

[Advanced search](#)

[Old Forum Archive](#) · [68kMLA Wiki](#) · [IRC Chat](#) · [Flickr Group](#) · [Donate](#)

- [Board index](#) < [Community Connections](#) < [The Lounge](#)
- [Change font size](#)
- [E-mail friend](#)
- [Print view](#)
- [User Control Panel](#) ([0 new messages](#))
- [View new posts](#) ([Lounge](#))
- [Forum rules](#)
- [About](#)
- [Members](#)
- [Logout](#) [[mactjaap](#)]

## [A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

[Post a reply](#)

23 posts · Page 1 of 1

- [Report this post](#)

## [A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [mactjaap](#) » 14 May 2011, 17:57



One of the most intriguing Mac related pieces of hardware for me are the LocalTalk PC cards. They were used to connect a LocalTalk network to a DOS or Windows 3.11 network. Apple made the first one in 1986/87. I acquired a model 630-5306. [vintagemacworld.com](http://vintagemacworld.com) has information about this card:

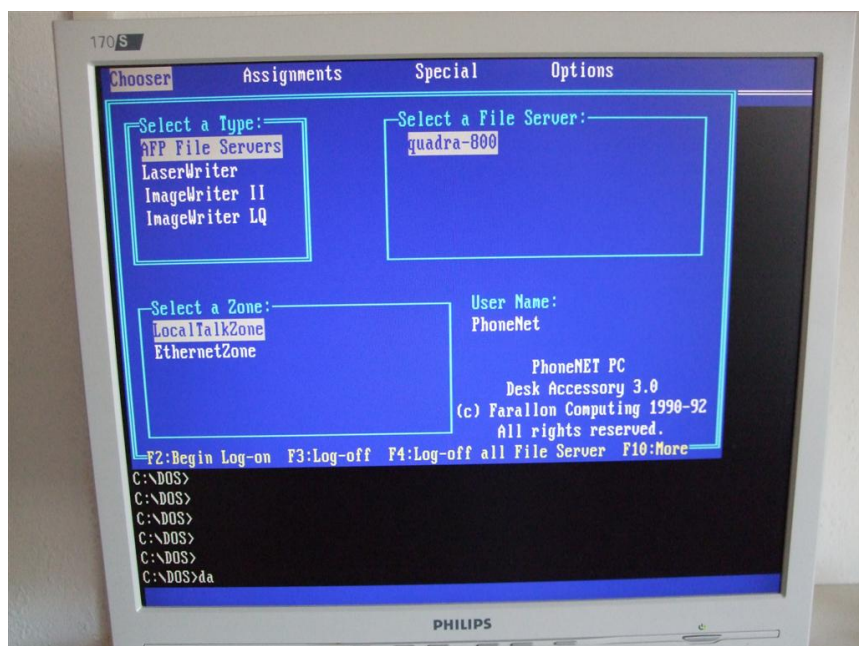
Apple's official LocalTalk PC card: Half-size ISA card, contains a 6502 processor and Zilog 8530 controller. Set of eight dip switches for setting IRQ and IO address. LocalTalk (RS-422 serial) interface is a 9 pin D socket, using the same LocalTalk/PhoneNet box as the Mac 128/512. Card is silk screened as "AppleTalk PC Card", copyright date 1986. Model number 630-0113. The card labelled 630-5306 appears to be identical.

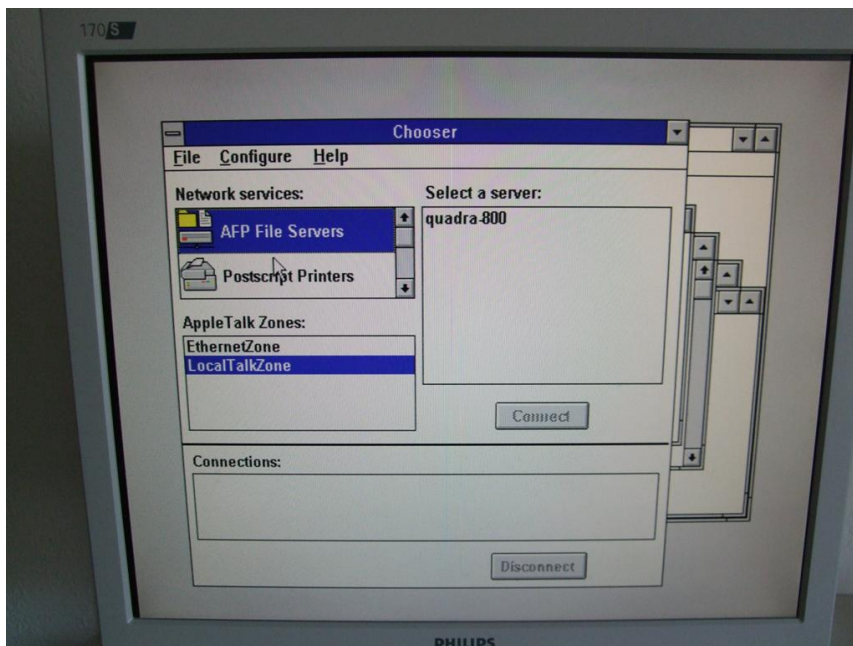
[http://www.vintagemacworld.com/pc\\_hardware.html](http://www.vintagemacworld.com/pc_hardware.html)

