# How to setup a Serial to Ethernet device server using DHCP

If you do not have a dedicated DHCP server in your network you can follow this guide to setup a 'local' DHCP server on your computer to test any serial to Etherent server's DHCP functionality.

First you need to setup a DHCP on a Local Area Network (your computer):

Decide what range of IP addresses you would like to use. You should use a "Private IP Range", otherwise you may well have problems related to traffic to and from your network being routed incorrectly. For a simple LAN, stick with 192.168.0.100, a subnet mask of 255.255.255.0 and a pool size of 50. This will allow up to 50 machines to be set up on your network without having to change anything.

> 1. Set the IP address of your computer to 192.168.0.2 with a subnet mask of 255.255.255.0 (an address in the same subnet as the addresses in the pool, but not an address in the pool itself!)
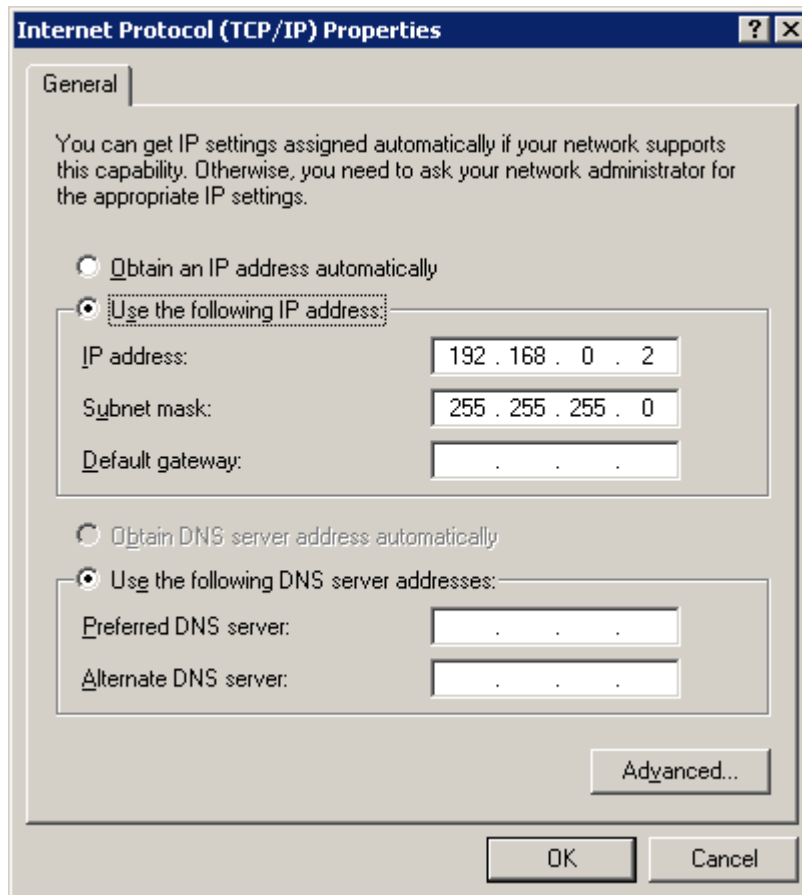
> 2. Download tftpd32 from http://tftpd32.jounin.net/
>
> 3. Unzip the file to your computer and run tftpd32.exe

