

# Getting Started with yIPee

PPP/SLIP Version 1.10

## 1. Introduction

With just a single IP address (fixed or dynamic) and an analog dial-up PPP or SLIP connection you can give your entire LAN full Internet access. Your LAN can be as small as a PC connected to a Mac, Amiga, PC *etc.via* a null-modem cable/ethernet, or it can be as big as you like. However, please remember that your bandwidth is fixed by the speed of your modem's connection, so do not expect to have ten machines operating at 28kbps simultaneously. This isn't physically possible!

**yIPee** is not a high level multi-proxy server system which tend to eat up TCP/IP resources, **yIPee** is a low level `IP masquerading` solution. Also, since **yIPee** is not a proxy based system this means that there are **no** restrictions on the number of different TCP services which you can access.

This is a working demo version of **yIPee**, so you can try it out for yourself. The demo version restricts you to a limit of 15 minutes on-line per connection.

System requirments are that your gateway machine (i.e. the one that will be atatched to the Internet) must be an IBM PC or compatible running Win3.x, Windows'95 or NT, and Core Systems TCP/IP v2.1. (*If you do not yet have this TCP/IP stack then you can download it from various ftp sites around the Internet. e.g.*)

**ftp://ftp.tku.edu.tw/pc/winsocK/Socket/inetv21.zip**  
**ftp://ftp.uni-rostock.de/WinsocK/Misc\_Utils/Dialers/inetv21.zip**  
**ftp://ftp.csusm.edu/pub/winworld/winsocK/inetv21.zip**

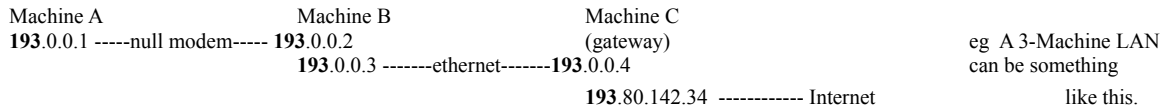
## 2. Installation

**Before installing yIPee make sure that you have installed Core Internet-Connect <sup>(TM)</sup> correctly**

**on your gateway machine, and that the rest of your LAN is responding to this machine. Also set up a serial interface on your gateway machine and connect to your Internet Service Provider, to make sure that your `gateway` is working ok as a single host machine. Please use the Serial Interface called "serial\_0" (you can see this beside the Next/Prev buttons in the Core configuration program) to set the preferences for your gateway machine's connection to your Internet Service Provider.**

## **2.1 Configuration of Fake IP Addresses and Nameservers.**

Your non-gateway machines will all have "fake" IP addresses, and your gateway machine will also have a "fake" address. (It will also have a real one too!!) You can make these addresses whatever you like with one proviso: The netid byte **must** be the same for all interfaces across your LAN and the value of this byte **must** be the same as the netid byte allocated to you by your Internet Service Provider. e.g. If your ISP allocates you an IP of **193.80.142.34**, then all interfaces across you LAN should have IP addresses with a netid byte is **193**. (Even for those people with dynamically allocated IP addresses the netid byte should remain constant.)



You must now also change the nameserver configuration on your non-gateway machines. The nameserver address for these should be set to the **fake fixed IP address** of your gateway machine. e.g. Using the diagram above, the nameserver option on machines A and B should be set to the address 193.0.0.4

NB The nameserver option on your gateway machine should **not** be changed and should point to the Domain Name Server of your Internet Service Provider.

NB If the connection between machines B and C (gateway) was a null-modem link, then you must use the same link-layer protocol as you are using for the connection between your gateway and your ISP. i.e. do **not** mix PPP and SLIP on the gateway machine. (However, if the connection between A and B was a null-modem link, then you could use either SLIP or PPP as the link-layer protocol)

Providing it is physically possible we would always recommend, for performance reasons, that you should use ethernet instead of null-modem for your local LAN. Also, for similar reasons, if you have the choice between SLIP and PPP for your dialup connection, we would recommend that you choose SLIP as the preferred link-layer protocol since there is significantly less overhead

involved with SLIP as opposed to PPP.

## **2.2 Where to put the files!**

Very simple...

**PPP\_YIP.DLL, SLIP\_YIP.DLL & HOOK\_YIP.DLL** **must all** be copied to your **..\WINDOWS** directory. i.e. if you are using SLIP, you **must** still copy ppp\_yip.dll to your windows directory and vice versa.

**CORE.INI** which is part of the Core TCP/IP distribution. **must** also be moved to your **..\WINDOWS** directory. Please make sure to move it and not copy it to your windows directory. ie **do not** leave a copy of it in the COREWSDS directory.

**YIPEE.EXE**, you can place this file wherever you want.

## **2.3 Checking the Configuration of your Gateway**

Finally, you should run the program **CHK\_YIP.EXE** This program will examine **CORE.INI** file and make any changes to it which are critical to the operation of **YIPEE**.