Another source of excellent information is:

<http://www.the4cs.com/~corin/localtalk/>

My first mission was to get it running in a DOS and Windows 3.11 environment. This was relatively easy. But it required some special equipment. First of all you need an old PC, because of the ISA slot. ISA is not in computers which are built after the year 2000. Furthermore you need a set of DOS and Windows floppy's to install the operating system. ISA cards require fiddling around with dipswitches and correct settings in the BIOS. In my case I had to put the card on IRQ 9 and let the BIOS know that IRQ 9 is handled by the ISA slot. Installation was straightforward and I could start the Chooser with the DOS command `da`. Here are some pictures:





When I was Google-ing around I found out that these card where also officialy supported by the Linux kernel. This was very good news for me because I have a Linux box which is central in my AppleTalk network. It runs Netatalk and is one of the central file servers. It would be great to connect to this machine by LocalTalk too!

To be honest. This is ***not*** a job for the faint hearted....

I'm very comfortable in a Linux environment but I really had to work hard to get it running.

First of all. AppleTalk and the LocalTalk PC card are not part of a standard Linux instalation. To get it running you have to recompile the kernel to make it a loadable module. I tried it first with my modern Red Hat Linux distribution with a 2.6 kernel. After I got it finally working (Red Hat has a special way of making a new kernel...) the Netatalk service would cause a kernel panic when it had to use the LocalTalk device. I tried it with many configuration changes in the atalkd.conf. but it didn't work.

Then I decided to take a Linux distribution which fitted more to the historical situation. I read that ISA support was standard in the 2.4 kernel and not anymore in the 2.6 kernel. So I switched to Debian Woody with a 2.4.19 kernel update. This update was straight forward. I used the config-2.2.20-idepci file in the /boot directory to create a .config file. With the use of the command make menuconfig I added AppleTalk and the LocalTalk PC card. After that I did the following commands:

Code: [Select all](#)

```
make
make install
make modules
make modules_install
```

and...reboot

You can use the card if you edit /etc/modules and add ltpc.

Code: [Select all](#)

```
#!/etc/modules: kernel modules to load at boot time.
#
# This file should contain the names of kernel modules that are
# to be loaded at boot time, one per line. Comments begin with
# a "#", and everything on the line after them are ignored.</pre>
af_packet
8139too
dummy
ltpc
```

and also in /etc/modutils/arch/i386

Code: [Select all](#)

```
alias ltpc lt0
```

Then I installed Netatalk:

Code: [Select all](#)

```
Package: netatalk
Version: 1.4b2+asun2.1.3-6
Section: net
Priority: optional
Architecture: i386
Depends: netbase, libpam-modules, libc6 (>= 2.1), libpam0g, libwrap0
Conflicts: netatalk-asun, libatalk14g, libatalk1
Replaces: netatalk-asun, libatalk14, libatalk1
Installed-Size: 604
Maintainer: David Huggins-Daines <a href="mailto:dhd@debian.org">dhd@debian.org</a>>
Description: Appletalk user binaries
 Netatalk is an implementation of the AppleTalk Protocol Suite for
 BSD-derived systems. The current release contains support for
 EtherTalk Phase I and II, DDP, RTMP, NBP, ZIP, AEP, ATP, PAP, ASP, and
 AFP.
```

The biggest fight to get it working was the configuration of atalkd. I got it finally working when I just entered lt0 in the /etc/netatalk/atalkd.conf. Netatalk will fill in the correct addresses itself. Mine

(/etc/netatalk/atalkd.conf) looks now like this.