4. At the DHCP tab set the "IP pool starting address" to the address you want the first computer to use DHCP to have. (192.168.0.100 if you're not sure!)
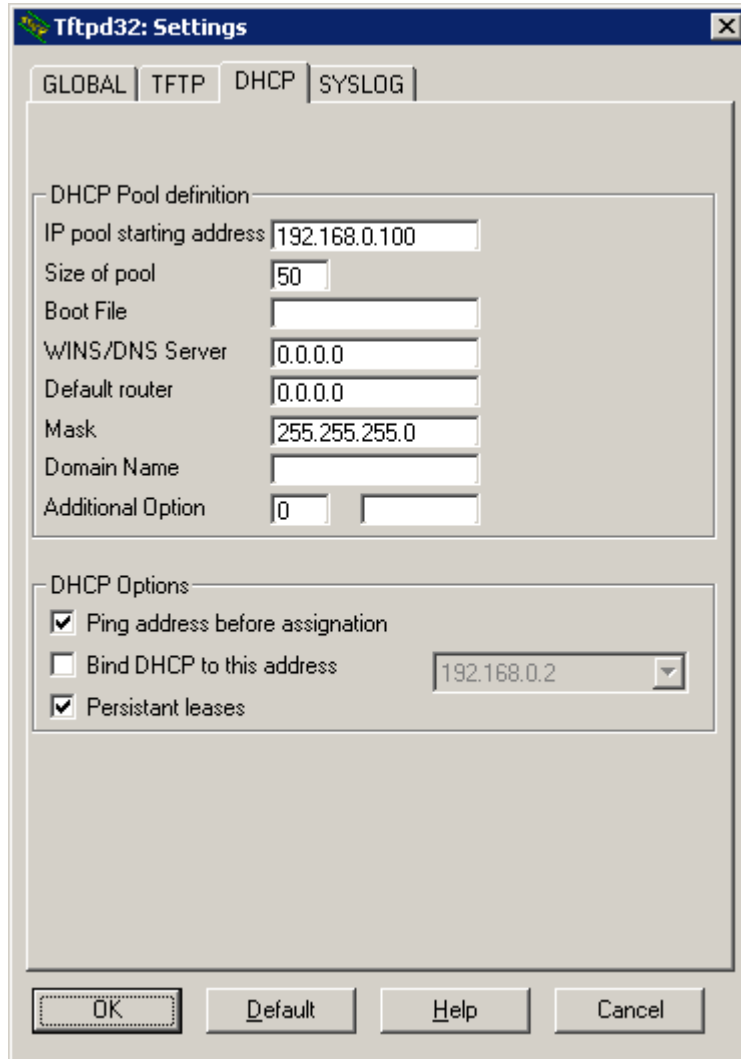
5. Set the "Size of pool" to a little more than the number of computers and devices you think you'll need on your LAN. (if in doubt, 50 is a nice number)

6. Leave the "Boot File" field blank

7. If you have a DNS server on your network, or one accessible to the machines on your network, enter it's IP address in the "WINS/DNS Server" box. If you don't, or don't know what it means, leave it blank.

8. Set "Mask" to your subnet mask. If you don't know what that is, follow my addressing scheme and set it to 255.255.255.0

9. Leave the "Domain Name" and "Additional Option" boxes as they are and press the "OK" button.
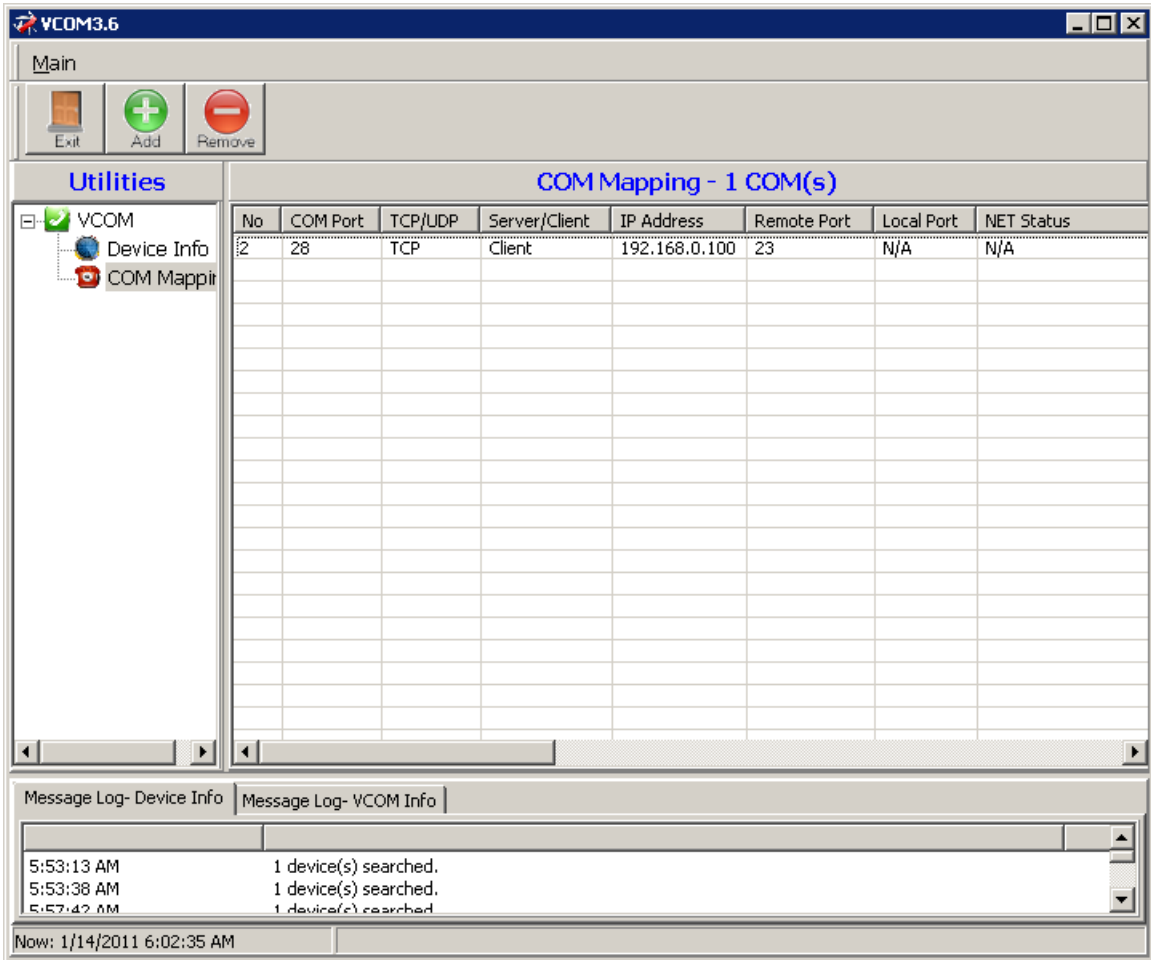
Your DHCP server is now set up!

