

**in**

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**REVISION HISTORY**

NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## in

### 1.1 main

VirtualLink

A SANA-II ethernet device for virtual point-to-point communication

(C) Copyright 1999 Chris Brenner

Introduction  
A short introduction

Disclaimer  
Legal stuff

License  
More legal stuff

Credits  
Who's behind this?

Requirements  
What you need

Installation  
Where to put it

Setup  
Making it work

Notes  
Miscellaneous information

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History  
Revision information

Contact  
Who ya gonna call?

## 1.2 intro

Introducing VirtualLink  
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VirtualLink was written primarily to establish a virtual ethernet link between MacTCP and Miami Deluxe when running a Macintosh emulator. This allows you to use Macintosh internet applications without stealing the modem away from Amiga internet applications. It might have other uses as well.

## 1.3 disclaimer

Disclaimer  
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## 1.4 license

Usage License  
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## 1.5 credits

### Credits

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VirtualLink

(C) Copyright 1999 Chris Brenner

magPLIP

(C) Copyright 1995 Jan Kratochvil & Martin Mares

(C) Copyright 1995-1996 Marius Gröger

VirtualLink is based on the wonderful magPLIP device written by Marius Gröger and further maintained by Stefan Ruppert. I recommend to anyone trying to write a SANA-II device that they get ahold of the source code for magPLIP. I found it to be the most straight-forward example of how to write a SANA-II device and VirtualLink would probably not exist without it.

## 1.6 requirements

### System Requirements

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- An Amiga with at least a 68020 processor
- Miami Deluxe
- ShapeShifter or Fusion 3.2 running Open Transport TCP 1.1 or higher

## 1.7 install

### The Installation Procedure

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In this archive you will find the following files

vlink.device.020-030  
vlink.device.040  
vlink.device.060  
vlinkmirror.device.020-030  
vlinkmirror.device.040  
vlinkmirror.device.060

Simply copy the appropriate vlink.device and vlinkmirror.device to the DEVS:Networks directory. If DEVS: does not contain a Networks directory, then you will have to create it first.

For example, if your Amiga has a 68060 processor, you would install the appropriate files by issuing the following commands from a shell.

```
copy vlink.device.060 DEVS:Networks/vlink.device
copy vlinkmirror.device.060 DEVS:Networks/vlinkmirror.device
```

## 1.8 setup

### Setting Up The Software

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Setting up VirtualLink requires adding the proper hardware and interface definitions to Miami Deluxe and configuring ShapeShifter and MacTCP. Step-by-Step instructions are provided for doing this. If you follow these steps you should have no problem getting VirtualLink up and running. Networking gurus may wish to take liberties with the setup procedure and configure Miami Deluxe and MacTCP to their own tastes.

Miami Deluxe Setup  
Configuring Miami Deluxe

ShapeShifter Setup  
Configuring ShapeShifter

Fusion Setup  
Configuring Fusion

MacTCP Setup  
Configuring the Macintosh

## 1.9 miamisetup

### How To Configure Miami Deluxe

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Create the hardware definition

1. Bring up the Miami Deluxe interface and go to the Hardware page
2. Click on the New button
3. From the Hardware Type window click on the Ethernet button
4. Type VirtualLink into the Name field
5. Verify that the Type gadget is set to SANA-II driver
6. Click on the file requester button next to the Driver field
7. From the file requester select vlink.device and click on OK
8. Verify that the Driver field contains DEVS:Networks/vlink.device
9. Click on the SANA-II parameters... button
10. Click on the Query device button and then click OK
11. At this point click OK to accept this hardware definition
12. Verify that a new definition named VirtualLink appears in the page

Create the interface definition

13. Go to the Interfaces page
  14. Click on the New button
  15. Set the Interface type to Ethernet
  16. Set the Interface to LAN
-

17. Click OK
18. Select VirtualLink from the window that pops up and click OK
19. Set the IP address to 192.168.1.1
20. Set the Netmask to 255.255.255.0
21. Move the Gateway Pri slider to the right so that it reads 1
22. Set the Gateway to 192.168.1.254
23. Move the Gateway Pri slider back to the left so that it reads 0
24. Click on the Events button
25. Click on the Auto-online button so that it becomes checked
26. Click OK
27. At this point click OK to accept this Interface definition
28. Verify that a new entry with the alias VirtualLink appears in the page

Activate routing

29. Go to the TCP/IP page
30. Click on the Gateway gadget so that is becomes checked
31. Click on the LAN-Connect... button
32. Set IP-NAT to internal
33. Verify that the FTP and IRC-DCC buttons are checked
34. Click OK

And finally

35. Save these settings so you don't have to go through this again

## 1.10 sssetup

How To Configure ShapeShifter

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1. Bring up the ShapeShifter Settings interface
2. Click on the Network... button
3. On the Network Settings window click on the Choose button
4. From the file requester select vlinkmirror.device and click OK
5. Verify that the driver field contains DEVS:Networks/vlinkmirror.device
6. Close the Network Settings window
7. Click on the Save button to save the settings

## 1.11 fusionsetup

How To Configure Fusion

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1. Go to the Peripherals page
  2. Click on the Network button
  3. Click on the file requester button
  4. From the file requester select vlinkmirror.device and click LOAD
  5. Verify that the driver field contains vlinkmirror.device
  6. Click the Exit button
  7. Be sure to save the settings
-



## 1.12 macsetup

How To Configure MacTCP

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1. Bring up the TCP/IP control panel
2. Set the Connect via selection pop-up to Ethernet
3. Set the Configure selection pop-up to Manually
4. Set the IP Address to 192.168.1.2
5. Set the Subnet mask to 255.255.255.0
6. Set the Router address to 192.168.1.1
7. Set the Name server addr field to your provider's DNS address
8. Add your provider's domain name to the Search domains field

## 1.13 notes

Random Thoughts

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- One other possible use for VirtualLink is as a testing tool for network application developers
- The version of MacTCP that comes with MacOS 7.5.x is unstable and VirtualLink seems to aggravate it. If you are running MacOS 7.5 and are having trouble with VirtualLink, try installing the latest version of Open Transport TCP. This is available from Apple's FTP site.
- I didn't see a need to write an installer script since the installation procedure is simply a matter of copying two files from one directory to another.
- VirtualLink should work with AmiTCP. Unfortunately, I don't have AmiTCP so I haven't been able to test this. I would be interested in hearing from anyone who is using VirtualLink with AmiTCP.
- VirtualLink should work with Miami 3.2 but since Miami 3.2 doesn't support multiple interfaces, the usefulness of such a setup would be limited.

## 1.14 history

VirtualLink Revision History

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Version 1.2 7/20/00

- Corrected the MTU size reported by the device.
- Packets are now written to and read from the virtual wire by the same task. This should improve performance since now a reader doesn't have to wait for an extra task switch in order to get a packet.

Version 1.1 12/21/99

- Fixed a bug that could cause a crash if VirtualLink is accessed without both devices resident.

Version 1.0 12/5/99

- First public release.

## 1.15 contact

How To Contact Me

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Comments, Complaints, Criticisms, and Questions can be directed to

Chris Brenner  
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<http://members.unlimited.net/~cbrenner/>

There's not much to see on my web page. One of these days I'll get around to putting some content up.

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