Code: [Select all](#)

```
lt0 -phase 2 -net 0-65534 -addr 65280.105
```

If you do a ifconfig you see the lt0 as a network device:

```

192.168.62.22 - PuTTY
debian:/etc# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0E:2E:05:63:88
          inet addr:192.168.62.22  Bcast:192.168.62.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:203367 errors:0 dropped:0 overruns:0 frame:0
          TX packets:6951 errors:0 dropped:0 overruns:0 carrier:0
          collisions:124
          RX bytes:19625761 (18.7 MiB)  TX bytes:572948 (559.5 KiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          EtherTalk Phase 2 addr:0/0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:8 errors:0 dropped:0 overruns:0 frame:0
          TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0
          RX bytes:560 (560.0 b)  TX bytes:560 (560.0 b)

lt0       Link encap:UNSPEC  HWaddr 69-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
          inet addr:127.0.0.24  Bcast:127.255.255.255  Mask:255.0.0.0
          EtherTalk Phase 2 addr:65280/105
          UP BROADCAST RUNNING NOARP MULTICAST  MTU:600  Metric:1
          RX packets:36377 errors:0 dropped:0 overruns:0 frame:0
          TX packets:15053 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0
          RX bytes:1595891 (1.5 MiB)  TX bytes:983921 (960.8 KiB)

debian:/etc#

```

If you do a nbplkup you see this:

```

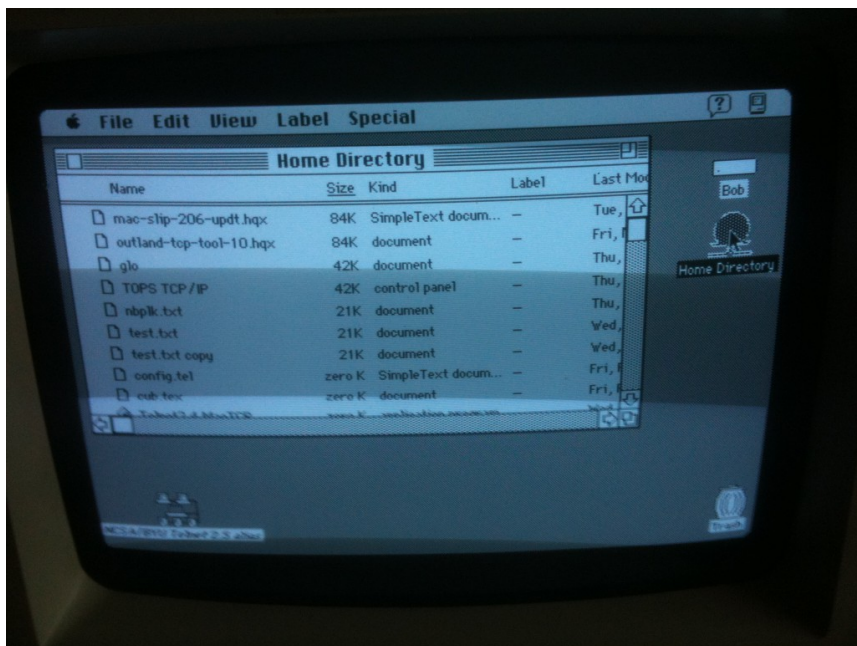
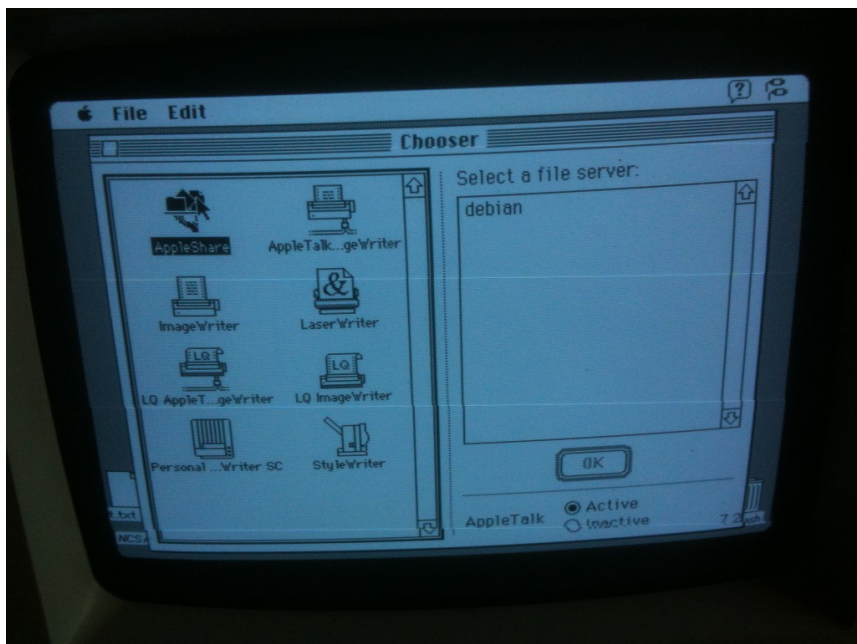
192.168.62.22 - PuTTY
MacPlusHD71:AFPServer          0.1:251
MacPlusHD71:PPCToolBox         0.1:252
MacPlusHD71:Macintosh Plus     0.1:253
MacPlusHD71:Workstation         0.1:4
debian:AFPServer                65280.105:128
debian:netatalk                 65280.105:4
debian:Workstation              65280.105:4
MacPlusHD71:AFPServer          0.1:251
MacPlusHD71:PPCToolBox         0.1:252
MacPlusHD71:Macintosh Plus     0.1:253
MacPlusHD71:Workstation         0.1:4

debian:~#

