὀῥῖ ᾶῥᾶῥῥᾶῥᾶ ὀῥὀ ὀῖῖὀᾶῥὀ Ἀβῶεῖο ᾶὀῥῥῥῖὀᾶῖ ᾶῥῥῚ Ὶᾶ ἰῥ-FreeBSD εᾶῥῥῖᾶῥῥῥῥῖ ὀῥὀῥῖᾶ ὀῥῥᾶῖῖ ἰᾶ ἰῥ ἰδῖᾶᾶ ἰᾶ ᾶᾶ ὀἰ Ἀβῶεῖ. Ῐ Ὶῥῥᾶὀς ᾶδῖῥῥῖᾶῥῖᾶ ᾶἰᾶῖῖᾶὀ ὀῥῖ ῥῖᾶὀῖ ὀῖὀ ὀῥὀῥῖ ὀἰ ὀῥὀῥῖᾶ ἰδῖᾶᾶ ἰᾶ ἰῥῖ ᾶἰᾶῖῖῖῖᾶὀ Ὶᾶᾶ Ἀβῶεῖ ῖῖῖὀἰῥῥῥῖῖῖῖ ῥῖ ῥᾶὀ ᾶὀὀῖ ὀἰῖ ὀῖῖὀἰ.

[illegible]

ÐÝíá áðí ðçí áðéeíáÐ ðíððíð éáéðíðíáð ððÛí÷íð áýí ìÝèíáé ððçðíáðíð ðíð áðéíð. Ì ðíðíð ÷íçðéíðíéáð ðí
 áíáéáíð ááéáðÛððáçð ðíð ððððíáðíð /stand/sysinstall. Áðí ðí 2.1.7-RELEASE éáé ìáðÛ ç sysinstall
 áðèðíéáð ðí ðððéíð ðíð áðéíð áðáéáÐ áðéðíÝðáé ðçí áðáðéáðð áééáÐ ððí label (ðððéíð) éáé ððá ðíðáðá
 (partitions) ðíð áðéíð. ÁðððÝíð ðáð áðéðíÝðáé íá áðèçéáýðáðá ðéð áééáÝð ìíð ððíð ððáéðéíÝíð áðéíð ÷íðíð
 íá áðçíáÛáé ðíðð ððéíéðíðð. Ì ááýðáíð ðíððíð áíáé íá áéðáéÝðáðá áéÛíðáð áíðéÝð ìá ðí ÷Ýíé áðí ðçí áíáíð
 áíðéíð ùð root. Áí áðééÝíáðá ðçí áðèéáéððééÐ éáéðíðíáð ÷íðáéÛáðá íá áéðáéÝðáðá ìíð 2-3 áíðéÝð áíð ìá ðí
 sysinstall ðíÝðáé áíðéÝðáðá ééáÛéé ðáíáðÛíð.

1.2 Īñéóìĭß

Ç áéá÷âßñéóç äßöêùí òôí UNIX® Ý÷áé äþóáé íÝá Ýíííé óá òðŨñ÷íõóáð ëÝíáéð. Ôí ðánaéŨòù èáíéëüäéí áîçääß òçí íñíëüäß ðíõ ÷ñçóéíðíëíüíá óá áóòù òí èáßíáíí éáé òòí FreeBSD äáíééŨ (ðñíõóáðð).

- [illegible]

1.3 Οçìáßá ðìò ðñÝðáé íá ðñìóÝìáððá éáé ðáãßáððò

Ἀþðá ìáãÛèç ðñìóí÷þ òçç ᾗέάáééáðßá, áí ᾗáí èÛááððá ðá ἰÝðñá óáð éáé ᾗßìáé èÛèð ìðññáß íá éáðáóðñÝðáððá ðá ðñéá÷÷ìáíá Ûèèí ᾗßðèí ðìò ððððþíáððò.

ðñìóÝìáððá ðé èÛìáððá. Ἀßìáé ðñéý áýèíèí íá éáðáóðñÝðáððá èÛèð ᾗßðèí ᾗìðéáýñìáððá ἰá áððÝðð ðéð áíðìèÝðð. Ἀí Ý÷÷áððá ᾗìðéáñèßáðð ᾗéÝñìáððá ðá ἰçíýìáððá ðìò ððñþíá éáðÛ òç ᾗéááééáðßá ᾗèèßíçðçð ᾗéá íá ᾗñáßðá òç óùóðþ ðððéáðþ ᾗßðèð.