You can now connect your pre-configured serial to Ethernet device server to the network (must be configured for DHCP):
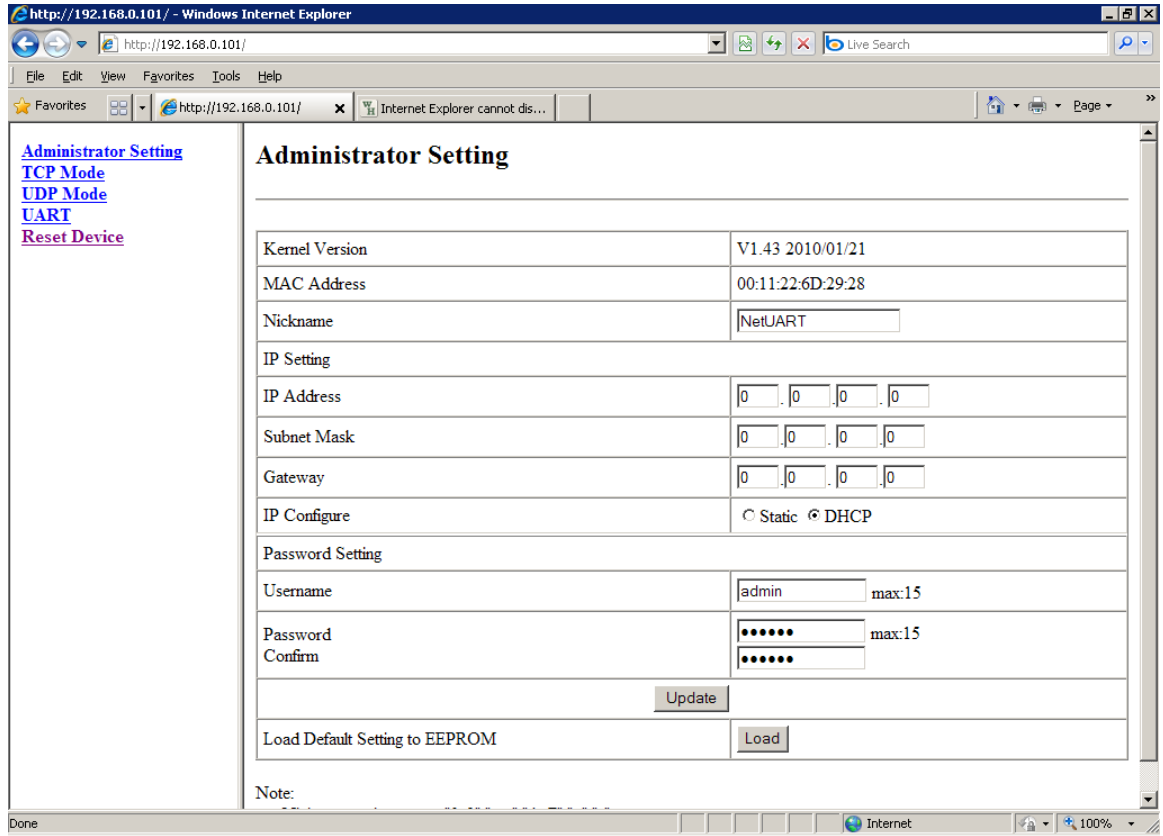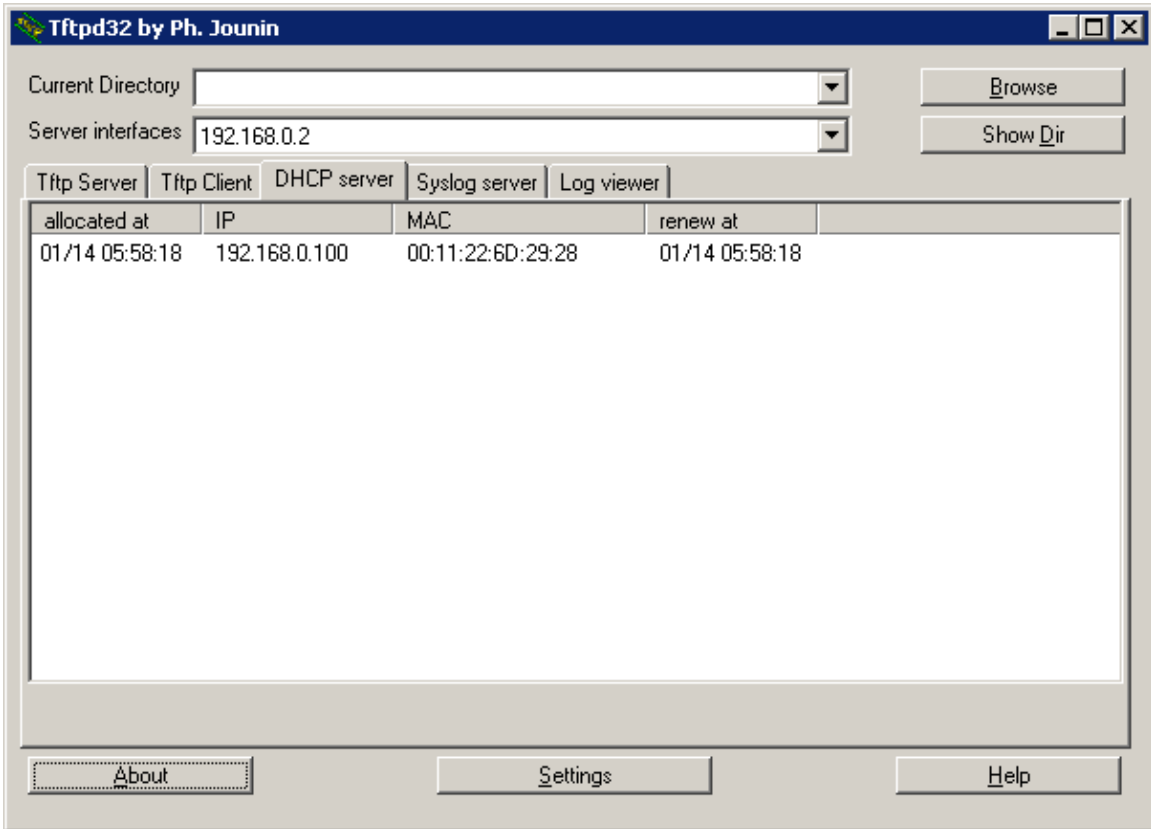
Use your serial to Ethernet server's IP search