```

I now can download stuff to the Macintosh Plus without any problem. Uploading to the Linux box will crash the Mac....

Here are two pictures how it looks on my Mac.



This operation costs me about two months of blood, sweat and tears.... But I had a lot of fun!

Next challenge is to get more of these cards and see if I get them also up and running in a modern Linux enviroment!

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [ClassicHasClass](#) » 14 May 2011, 20:44

Where did the Windows 3.1 drivers come from? Mine only came with the DOS TSR IIRC.



[ClassicHasClass](#)

**Joined:** 03 Jul 2009, 18:48

**Location:** Electron Alley

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [Cory5412](#) » 14 May 2011, 20:46

Haha, that's intense! It would be cool to see if that card would also function under, like, Windows 95 or Windows NT4, which did have appletalk protocol and a mac file services program.

Fun fact: netatalk does speak "appletalk" as it were, and if you use a device like a farallon iPrint, you can hook an old localtalk mac up to a modern linux box and it works fully both ways, for those who don't have a computer with ISA or whose linux boxes don't have ISA. (NT4 does this too.)

[Cory5412](#)

Daring Pioneer of the Future

**Joined:** 02 May 2007, 04:13

**Location:** Arizona, USA

- [Private message](#)
- [Website](#)
- [AIM](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [Unknown\\_K](#) » 14 May 2011, 21:34

I think there were Win 3.11 PC networking disks included in the AWS 95 A/UX install.

Favorites: big box Mac IIs, 950, 800's

Wanted: Anything Nubus, Video capture and editing hardware and software for 68k mac. Original software including A/UX.

Looking for 9150, Mac II, Color classic, 840av motherboard, and Nubus cards.



[Unknown\\_K](#)

**Joined:** 02 May 2007, 01:39

**Location:** Ohio/USA

- [Private message](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [mactjaap](#) » 14 May 2011, 21:48

@ClassicHasClass and [Unknown\\_K](#)

I have installer disks for PhoneNET PC version 3.0. This installer is for DOS 4 and 5 and Windows. I run DOS 6.22 and Windows 3.11.

For people interested I could make a dd (<http://www.chrysocome.net/dd>) of the disks. Just give me a PM. What version do you have?

And yes....maybe I will try it on Windows 95 or XP later.

For now I'm looking for a different more modern card.

Is there anyone with a card like that? Dayna or COPS.... with DB-8 LocalTalk connector....???

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [ClassicHasClass](#) » 15 May 2011, 00:56

mactjaap, that would be great. I really don't remember what version I have, but it's old.



[ClassicHasClass](#)

**Joined:** 03 Jul 2009, 18:48

**Location:** Electron Alley

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [Gorgonops](#) » 15 May 2011, 05:57

Now for bonus points you could try to get that ancient code to let a Linux box act like a TCP/IP router for localtalk Macs working.