ÖððéèÛ ᾗáí Ý÷÷ìáððá éáíßá ᾗðèýíç ᾗéá æçìèÝðð ðìò ἰðññáß íá ðñìèèçèñýí. Ç ᾗðèýíç ᾗßìáé ᾗéèþ óáð!

1.4 Zip, Jazz, éáé Ûèèá áðáéñìýìáíá ἰÝóá

Ἰé áðáéñìýìáíñé ᾗßðèð ἰðññýí íá ᾗéáññöüèñýí óáí éáññéèñß ᾗßðèð. Òí óçìáíðéèú ᾗßìáé íá ᾗßìáé óðñáñÝñð ἰ ðáçäüð ðìò ᾗßðèð éáðÛ òçí ᾗèèßíçðç ðìò ððððþíáððò éáé ἰá ᾗéðéÝðá ἰÝóá þððá íá ἰðññÝóáé ἰ ððñþíáðð íá ᾗáß óùóðÛ òçí ᾗäüìáðñßá ðìò ᾗßðèð. ÈñèðÛìáðð ðé èÝáé ç áíðìèþþ dmesg ᾗéá íá ᾗáßðá áí ç ðððéáðþ ᾗßìáé óðçí èßððá. Ἀéá ðáñÛááéñíá áí ἰ ððñþíáðð ᾗñÛðáé:

Can't get the size

öüðá ᾗáí ððÛñ÷ᾗé ᾗéðéÝðá óðñí ðáçäü. Ἀí ᾗßìáé áððú èá ðñÝðáé íá ᾗðáíáéèèþðáððá òí ἰç÷Ûíçíá ðñéí ᾗñèèÛðáððá íá ᾗéáññöþðáððá òçí ᾗéðéÝðá.

2 Ἀéáññöþñííðáðð ᾗßðèðð ᾗéá áðìèèáéóððèèþ èáéðìðñáßá

2.1 Ἀéóáãüñþ

Ἀððþ ç ðáñÛáñáððò ðáñéáñÛðáé ðþð íá ððéÛìáððá ᾗßðèðð ἰññí ᾗéá òí FreeBSD. Èðìçèáßðá ùðé ñé ᾗßðèðé ᾗðìèèáéóððèèþð èáéðìðñáßáðð ᾗáí ἰðññýí íá ᾗéáááóðñýí áðü Ûèèá èáéðìðñáéèÛ, ἰýðá íá èÛññí boot.

2.2 ðþð íá ððéÛìáððá ᾗßðèðð áðìèèáéóððèèþð èáéðìðñáßáðð ἰá òí Sysinstall

To /stand/sysinstall, òí ðññáññáíá ᾗáéáðÛððáçðð ðìò ððððþíáððò, Ý÷÷ᾗé ᾗðáéðáéáß óððð ðáéáððáßáðð ðìò ᾗèäüóáéð þððá íá ᾗðèðñèáß òçí ᾗéááééáðßá ÷ññéóñý ðñí ᾗßðèí éáé íá ᾗðáéðáß èéäüðáñç ðññððÛèáéá. Òá ðññáñÛìáððá fdisk éáé disklabel ðìò ððÛñ÷÷ìóí óðñí sysinstall ᾗßìáé ᾗñáððéèýý ðáñéáÛèñíððò (GUI - Graphical User Interface) éáé ἰáèþññí òí ἰðÝñáñáíá ðìò èñðßíáððò ðñí ᾗßðèí. Ἀßìáé ðññðáíþð ἰ ᾗðèñèüðáññð ðññððò íá èñðáððá ᾗßðèðð áðü òçí Ýèáñóç 2.1.7 éáé ἰáðÛ ðìò FreeBSD.

1. Ἰáéèíþððá òí sysinstall þð root ᾗñÛññíðáðð

```
# /stand/sysinstall
```

óðçí ᾗñáññþ áíðìèþí.

