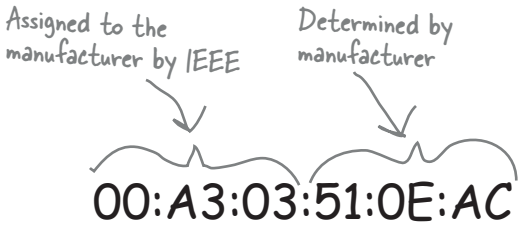
MAC address versus IP address

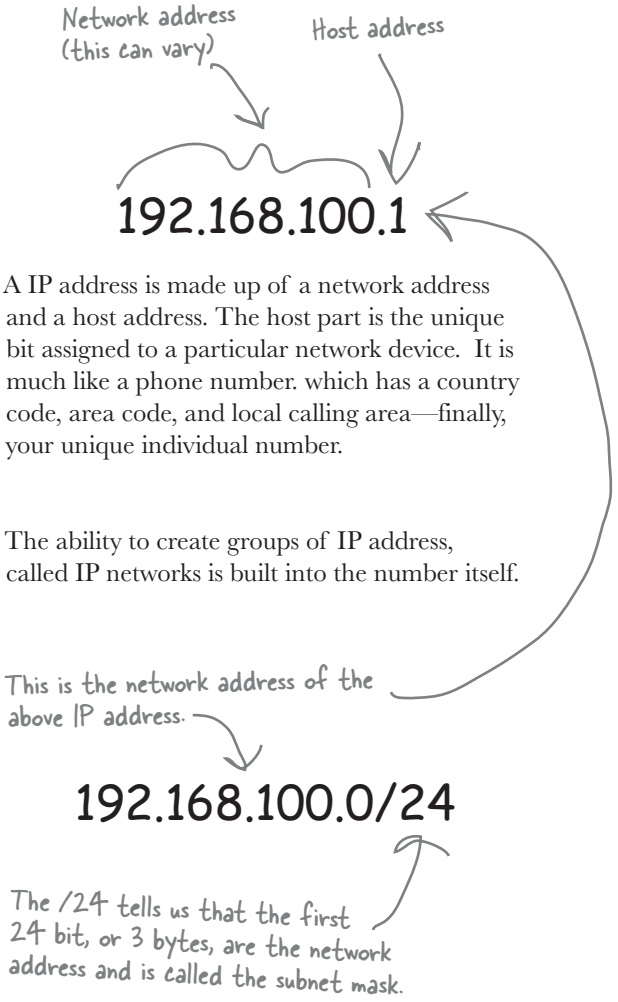
So why can't a MAC address be used to move traffic from one network to another?

It's all in the numbers...



A MAC address is assigned to every device connected to an Ethernet network. In your computer, that is the network card. The beginning part of the MAC address designates the manufacturer. The later part, the manufacturer increments, so all their products have unique MAC addresses. It is like a social security number, in that you really can't tell where a person lives just by looking at it.

There is no way to store network information in the MAC address. Each address is specific and unique to the piece of hardware it is assigned to.



A IP address is made up of a network address and a host address. The host part is the unique bit assigned to a particular network device. It is much like a phone number. which has a country code, area code, and local calling area—finally, your unique individual number.

The ability to create groups of IP address, called IP networks is built into the number itself.

Geek Bits

Each network device on a TCP/IP network needs to have an IP network address, a unique address on the network. But how do you find what it is?

If you're running Mac OS X, open up the Terminal application from your Utilities folder, and type `ifconfig`. This same command works on Linux as well.

If you're running Windows XP, 2000, or Vista, click Start, then Run, and then type `cmd`. When the command window appears, type `ipconfig`.