[Gorgonops](#)

**Joined:** 16 Jun 2009, 20:05

- [Private message](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [mactjaap](#) » 15 May 2011, 11:58

@ClassicHasClass

I made a dd of both floppy's and uploaded them to my site:

<http://macintosh.vanegten.com/pccard01.dd>

<http://macintosh.vanegten.com/pccard02.dd>

It is version 3.0. I added two pictures how I did the install. You have to have MSDOS 4, 5 or 6 and if you want Windows 3.11. This installer is for both.

Go to A:\ and type install





I will send you a PM with a very relevant detail...

I have no floppy drive in my windows system so let me know if the dd works.

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)


[Top](#)

- 
- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [mactjaap](#) » 15 May 2011, 12:09

@Gorgonops

Yes a LocalTalk TCP/IP router on my Linux box... that's the TOP for me   
But it seems not so simple. The original txt file with the ltpc driver talks about it:

-----

IP:

Yes, it is possible to do IP over LocalTalk. However, you can't just treat the LocalTalk device like an ordinary Ethernet device, even if that's what it looks like to Netatalk.

Instead, you follow the same procedure as for doing IP in EtherTalk. See Documentation/networking/ipddp.txt for more information about the kernel driver and userspace tools needed.

-----

<http://www.kernel.org/doc/Documentation/networking/ltpc.txt>

And when I have a look in the ipddp.txt there is some more information:

Basic instructions for user space tools

=====

I will briefly describe the operation of the tools, but you will need to consult the supporting documentation for each set of tools.

Decapsulation - You will need to download a software package called MacGate. In this distribution there will be a tool called MacRoute which enables you to add routes to the kernel for your Macs by hand. Also the tool MacRegGateWay is included to register the proper IP Gateway and IP addresses for your machine. Included in this distribution is a patch to netatalk-1.4b2+asun2.0a17.2 (available from <ftp://u.washington.edu/pub/user-supported/asun/>) this patch is optional but it allows automatic adding and deleting of routes for Macs. (Handy for locations with large Mac installations)

Encapsulation - You will need to download a software daemon called ipddpd. This software expects there to be an AppleTalk-IP gateway on the network. You will also need to add the proper routes to route your Linux box's IP traffic out the ipddp interface.

<http://www.kernel.org/doc/Documentation/networking/ipddp.txt>

But I'm clueless where to begin. Do I need Decapsulation or Encapsulation? For a router I would think ....both????

But thats not an option.

If you seach on ipddp there is no manual or how to to make it work.

So this is also something for the forum.

**Is there anyone with experiance with ipddp???**

Years ago I had contact with member called porter about this subject, but he is not an active memeber anymore.

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [ClassicHasClass](#) » 15 May 2011, 21:01

Thanks, mactjaap!



[ClassicHasClass](#)

**Joined:** 03 Jul 2009, 18:48

**Location:** Electron Alley

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [Gorgonops](#) » 16 May 2011, 00:01

I'm pretty sure MacGate is the package you need to make the Linux box a router, but I do say this having never had a reason to set it up. I swear I remember there being a text file floating around (in the MacGate distribution?) That covered the process end to end. (I seem to recall it rather politically incorrectly calling the client machines. "Macintoys" or something similar.)



[Gorgonops](#)

**Joined:** 16 Jun 2009, 20:05

- [Private message](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [Gorgonops](#) » 16 May 2011, 18:52

Just to note, I downloaded the MacGate source files (Which is *\*really\** hard to find these days, I ended up getting off an ftp site for Debian Potato packages), and it's definitely what you need to make the Linux box act as an IP gateway for Macs. It works in concert with the ipddp driver, which supplies the "low-level" packet encapsulation services.

Regarding ISA support in "modern" Linux distributions... I have Debian Lenny installed on a 200Mhz Pentium lunchbox and managed to get WiFi working on it via an ISA->16 bit PCMCIA adapter card without recompiling the kernel. (The machine also has an ISA 3com network card and a Soundblaster AWE32 .) I suspect "No ISA support" may be more of a RedHat issue than a generic 2.6 kernel problem.



[Gorgonops](#)

**Joined:** 16 Jun 2009, 20:05

- [Private message](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [mactjaap](#) » 16 May 2011, 21:30

Great Gorgonops! I found it too!

<http://archive.debian.net/potato/macgate>

Downloaded the .deb file and will test it. When I unpack it quickly with:

Code: [Select all](#)

```
ar -x macgate_1.14-5.deb
```

and then with:

Code: [Select all](#)

```
tar xfvz data.tar.gz
```

...

