NeXTStep/OpenStep
Ethernet-Based Network Configuration
For Cable Modems, DSL, LANs, Etc...

FORMATTING: This will look a lot better if your window is wide enough that the row of '---' below fits on one line:

Other Formats (outdated):

These instructions can be downloaded (37.1 KB) in .tar.gz format <u>here</u>

This How-To can also be downloaded as a PDF file [here] thanks to Frank Siegert's PStill program.

Warnings and Disclaimers:

Despite its name, you do not want to use **SimpleNetworkStarter.app** for this procedure

Use these directions at your own risk.

Getting Underway:

Basic Assumptions

1. Assuming you have a static IP (dynamic IPs via DHCP can be done, but are not covered in this document)
2. Assuming your IP is **192.42.172.2** for the purposes of examples
3. Assuming your hostname is **mynext** and your domain is **cable.modem.com**

Preparation

The first step is to wipe all your NetInfo information... This will delete all user information (but not the actual accounts).

```
rm -rf /etc/netinfo /etc/hostconfig

cd /usr/template/client/etc

cp -rp netinfo /etc

cp hostconfig /etc

(reboot)
```

Initial Reboot

When you reboot you will get a message like:

```
No response from parent NetInfo domain
```

or
```
Can't find parent NetInfo domain
```

That is OK, just hit 'c' or 'control c' (it will tell you) to continue.

You will be brought back to the screen which asks you to pick a keyboard and language. Do so.

You may be automatically logged into the 'me' account.
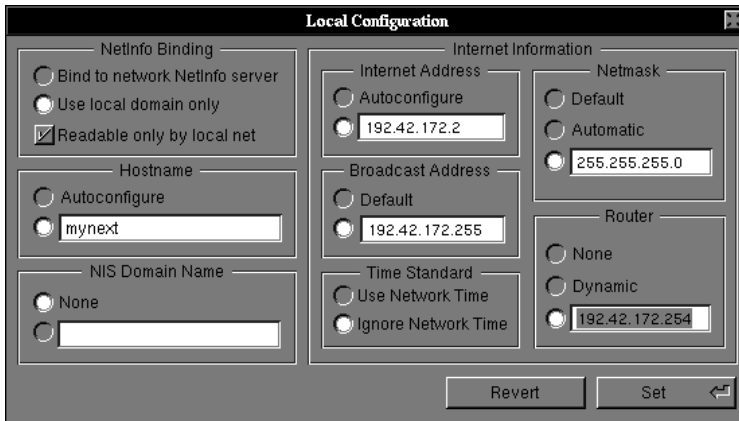If so, set a password for the **me** account (using Preferences.app) and then logout

Next, Login as **root**. Set a password for the root account using the Preferences.app

Launch /NextAdmin/HostManager.app

HostManager
Info...
Host   ▷
Edit   ▷
Network   ▷
Local...
Windows   ▷
Services   ▷
Hide   h
Quit   ~

Use the **LOCAL** menu item seen here

Local Configuration

NetInfo Binding
○ Bind to network NetInfo server
○ Use local domain only
☑ Readable only by local net

Hostname
○ Autoconfigure
○ mynext

NIS Domain Name
○ None
○

Internet Information
Internet Address
○ Autoconfigure
○ 192.42.172.2

Broadcast Address
○ Default
○ 192.42.172.255

Time Standard
○ Use Network Time
○ Ignore Network Time

Netmask
○ Default
○ Automatic
○ 255.255.255.0

Router
○ None
○ Dynamic
○ 192.42.172.254
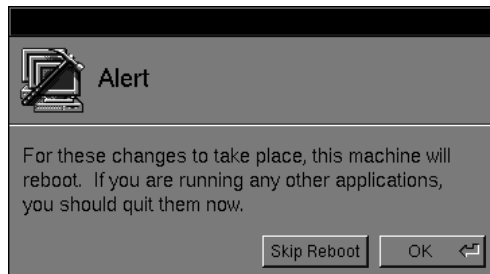
Revert   Set   ⏎

NOTE: The values show are NOT the ones you should use.

Set them to what your Service Provider tells you

This should give you a general idea of what it should look like.

Important Notes:

1. What is called a **router** here (192.42.172.254) may be called a **gateway** by your ISP.

2. The IP 192.42.172.254 is just an EXAMPLE and has no basis in reality or likelihood.

3. The Netmask is usually **255.255.255.0** but may not be for you.

4. Assuming your IP is '192.42.172.**2**' your **Broadcast Address** would probably be 192.42.172.**255**' (that is, the same numbers as your IP except for the last number, which changes from **.2** to **.255**). However you should check with your ISP.

Alert

For these changes to take place, this machine will reboot. If you are running any other applications, you should quit them now.

Skip Reboot   OK   ⏎

Note: When you press SET in HostManager.app, it will want you to reboot. Select 'skip' for now. We will reboot manually in a few moments.

Next we should take care of `/etc/resolv.conf`
This file does not exist by default, but you may have one if you were using PPP. Please note the spelling of the filename very carefully.