2. ἈðéèÝìðá Index.
3. ἈðéèÝìðá Partition.
4. ἈðéèÝìðá òí ᾗßðèí ðìò èÝèáððá íá ᾗáéáðáóðþðáððá ÷ñçðèññèþíðáðð ðá ᾗáèÛèéá éáé ἰáðÛ **SPACE**.

5. Ἀί εά ÷ ñçóéíðìéþóáðå ùèí òí ἁβóèí ἁέά òí FreeBSD, ἁðéëÝíðå Ἀ.
6. Ἰùèéð óáð ñòðþóáé áí ùíòò èÝéåðå íá òí èÝíáðå áððü (Do you still want to do this) ἁðáíðþóðå Yes.
7. ἈðéëÝíðå Write.
8. Ἐά óáð ἁḂÛéå íéá ðñíḂéäíðìþçόç ó÷ḂðéèÛ íå ôçí ἁḂñḂöþ óå ððÛñ÷ííóá óðóðþíáðå ἁðáíðþóðå Yes.
9. Ἰùèéð óáð ñòðþóáé áí èÝéåðå íá ἁḂéáðóðþóáðå Ýíá boot loader, ἁðéëÝíðå None ἁέά íá ἁðñóýḂåðå ïðíéḂḂðñå ἁèéḂḂ þòí Master Boot Record. Ç ἁḂéáðÛóðáóç Ḃñüð boot loader ÷ñḂéÛḂåðå ùñí óå éḂéñýñéð ἁḂéáðóðÛóáéð òí FreeBSD þ áí ó÷ḂḂéÛḂåðå íá òíðñéḂðþóáðå òí ἁβóèí óå èÛðñéí Ûèèí íç÷Ûíçá.
10. Ðáðþóðå **ENTER** óðí ḂíçíḂñüðéèü ïþñíḂ Ḃñ èÝḂé “Wrote FDISK partition information out successfully”.
11. ἈðéëÝíðå Quit ἁέά íá ἁḂḂðå ἁðü òí FDISK Editor éḂé ïðÛ **ESCAPE** ἁέά íá ἁðéóðñÝðåðå óðí Index menu.
12. ἈðéëÝíðå Label ἁðü òí Index menu.
13. ἸñÛóðå òí ἁβóèí óáð ùðüð èÝéåðå (ḂḂþ ïñþḂåðå óå partitions). Ἀí èÝéåðå ùñí Ýíá partition ðáðþóðå òí c ἁέά íá ḂçíéíðñḂðåðå òí partition. ἸðÛ ἁðèð ἁḂ÷èḂðå ðéð ðñíḂðéçíḂÝð ἁέά óå ðñíéḂéñéóíÝíá size, partition type Filesystem, éḂé mountpoint (òí ïðñí ḂḂí ÷ñçóéíðìéḂḂðé).
14. Ðáðþóðå w ùèéð ðḂḂéþóáðå éḂé ἁðéèðñþóðå ðéð ḂèéḂḂÝð ἁέά íá óñíḂ÷þóðå. Òí filesystem èḂ ḂḂñḂóðḂ ἁðüðḂḂ ἁðü ôçí Ḃññèþ newfs Ḃèüðð áí ἁðéëÝíðå òí ḂñðḂḂðñ. (Ἀí ḂÛḂåðå éḂéñýñḂḂí partition óáð óðñÝñḂé íá òí èÝíáðå!). Ἐά óáð ḂþóḂé òí èÛèð:

```
Error mounting /mnt/dev/ad2s1e on /mnt/blah : No such file or directory
```

ἈḂñþóðå òí.

15. Ðáðþóðå óñíḂ÷ñíḂ òí **ESCAPE** ἁέά íá ἁḂḂðå.