I could test the binary on my Red Hat box and it seems to run.

I will do a fresh install of Debian to set all the kernel parameters OK!. There is a nice install.txt in it what tells what to do:

### 2.1 MacRoute usage

=====

MacRoute allows you to add and delete static routes to your Mac. This tool adds or deletes one route at a time and does not take care of anything but setting up the route in Ipddp. You still need to create the proper routes with the route command.

One example of why you may use this tool. You have a Macintosh that runs a WWW server, but is only available over localtalk. You want to allow this Mac to be usable always by networks other than the localtalk network the Mac is on. So you can do the following:

```
MacRoute -c add -n 1000 -m 7 -i 192.168.1.25
```

- c stands for command, add or del are accepted.
- n is the network number for the Macintosh.
- m is the node number of the Macintosh.
- i is the IP number that the macintosh owns.

Using the nbplkup command you can find the Net:Node of the Macintosh.

Now with the command above the Macintosh will only be able to send packets and not receive them. You will need to set up a route to Ipddp for the Mac to receive packets, like this:

```
route add 192.168.1.25 dev ipddp0
```

Now the Mac can send and receive packets just like any other node on your network.

## 2.2 MacGated usage

=====

MacGated is a daemon that does what MacRoute does and a little more automatically. MacGated will add and delete routes as they are needed, saving you from having to manually add a route for each Mac each time they boot or whatever.

MacGated is a very simple to use daemon. Start MacGated with the following.

```
MacGated -s -i 192.168.1.1 -i 192.168.1.4
```

Now MacGated can accept an unlimited number of -i directives. The -i command makes MacGated register that IP number as a IPGATEWAY on the Appletalk network. The best rule of thumb for this is to always register the IP of the ipddp0 device and then also register the IP of your main interface. (ie. eth0). You may have to play with some different combinations if your Linux Box has many interfaces, but even registering everyone of your machines IPs will not hurt anything.

The -s directive tells MacGated to scan for Macintoshes that have already registered their NBP IPADDRESS and include their IP in MacGates routing tables for IP gatewaying. In short it is a good idea to enable this option.

MacGated will run rather seamlessly now. For each Mac that comes onto the network to do IP, MacGate will create a route for it and spawn a child called MacPinger. MacPinger pings the Mac every 45 seconds to see if the Mac is still doing IP. If the Mac does not respond then the route to that Mac is deleted.

About the ISA problem... you are probably right. It is not recommended by Red Hat to recompile your kernel and it is made more difficult than on a "normal" Linux box.

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [Gorgonops](#) » 17 May 2011, 00:40

Awesome. It will be interesting to see if it works on kernels newer than 2.1. ;^)

As an aside, assuming it works here it would be interesting if someone who had the appropriate hardware, IE, a flock of Localtalk Macs and an Appletalk-only Ethernet-to-Localtalk bridge, would see if the MacGate software can work over Ethernet. That would open up using a Linux box as a router for a Mac network simply by dedicating a single ethernet-equipped Mac (using Apple's free software) or a dumb hardware bridge to the task, rather than having to get a hard-to-find-and-use ISA COPS card or paying for IPnetRouter.



[Gorgonops](#)

**Joined:** 16 Jun 2009, 20:05

- [Private message](#)

[Top](#)

---

- [Report this post](#)

## **Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.**

by [mactjaap](#) » 17 May 2011, 22:41

Could you explain what you mean by this:

## a flock of Localtalk Macs and an Appletalk-only Ethernet-to-Localtalk bridge

Do you mean f.i. a Quadra with Debian on it? Or some other hardware?  
Please explain.

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)

[Top](#)

- 
- [Report this post](#)

### [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [Gorgonops](#) » 18 May 2011, 00:24

*mactjaap wrote:* Could you explain what you mean by this: ...

There are [numerous ways to bridge Localtalk packet traffic directly to Ethernet](#), ranging from simple hardware devices to software packages like Apple's [Localtalk Bridge](#) software. What I'm referring to specifically is the class of devices that don't have any TCP/IP encapsulation/decapsulation/gateway support, IE, all they do is blindly shove Appletalk packets from a Localtalk segment to an Ethernet network and back. Devices like this can allow a Localtalk Mac to connect via the bridge to an ethernet-connected Appletalk service such as a Netatalk server or printer but they don't allow the Localtalk Macs to get a TCP/IP connection for Internet routing, etc.