Start /NextApps/Edit.app and open a new window. (Note: if the new window is titled UNTITLED.rtf press `command-key shift R` to change it to simple UNTITLED)
The file usually only needs a few lines.

```
domain cable.modem.com
nameserver 123.456.789.123
nameserver 123.456.789.124
nameserver 123.456.789.125
```
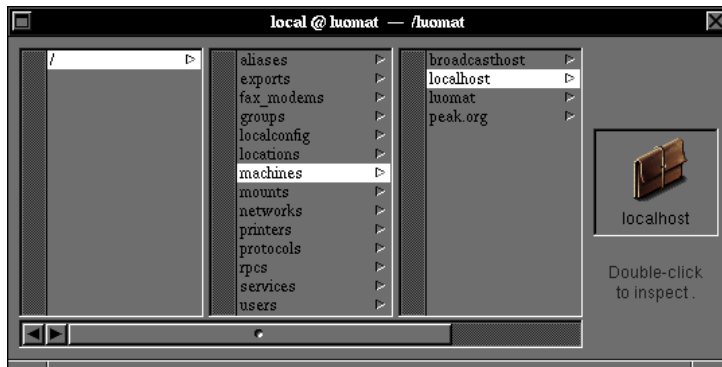
Your Internet Service Provider should give you the numbers (IP addresses, not hostnames) to use. Usually there are 2 or 3 machines which serve as nameserver machines.

*see **man 5 resolver** for more information on the /etc/resolv.conf file*

Finally, you should make a **Fully Qualified Domain Name** entry into NetInfo.

Launch /NextAdmin/NetInfoManager.app

Note: your titlebar will not read `local @ luomat -- /luomat` and you will not have entries for 'luomat' and 'peak.org'.

What is important are the 'localhost' and 'broadcasthost' hosts

Using the mouse, select **/** then **/machines** then **/localhost** as indicated above

Using the menu for NetinfoManager.app, select 'Edit' and then 'Duplicate'

You should then have an entry **/machines/copy_of_localhost**

Double-click on the 'copy_on_localhost' item to open its own window.

There will be two columns, one labelled **Key** and one labelled **Value**. **DO NOT CHANGE THE ITEMS UNDER KEY!!!** Only change the items under VALUE

Select **name** under **Key** and then **copy_of_localhost**

Change 'copy_of_localhost' to 'mynext' and HIT RETURN. If you do not hit return the value WILL NOT CHANGE. I have made that mistake plenty of times.

Then goto the Menu item **Directory** and then **Append Value**

You should see a new entry under **Value** called **new_value**. Select it and rename it 'mynext.cable.modem.com' and HIT RETURN.
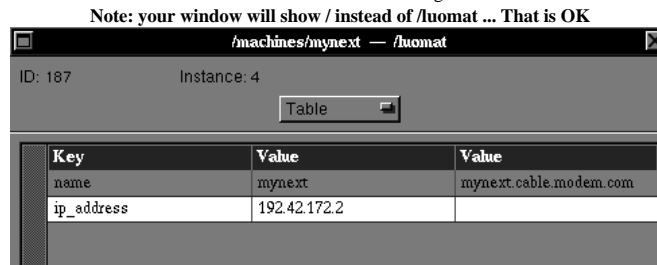
Select **ip_address** under **Key** and then select 127.0.0.1 and change it to your IP address (ie '192.42.172.2' in the example we have been using).

Next under **Key**, select 'serves' and then goto Edit (same as above) but instead of Duplicate, select [Delete   r] to delete the 'serves' entry entirely.

Finally, let's save the changes we've made. Goto the menu item [Directory   ▷] and choose 'Save'.

Change from the Browser view to the Table view in the window we have been working in. It should look like this after you have saved everything:

Note: your window will show / instead of /luomat ... That is OK

/machines/mynext — /luomat		
ID: 187 Instance: 4		
Table		
Key	**Value**	**Value**
name	mynext	mynext.cable.modem.com
ip_address	192.42.172.2	

AT LAST! Everything should be ready to reboot now.

Troubleshooting:

1. The thing to do is to turn booting to 'verbose' (on Intel hardware, simply type '-v' at the boot prompt; on NeXT hardware: goto the ROM monitor and set verbose booting in the ROM preferences.... read this if you don't know how to do that).

2. Hopefully you won't see the "the network is disabled or your computer isn't connected to it" message. Verbose booting is a very helpful way of seeing what is going wrong when something suddenly stops working.

3. When you login, the first thing to try is **/etc/ping YOUR.ROUTER.IP**. You should get a response like '64 bytes from YOUR.ROUTER.IP'. Try it with **/etc/ping 127.0.0.1** to see what it looks like.

4. Another tool is **/usr/ucb/netstat -rn**

```
Routing tables
Destination      Gateway         Flags    Refs     Use  Interface
127.0.0.1        127.0.0.1       UH        21    30871  lo0
default          192.42.172.254  UG         4    25655  en0
192.42.172       192.42.172.2    U         40    78951  en0
```

Where '192.42.172.254' is the ROUTER and '192.42.172.2' is your IP. Ignore the 'Flags' and 'Refs' and 'Use' columns.

Last Updated: 21 Feb 1998