## **3. Starting up yIPee**

**yIPee** should not be started until you have dialled up and logged on to your Internet Service Provider. **yIPee** can then be launched by double clicking on the **YIPEE.EXE** program. You can do this from within the File Manager, or you can add this program to the Core Internet-Connect window by selecting "New..." from the file menu in Program Manager.

*This paragraph applies only to those who have dynamically allocated IP addresses.*

There is currently no way in winsock to determine dynamically allocated IP addresses. Therefore, if you are on a dynamic connection, you will have to pass your IP address to **yIPee** by typing it into an edit-text requester which will appear after you have launched yipee.exe. You can easily obtain the value of your dynamically allocated IP address from the Core Winsock Monitor window. Select the menu item **Interface Statistics** from the **Stats** menu. If you select this menu item too early, ie before the stack has fully configured itself then the address might still read as **0.0.0.0** The solution is of course just to wait a second or two and then select the menu item again, and you will see the change to **193.80.142.34** or whatever IP address has been allocated to you.

If you quit out of **yIPee** whilst still on-line, the gateway machine will still continue to function normally, but the remainder of your LAN will now in effect be **off** the Internet. And of course you should quit out of **yIPee** after you have disconnected from the Internet. (Warning: in the evaluation version, you cannot simply run yipee.exe again to obtain a further 15 minutes, Core TCP/IP must be quit out of, ie expunged from memory, then re-loaded to obtain a further 15 minute allocation.)

#### **4. yIPee in Action**

**yIPee** deals specifically with the TCP protocol. This means that you can access any TCP based services from all machines on your LAN. ***Please note that a peculiarity of FTP is that data connections can be initiated by the server you have contacted. This poses potential problems for yIPee. The solution to this problem is that you must set your FTP client into PASV mode. This ensures all socket connections are initiated by your client. Check the documentation of your FTP client for setting PASV mode. The above is not a problem for your gateway machine, FTP will work for it whether in PASV mode or not.***

**yIPee** does not respond to ICMP and UDP packets generated by your LAN, packets of these types will be ignored. Fortunately, this is not a problem, since 99% of applications make use of the TCP protocol. Client applications that will not work with **yIPee** are Ping, NFS (using UDP), Traceroute. NFS using TCP will work. Also, for the same reason as FTP above, no server daemons can be run on your LAN machines. Again, as above, these limitations do **not** apply to your gateway machine. It will be able to respond to ICMP and UDP packets, and you **will** be able to run server daemons on it without any problems.

The aforementioned ICMP and UDP limitations are of course in the context of your LAN's connectivity with the Internet. That is to say, ICMP, UDP and server daemons **will** work on any of your LAN machines but **only** across your 'local cable'. And of course as has been stressed before **none** of these limitations apply to the gateway machine itself.

There is of course the obligatory exception. UDP clients (such as nslookup, askhost etc.) which access the DNS **will** work on all machines on your LAN.

#### **5. Miscellaneous**

Providing you have **WSOCK32.DLL**, then 32-bit Windows client applications will work fine

with Core TCP/IP since this dll has a "thunking" layer built into it to communicate with **WINSOCK.DLL**. (see Updates and Upgrades for details of a full 32-bit version of **yIPee**)

Bug reports are welcomed. If you encounter what you consider to be a bug, please submit a detailed description of the problem to: [donc@rmplc.co.uk](mailto:donc@rmplc.co.uk)

## **6. How to Order Full Version**

- By Cash:** You can send cash to the value of £26 UK sterling or \$39 US dollars to the address given below. Please include your e-mail address.
- By Cheque:** You can send a cheque made out to the amount of £26 UK Sterling. This cheque must be drawable on a UK bank and should be sent to the address given below. Please make the cheque payable to D.Cameron and remember to include your e-mail address.
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### **Contact Details**

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**WWW: <http://www.rmplc.co.uk/eduweb/sites/donc>**

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-----BEGIN PGP PUBLIC KEY BLOCK-----  
Version: 2.6.2i

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mQCNAzGYG7sAAAEENcGV7RVmr21aeh27wPdvVDV8nmQrRWyinPqkpyfRRGC4YKi
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8IZUSX9t4l+C9i5km5PEGnam3Omz/1jM4cPsBSiRjAeCECDAWfrT2vmbxWD1AAUR
tCFEb25hbGQgQ2FtZXJvbiA8ZG9uY0BybXBsYy5jby51az4=
=ppab
-----END PGP PUBLIC KEY BLOCK-----
```

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## **7. Updates and Upgrades**

Once you have purchased a copy of the full working version of **yIPee**, this will entitle you to obtain **all** future updates and upgrades **free** of charge. There already is an update available for ethernet users.

Future full versions will include:

- a) a 32-bit PPP version
- b) a 32-bit SLIP version
- c) a version supporting ISDN

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