(To clarify the terminology here when I say "Appletalk" I mean "Appletalk-formatted packets", IE, the L2 transport protocol using AARP for address resolution. These are essentially the same regardless of whether the L1 physical transport is Localtalk or Ethernet. This is distinct from TCP/IP's L2 ARP transport.)

What I was curious about is if MacGate has the ability to use Ethernet as the L1 transport. (From it's sparse

documentation I don't see a reason why it shouldn't work...) If it does you could use a Linux machine on the Ethernet side of an Appletalk-Localtalk bridge to perform TCP/IP gateway functions for the Localtalk machines without needing to physically connect the Linux machine to the Localtalk segment. (Again, you could use one of those dumb translator boxes, which were fairly common for converting things like Localtalk printers to Ethernet, or use the Localtalk bridge software on an appropriate dual-media Mac to make the physical connection. Running Linux directly on a Mac to be the gateway is probably a nonstarter because so far as I know no one has ever gotten Localtalk working under a free \*NIX on Mac hardware.) There are certainly software packages you can use to do the IP encapsulation on a Mac, like [IPNetRouter](#), but using one without paying is piracy.

[This piece of software for FreeBSD seems to support what I'm describing. It is likewise very old.](#)



[Gorgonops](#)

**Joined:** 16 Jun 2009, 20:05

- [Private message](#)

[Top](#)

---

- [Report this post](#)

## **[Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)**

by [ClassicHasClass](#) » 18 May 2011, 04:19

You know, that FreeBSD package might be very happy on my very old NetBSD IICI. It has netatalk on it already and the kernel is of a similar generation. I might toy with that a bit.



[ClassicHasClass](#)

**Joined:** 03 Jul 2009, 18:48

**Location:** Electron Alley

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.

by [mactjaap](#) » 18 May 2011, 12:10

Aha..now I see. I get the point. This could be indeed a very interesting concept! A localtalk bridge like a small box or control panel is easy to get. For the TCP part I now use a FastPath 5 router which is not so common now a days...

I have been testing the MacRoute software but I'm not sure wat do do. Normally my network is like this: 192.168.62.0/24 for the Ethernet side and 192.168.60.0/24 for the LocalTalk part  
I setup lt0 and ipddp0 with the commands:

Code: [Select all](#)

```
ifconfig lt0 192.168.60.10 up
modprobe ipddp
ifconfig ipddp0 192.168.60.1 up
```

Then I add a route to my Macintosh Plus where is have a working web server over LocalTalk:

Code: [Select all](#)

```
MacRoute -c add -n 0 -m 1 -i 192.168.60.2
route add 192.168.60.2 dev ipddp0
```

Now my route tables looks like this:

```
debian:/home/tjabring# netstat -rn
```

Code: [Select all](#)

```
Kernel IP routing table
Destination      Gateway          Genmask          Flags      MSS Window  irtt
Iface
192.168.60.2      0.0.0.0          255.255.255.255  UH          40  0           0
ipddp0
192.168.62.0      0.0.0.0          255.255.255.0    U           40  0           0 eth0
192.168.62.0      0.0.0.0          255.255.255.0    U           40  0           0 lt0
192.168.60.0      0.0.0.0          255.255.255.0    U           40  0           0
ipddp0
0.0.0.0           192.168.62.1     0.0.0.0          UG           40  0           0 eth0
```

I don't see how packages will know how to use the lt0 to go to the Macintosh Plus.....

If I do a ping from the Debian I see traffic with tcpdump on the ipddp0 and on the lt0.

lt0

Code: [Select all](#)

```

11:50:54.541491 72.22.169.37 > 68.72.0.138: at-rtmp 58
11:50:55.541492 72.22.168.37 > 68.72.0.135: at-rtmp 58
11:50:56.541492 72.22.167.37 > 68.72.0.134: at-rtmp 58
11:50:57.541496 72.22.166.37 > 68.72.0.130: at-rtmp 58
11:50:58.541493 72.22.165.37 > 68.72.0.132: at-rtmp 58
11:50:59.541492 72.22.164.37 > 68.72.0.132: at-rtmp 58
11:51:00.541491 72.22.163.37 > 68.72.0.131: at-rtmp 58
11:51:01.541495 72.22.162.37 > 68.72.0.128: at-rtmp 58

```

ipddp0

Code: [Select all](#)

```

11:50:57.541485 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:50:58.541482 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:50:59.541482 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:51:00.541481 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:51:01.541484 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:51:02.541497 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:51:03.541483 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:51:04.541479 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)
11:51:05.541481 0.1.209.1 > 0.68.72.72: ip-proto-76 64 (DF)

```

But the ping has no reply.....

This is what a nbplkup looks. I can aecho all the machines.

Code: [Select all](#)

```

                                debian:AFPServer
65280.209:128
                                debian:netatalk
65280.209:4
                                debian:Workstation
65280.209:4
                                192.168.60.5:IPADDRESS                                0.217:72
                                quadra-800:AFPServer                                0.217:250
                                quadra-800:PPCToolBox                                0.217:251
                                quadra-800: Macintosh                                0.217:252
                                quadra-800:Workstation                                0.217:4
                                192.168.60.2:IPADDRESS                                0.1:72

```

MacPlusHD71:AFPServer	0.1:251
MacPlusHD71:PPCToolBox	0.1:252
MacPlusHD71:Macintosh Plus	0.1:253
MacPlusHD71:Workstation	0.1:4

Any one who can help me with this???????????

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100 and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands


- [Private message](#)
- [Website](#)

[Top](#)

- 
- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [Bunsen](#) » 23 May 2011, 21:40

I love this thread. Your opening post was excellent mactjaap - well told and well documented, pictures and all 

[have you searched?](#) [Seeks:](#) Nubus PDS DSP PB170 Newton; TRS-80 III/4; CBM BBC SX-64 CX5M [Likes:](#) 8bit luggable palmtop terminal NC tablet audio MIDI analog FM drum synth steam&dieselpunk; 1930-1980 lab/comm/mil [Score!](#) [NC100](#) [PB190](#) [Q950](#) [Ile-PDS](#)



[Bunsen](#)

Witchfinder-General

**Joined:** 02 May 2007, 17:59

**Location:** Melbourne, Australia

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [mactjaap](#) » 23 May 2011, 23:03

Thanks for your compliment! I really like to research and document things in a good way!  
For now...I'm busy on a email with the author of the ipddp driver. Let's see if this helps us further with AppleTalk-IP.

+=====+

Main collection:

Apple II (ITT 2020), LISA XL (case and monitor only..), Macintosh 128K, 512K, Plus, ED, SE, PowerBook 100  
and a FastPath5 router

Hard core LocalTalk PC card fan!



[mactjaap](#)

**Joined:** 15 Mar 2009, 02:19

**Location:** The Netherlands

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [ClassicHasClass](#) » 24 May 2011, 00:46

macipgw is being difficult on NetBSD -- seems I'll have to do some hacking.



[ClassicHasClass](#)

**Joined:** 03 Jul 2009, 18:48

**Location:** Electron Alley

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [weif](#) » 24 Aug 2011, 19:10

*ClassicHasClass wrote:* macipgw is being difficult on NetBSD -- seems I'll have to do some hacking.

Have you had any luck getting macipgw to build on NetBSD? If so, could I see your updated source to see if I can build it for FreeBSD?

From my Mac to yours...

<http://www.weif.net/>

[weif](#)

**Joined:** 05 Aug 2009, 05:49

**Location:** Butte, MT

- [Private message](#)
- [Website](#)

[Top](#)

---

- [Report this post](#)

## [Re: A LocalTalk PC card, a Macintosh Plus and a Linux box.](#)

by [ClassicHasClass](#) » 24 Aug 2011, 19:42

Not yet, alas. I still lack home Internet (c'mon, AT&T, install that T1!), so I haven't had time to work on it lately. Ping me in a couple weeks.



[ClassicHasClass](#)

**Joined:** 03 Jul 2009, 18:48

**Location:** Electron Alley

- [Private message](#)
- [Website](#)

[Top](#)

Display posts from previous:  Sort by

[Post a reply](#)

23 posts · Page 1 of 1

[Return to The Lounge](#)

Jump to:

## [Who is online](#)

Users browsing this forum: [mactjaap](#) and 0 guests

- [Board index](#)
- [Unsubscribe topic](#)
- [Bookmark topic](#)
- [Bump topic](#)
- [The team](#) · [Delete all board cookies](#) · All times are UTC + 1 hour [ DST ]

Powered by [phpBB](#) © 2000, 2002, 2005, 2007 phpBB Group