2.3 Ðüð íá ððéÛíðå ἁβóèíðð ἁðñéḂḂéóðéèþð èḂéðññḂḂḂò ïÝóá ἁðü ôçí ḂñḂñìþ Ḃññèþí

ἈèðḂéÝóðå ðéð ḂḂñḂéÛüð ḂññèÝð ḂñèéḂééóðñíóð òí ad2 íå òí ùñíḂ ôçð óðóéḂðð òñ ἁβóèñ (ḂñÛððå dmesg íá ḂḂÝḂñðå áí ḂḂḂé òüóðü).

```
# dd if=/dev/zero of=/dev/ad2 count=2
# disklabel /dev/ad2 | disklabel -B -R -r ad2 /dev/stdin
ἘÝèñðå ùñí Ýíá partition, ïðüð ïðñíýñḂ íá ÷ñçóéíðìéþóíðå òí èññÛðé 'c':
# newfs /dev/ad2c
```

Ἀí ÷ñḂéÛḂåðå íá ḂèèÛíðå òí disklabel ἁέά íá ÷ñçóéíðìéþóðå ðñéḂḂèÛ partitions (ἁέά ḂḂñÛḂḂḂḂḂ áí èÝéåðå swap) ðüðå èÛíðå:

```
# dd if=/dev/zero of=/dev/ad2 count=2
# disklabel /dev/ad2 > /tmp/label
Ἀñþñðå òí disklabel ἁέά íá ðññéÝóððå partitions:
# vi /tmp/label
# disklabel -B -R -r ad2 /tmp/label
ḂèðḂéÝóðå ôçí Ḃññèþ newfs óðå partitions ùðüð ðñÝðḂé
```

Ἰ ἁβóèñð óáð ḂḂḂḂé Ýðñéññð ðññð ÷ñþóç.

3 Äéáìĩñöþííîáò äßóêîõ ãéá óõîâáôÐ ëäéôîõñãßá

3.1 ÁéóáñùñÞ

Ç añāñiP āfōreþi āñāēē iāf i āōēreuoāññō ññuðñō āēā íā oōēŪiāōā āñōēñō āñēēāēōōēēPō ēāēōññāñāō āēēŪ āñāē ēāē i āōōēreuoāññō āēā íā oōēŪiāōā oñāāōññō āñōēñō. Ōi f_{disk} āñu ñçf añāñiP āfōreþi ēYēāē ðāñēōōūōñāñō āñōāēō iāēñāōēēþi ēāē ðñēYō āñōāēō ñ÷āōēēŪ iā ññi ðñāēā ēñiāōēþi, ēŪōē ðñi ðñññāññō āñi ÷ñāēŪāōāēē íā iŪēāōā. Āē āñōñ ÷ñçōēññññēññō ðñi sysinstall āēā íā oōēŪiāōā oñāāōññō āñōēñō āēñēñēñññō ðēð iāçāñāō ðāñāēŪōñ.

3.2 Δρò íà ööëÛîâöâ äßóëîõò óõîááòρò ääëôîõñãßàò ìà ôî Sysinstall

1. ÎâêíÐóâ òï sysinstall þò root ãñÜöííôáð

```
# /stand/sysinstall
```

óôçí ãñàììÐ áíôïëþí.

2. Ἀδελφότητα Index.
3. Ἀδελφότητα Partition.
4. Ἀδελφότητα οἱ ἀβόητ διὸ ἐΥεῖα αἰ ἀἀάοάοόΠόαα ÷ ηζούιιθιεπράο αἰ ἀαΕὔέα εἰέ ιαοÜ **SPACE**.
5. Αἶ εἰ ÷ ηζούιιθιεΠόαα üēī οἱ ἀβόητ ᾗεί οἱ FreeBSD, Ἀδελφότητα A.
6. ¼ôáí óád æçðçèß:

Do you want to do this with a true partition entry so as to remain cooperative with any future possible operating systems on the drive(s)?

(ÈYēāōā īā ōī ēUīāōā āōōū īā ŋāāīāōēēŬ ēmīŬōēā āēā īā ŋāāīāīāīāē ōōīāāōōū īā Ŭēēā ēāēōīōāēēŬ ōōōōPīāōā?) ÁŋāōPōōā yes.

7. **ΆδεέΎίοά Write.**
8. **¼οάί οάδ æçðçëß íá ääëáóáóðßóáðá öíí boot manager, áðëéΎίοά None íà öí **SPACE** éáé íåöÜ **ENTER** äéá OK.**
9. **Quit (ääåßðå) áðü öí FDISK Editor.**
10. **Ëá óád ñüðßóåé èÜðé ó÷åðëü íà öíí boot manager ðÜëé, áðëéΎίοά None íáfÜ.**
11. **ΆδεέΎίοά Label áðí öí Index menu.**
12. **ÍñÜóóå öí äßöëí üðüð èΎëåðå (ääß éå ïñßóåðå óå partitions). Áí èΎëåðå üüí Ύía partition áðëðð äå÷ëåßóå óéð ðñíäëëëäΎð äéå óå ðñíëåñëíéóΎía size, partition type filesystem, éåé mountpoint (öí íðíßí äåí ÷ñçóéííðíëåßóåé).**
13. **Öí filesystem éå ðåñåóóåß áóðüüåóå áðü öçí áíöíëß newfs åêüüð áí áðëéΎίòå öí áíóðëåöí. Áí åÜæåðå éåéñýñåéí partition óád óöíöΎñåé íå öí èÜíåðå! Ëå óád äðóåé öí èÜëèð:**

```
Error mounting /mnt/dev/ad2s1e on /mnt/blah : No such file or directory
```

ÁãíîÞóôâ ôï.

14. ÐáôÞóôâ óõíá÷üìáíá ôï **ESCAPE** ãéá íá âãåâôå.

Ἰ ᾱβóêῖð óᾱð ᾱβῖᾱέ Ὶóῖêῖð ðñῖð ÷ñᐑόç.

4 ¶ēēᾱò ēᾱéôῖñᾱᐑᾱò ἰᾱ ôῖð ᾱβóêῖð

4.1 ᐑñῖóēῚóῖῖᾱò swap.

Ἐᾱêᐑò Ὶῖᾱ óýóçῖᾱ ᾱðᾱêðᾱβῖᾱðᾱέ, ç ᾱῖῚᾱêç ᾱέᾱ ἰᾱᾱᾱýóᾱñῖ swap ᾱβῖᾱðᾱέ ῖêῖ ἑᾱέ ðéῖ ᾱðéóᾱêðéêᐑ. ᐑᾱñῖêῖ ðῖð òῖ ἰᾱ ðñῖóðᾱêᾱᐑ swap óᾱ Ὶῖᾱῖ ððῚñ ÷ῖῖᾱ ᾱβóêῖ ᾱβῖᾱέ ðññᾱñῚ ᾱýóêῖêῖ, Ὶῖᾱð ἑᾱéῖῖñᾱéῖð ᾱβóêῖð ἰðῖñᾱᐑ ἰᾱ ῖñòῖðῖéçᾱᐑ Ὶóóé ᐑóðᾱ ἰᾱ ðᾱñéῚ ÷ᾱέ òῖ ᾱðéðēῚῖ swap ðῖð óᾱð ēᾱβðᾱέ.

Ἄέᾱ ἰᾱ ᐑñῖóēῚóᾱð swap ἑᾱêᐑò ᾱῚᾱðᾱ Ὶῖᾱ ᾱβóêῖ óῖῖ óýóçῖᾱ:

1. Ἐᾱêᐑò ēῖᾱᾱðᾱ òῖ ᾱβóêῖ (partitioning) ᾱēēῚῖðᾱ òῖ disklabel ἑᾱέ ῖñᐑóðᾱ ÷ᐑñῖ ᾱέᾱ swap óῖῖ êñῖῚóé (partition) ‘b’ ἑᾱέ ᾱῚēðᾱ òῖῖ ððῖêῖðῖ ÷ᐑñῖ óᾱ ēῚᐑῖêῖ Ὶēēῖ êñῖῚóé, ð.÷. óῖῖ ‘a’ ᐑ óῖῖ ‘e’. Ὀῖ ἰῚᾱᾱèð ðῖð ᾱβῖᾱðᾱ ᾱβῖᾱέ óᾱ blocks òῖῖ 512 bytes.
2. Ὶóᾱῖ ēῚῖᾱðᾱ newfs óῖῖ ᾱβóêῖ, Ἰçῖ òῖ ēῚῖᾱðᾱ óῖῖ êñῖῚóé ‘c’. Ἀῖðᐑᾱðᾱ, ēῚῖᾱ òῖ ῖῖῖ óῖῖ êñῖῚóé ðῖð ᾱᾱῖ ᾱβῖᾱέ swap.
3. ᐑñῖóēῚóðᾱ óῖῖ `/etc/fstab` òῖ ðᾱñᾱēῚòῖ:

```
/dev/ad0b                                none                swap                sw 0 0
```

ἈēēῚῖðᾱ òῖ `/dev/ad0b` óῖῖ ῖñῖᾱ òçð ἑᾱéῖῖñᾱéᾱð óᾱð óðóéᾱðᐑð.