feature to search for the IP address which have been assigned to the serial to Ethernet server:
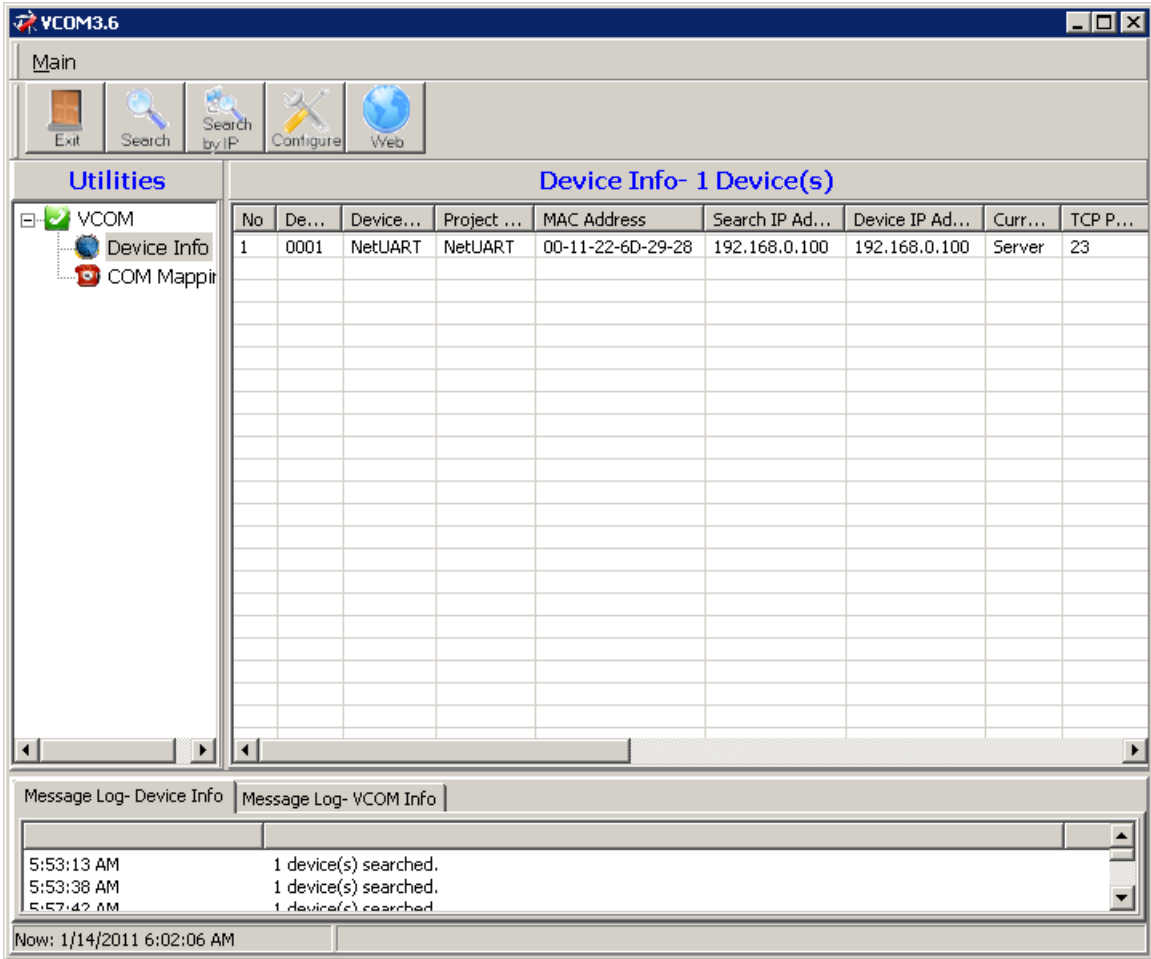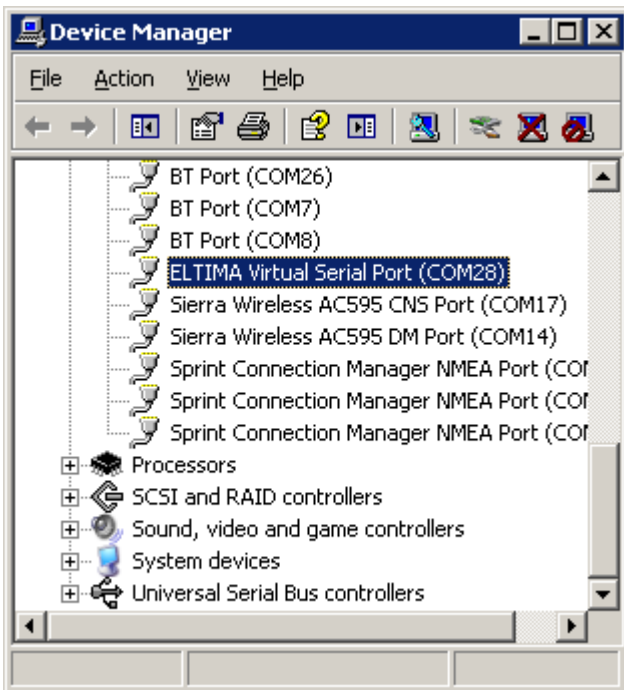
A virtual COM port can now be created:

In Tftpd32 you can monitor which devices and IP addresses have been assigned multiple network devices:

In Windows Device Manager you can see the created virtual COM port:

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The created virtual COM port can be tested with AccessPort: