

Synonyms used in this article

- CF means Compact Flash
- DB9 means the serial-connector of standard I86-PC-Hardware
- x means Data and Handshake-wires crossed over (nullmodem)
- = means Data and Handshake-wires straight through

I used

- CF-Card
- CF-Writer
- WRAP-Board
- serial-nullmodem-cable "DB9 x DB9" Attention, it HAS to be nullmodem, not "DB9 = DB9" Documentation from pcengines says you could otherwise damage the serial-port.
- linux-system, which knows the CF-Writer - this one turned out to be a problem, you should prepare to fetch the cdrom from the download-site and use the live-filesystem on it to prepare the CF-Card. Which means you need a pc which you can reboot at your needs and a cd-burning device. (for problems i had with the pre-existing linux-installation see below)

Steps

- get the actual stable release from <http://linux.voyage.hk/?q=download> [<http://linux.voyage.hk/?q=download>] currently 3 Mar 2007 it is voyage-0.4.1.tar.bz2 approximately 19 MB uh STILL, no checksum for the file, Web/Ftp-Masters please create them, i want to verify that i got what you published.
- looked at the readme for voyage
- unpacked like they say in the readme - partially failed, the tar-archive contains device-nodes which only root my create - i will need super-user-privileges.
- unpacked again everything is fine now
- cd into the new created directory
- next is running voyage.update as root, so better check what it does. It WRITES A RAW DISK !!! This is obviously meant for writing on the flash-card. Be aware to tell the RIGHT DEVICE-NAME when it asks otherwise it may kill the data of the linux-system you're on. My CF-Writer is one for USB with the device-name of /dev/uba
- readme says i have to format the card myself so insert the card
- fdisk /dev/uba and created an empty dos-Partition-table, ignored one error-

message, no write yet

- created one primary partition over the whole card
- checked the table - ahhh, it does partition-type = linux by default, but "bootable-flag" is missing still no write yet
- activated the bootable-flag of my partition
- checked table, verified table and write on the card now.
- left fdisk-program automatically, now "mkfs.ext2 /dev/uba1" this takes some minutes on my 512MB-Card
- "tune2fs -c 0 /dev/uba1" which means: never do fsck on that filesystem
- create mountpoint for my freshly formatted CF-Card: "mkdir /mnt/voyage_install"
- started ./voyage.update, installer in current-directory is ok, Disk-Device is WRONG !! I think there should be no default to this question. I set it to /dev/uba
- tell the created mountpoint
- selected option for wrap-board card is writing now
- error-message: "Fatal: stat /dev/uba: No such file or directory"

Fatal Error: Failed to chroot to /mnt/voyage_install to install lilo" while CF-Writer was still writing.

- waited until write-led went off and checked the installer-script again.
- This is BAD, i think the installing system has to have the same device-numbering-scheme as the installed system, will get a boot-cdrom and retry.
- started download of cdrom-image from <http://www.voyage.hk/download/ISO/voyage-0.1sarge.iso> [<http://www.voyage.hk/download/ISO/voyage-0.1sarge.iso>]

Had Lunch

- burned a cdrom, booted it - It is a live-filesystem
- The usb device for the CF-Writer is now /dev/sda but the CF-Writer has do be plugged in with card to be recognized
- copied voyage-0.1sarge.tar.gz via scp to the ram-disk /KNOPPIX/dev/shm on the development-system and unpacked it.
- again fdisk /dev/sda, created empty dos-partitiontable, created 1st primary partition, set the boot-flag
- again mkfs.ext2 /dev/sda1 and tune2fs -c 0 /dev/sda1
- again created mountpoint, this time named /mnt/cf
- now cd to installer-dir, run the script ./voyage.update, installer=current directory, disk-device=/dev/sda, mount-point=/mnt/cf option=1 for WRAP-board.
- one warning about non-existent /proc, that is ok
- set root-password

- DONE
- shut the development-system down, removed the CF-Card, put it in the wrap-board.
- Power on at wrap
- Finally the wrap-board is up and running

Praise the Flying Spaghetti Monster !!

and may his noodly appendages look kindly upon ye and yer kind

i still have some smaller problems like serial-comm hangs, and bringing up the atheros-wifi-cards but at least it does dhcp-client on eth0 and i can ssh into the board.

Postscript: Version 0.4.1 easier to install

From voyage 0.4.1, it does seem that the above problems have been addressed. Successful install was carried out using an Ubuntu 6.06 (and later an Ubuntu 8.04 system), where the CF reader was /dev/sdb, and the targets Alix 1c, and Alix 2c2 worked OK.

Steps:

- Unpack the voyage-0.4.1.tar.bz2 archive somewhere on your linux 'development system'. Note: use 'sudo' to unpack. The errors noticed when not using sudo are fatal – they will prevent the system booting up.
- Use fdisk, parted and tune2fs as discussed above or in the README file to setup a single ext2 bootable partition on the compact flash device.
- From the top level of your unpacked voyage software, run:

```
$ sudo usr/local/sbin/voyage.update
```

- Answer the questions and use the menu options to select your compact flash device e.g. /dev/sdb and the target card type, and finally to copy the system to the flash device.

After that, put the CF card into your target board and boot it up. { Rodney @ nicta.com.au, Sydney }

Atheros WiFi Card support

The madwifi driver is included in the distribution, so it is just a matter of inserting the driver and configuring as usual, e.g.:

```
-----  
# modprobe ath_pci  
-----
```

```
| # wlanconfig ath0 create wlandev wifi0 wlanmode sta  
| # modprobe wlan_scan_sta {module to scan in station mode}  
| # ifconfig ath0 up  
| # wlanconfig ath0 list scan {scan for networks, atheros specific}  
| # iwlist ath0 scan {scan generic}  
|-----|
```

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