4. Ἄέᾱ ἰᾱ ᾱῖᾱñᾱῖðῖéᐑóᾱðᾱ Ὶῖᾱðᾱ òῖ ῖῚῖ swap ÷ñçóêῖῖðῖéᐑóðᾱ òçῖ ᾱῖðῖêᐑ swapon

```
# swapon /dev/da0b
swapon:  added /dev/da0b as swap space
```

4.2 ἈῖóéᾱñῚóῖῖᾱò ᾱᾱ ðᾱñéᾱ ÷ῖῖᾱῖᾱ ᾱβóêῖῖ

Ἀðῖ òῖῖ: Renaud Waldura (<renaud@softway.com>)

Ἄέᾱ ἰᾱ ἰᾱðᾱééῖᐑóᾱðᾱ ᾱñ ÷ᾱβᾱ ᾱðῖ òῖῖ ᾱñ ÷éêῖ óᾱð ᾱβóêῖ óᾱ Ὶῖᾱῖ ἑᾱéῖῖñᾱéῖ, ēῚῖᾱ:

```
# mount /dev/ad2 /mnt
# pax -r -w -p e /usr/home /mnt
# umount /mnt
# rm -rf /usr/home/*
# mount /dev/ad2 /usr/home
```

4.3 ÖœéÜîôå åíùìÝíîò ãßóëîò àå ôî CCD

Áđĩ ôĩĩ: Stan Brown (<stanb@awod.com>)

[illegible]

Ā́éá íá òñŸíâôâ CCD ðēÝíí âáí ÷ñâēÜæâóââ âéâéü ðõñÞíá. Ìâ ôçí áíôíēÞ ccdconfig, öĩñðÞíâôâé ôí éâôÜēēçĩ
KLD áóôüíâôâ áí ĩ ðõñÞíâôâ âáí Ý÷âé Þæç õðĩóôÞñéíç áéá CCD.

Ôá CCD ôöëÜ÷îíôáé óá partitions ôýôïö 4.2BSD. Áí èÝëäôá íá ÷ñçöëüðîëëóóäôá üëí ôüí äëöëí êáé ðÜëé ðñÝðáé íá ôöëÜíäôá Ýíá íÝí partition. Äéá ðáñÜüäéäíá, ç áíôíëð **disklabel -e** ðîññá íá íá ääíäé:

```
#          size      offset      fstype    [fsize bsize bps/cpg]
c: 60074784         0      unused          0         0         0 # (Cyl.  0 - 59597)
```

Άάρ ιδññâßôâ íá ÷ ñçôèîüðñēĐôâôâ ôï partition c άέα CCD, äöüóñí άβίάέ öýðñö *unused*.
 Άíôßêâôâ äçïèíôñâĐôââ Ýíá íÝí partition äêñéâðò ßäéíö íääÝèíöð áέéÜ öýðñö 4.2BSD:

```
#          size      offset      fstype    [fsize bsize bps/cpg]
c: 60074784         0      unused         0         0         0 # (Cyl.    0 - 59597)
e: 60074784         0    4.2BSD         0         0         0 # (Cyl.    0 - 59597)
```

Ā́éá íá ā́ciēīōñāPōáōā Yía íYī CCD, āēōāēYōōā ōēō đāñāēŪōū āíōīēYō. ĐāñēānŪōīōī đpò íá đñīōēYōāōā ōñāđō
 āđōēīōđ. Áđēđō āēēŪīōā ōēō ōōōēāōYō ũđīō ÷ñāēŪāōāē. Èōīcēāđōā ũēē íē āđōēīē đñYđāē íá āđīāē *ũñēīē*.

```
# cd /dev ; sh MAKEDEV ccd0

# disklabel -r -w da0 auto
# disklabel -r -w da1 auto
# disklabel -r -w da2 auto

# disklabel -e da0
ᏍᏏᏉᏉᏉᏉᏉ ᏉᏐᏐᏐᏐ 4.2BSD
# disklabel -e da1
ᏍᏏᏉᏉᏉᏉᏉ ᏉᏐᏐᏐᏐ 4.2BSD
# disklabel -e da2
ᏍᏏᏉᏉᏉᏉᏉ ᏉᏐᏐᏐᏐ 4.2BSD

# ccdconfig ccd0 273 0 /dev/da0e /dev/da1e /dev/da2e

# newfs /dev/ccd0c
```

Ç ôêĤ 273 âġíáé ôĭ ĩŸääèò ôĭõ stripe. Åġíáé ĭ áñéèüò ôĭĭ sectors (512 bytes ĭ êâéŸíáo) óá êÛèâ block äääñŸíuĭ ôĭõ CCD. Èá ðñŸðâé íá âġíáé ôĭõèÛ÷éóóĭ 128 kB, êâé äâĭ ðñŸðâé íá âġíáé äŸíâĭç ôĭõ 2.

Ôpñá ìðĩñáßôâ íá êÛíáôâ mount êáé íá ÷ñcôéiĩðĩéPóáôâ ôi CCD óáo ìÝóù ôcò óóóéãPò /dev/ccd0c.

já déu aóíáôu éáé ãóÝééêôí áíáééáéôéêú ôíô CCD áíáé ôí Vinum. Ðãñéóóúôãñãò ðëçñíöíñßãò óóí Vinum Project
 home page (<http://www.vinumvm.org/>).

5 Ἀð÷ᾗñéóôþᾗ

Ì óðᾗᾗᾗᾗᾗÝᾗò èᾗ þḗᾗḗ ᾗᾗ ᾗð÷ᾗñéóðþᾗḗ òíðð ðᾗᾗᾗᾗᾗᾗᾗ ᾗἑά òçí óðíᾗḗóöíñᾗᾗ òíðð óᾗ ᾗððþ òçí ᾗñᾗᾗóþᾗ òíðð:

- Darryl Okahata (<darrylo@hpnmhjw.sr.hp.com>) ᾗἑά òḗð ᾗðḗÝò ïᾗçᾗþᾗð ᾗᾗḗᾗðᾗᾗóðᾗóç þíùð ᾗþḗḗḗ òᾗ ᾗðíḗḗᾗḗóóḗḗ òñüðí ḗᾗḗóðíðñᾗþᾗð, òḗð ïðíþᾗð Ý÷ù ðíḗḗÝð òíñÝð ÷ñçóḗñðíḗḗþᾗḗ óóçí FreeBSD-questions.
- Jordan K. Hubbard <jkh@FreeBSD.org> ðíð Ýḗᾗᾗ òí sysinstall ÷ñþḗḗḗ ᾗἑά òÝḗḗḗḗ ᾗþᾗḗð ᾗḗḗḗḗÝð.
- John Fieber (<jfieber@indiana.edu>) ðíð Ýᾗùóᾗ òḗð ðḗçñíḗḗñþᾗð ḗᾗḗ òᾗ ðᾗᾗᾗᾗþᾗᾗᾗᾗ ᾗἑά òí DocBook DTD ðᾗḗḗ òᾗᾗ ïðíþᾗ ᾗððü òí ḗᾗþᾗᾗḗ ᾗᾗóþᾗᾗᾗᾗḗ.
- Greg Lehey <grog@FreeBSD.org> ðíð Ýḗᾗᾗᾗ òçí ᾗḗḗḗᾗᾗᾗ ḗḗ, øᾗ÷ḗḗᾗᾗ ᾗἑά ᾗᾗᾗñþᾗᾗᾗᾗᾗ, ḗᾗḗ ᾗἑά òçí òðíððþñḗíç òíð òᾗ ᾗḗᾗᾗᾗᾗ ḗÝᾗᾗᾗ.