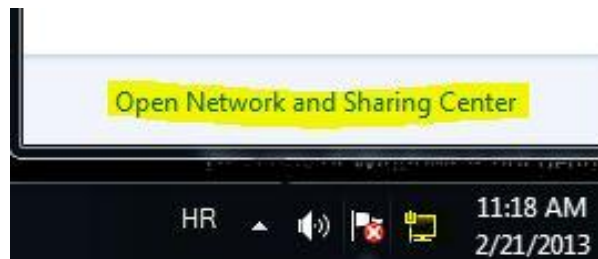


CONFIGURE IPV4 IN WINDOWS 7

Network and Sharing Center

To configure TCP/IP settings in Windows 7 we have to go to the Network and Sharing Center which is located in Control Panel. The shorter way to get to the Network Center is to click the networking icon in the Notification area and select the "Open Network and Sharing Center" option.



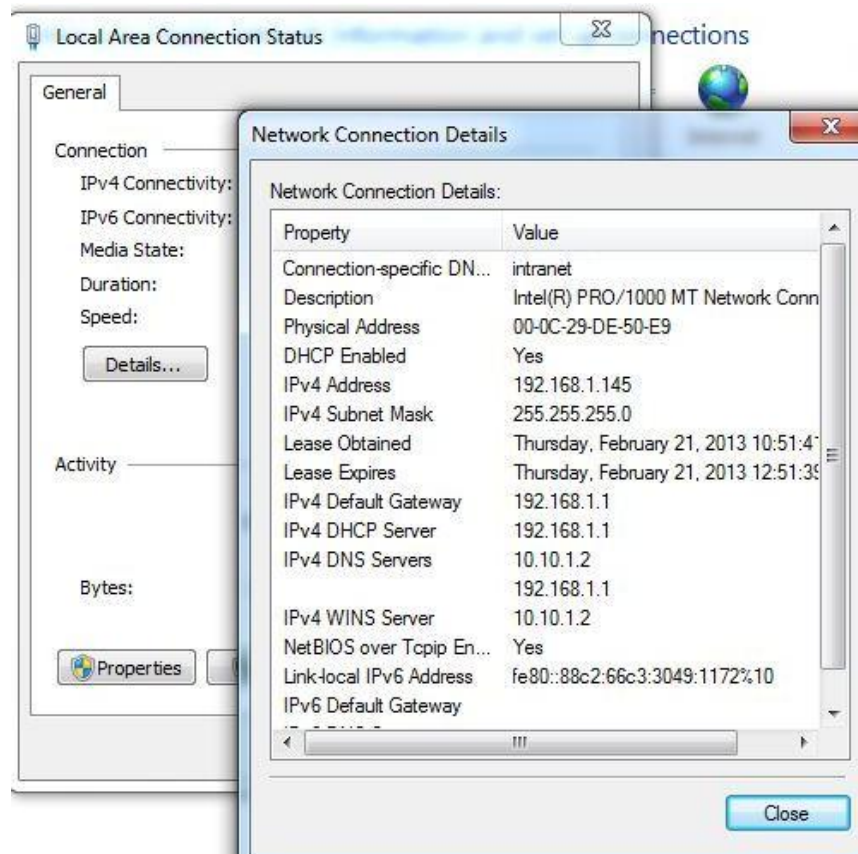
Network Center Shortcut

The Network Center will show us many options, but the one section we are particularly interested in is "Active networks". In our case we already our network connection configured, and we are connected to the "intranet" at our workplace.



Active Networks

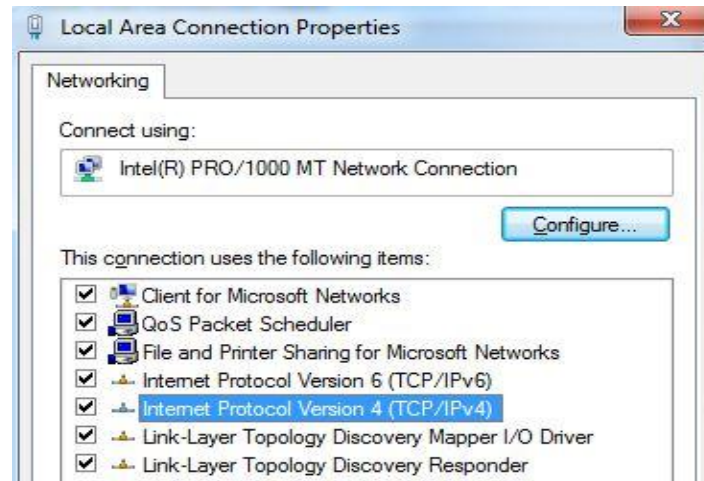
To see the details about that connection we can simply click its name, which is "Local Area Connection" in our case. To see the details about that specific connection we can click on the Details button.



Connection Details

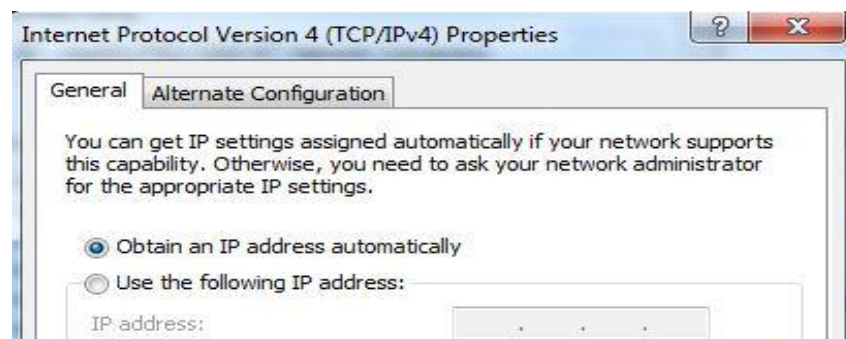
Notice that our connection currently uses DHCP to get the required information about the network connection. We already have our IPv4 address, subnet mask, DNS server. Notice that we can also see the "DHCP Enabled" option which is set to "Yes", and we can also see the IP address of the DHCP server.

To change network settings we can click the Properties button. The new window will open on which we have to select which item we want to configure. In this case we will select the "Internet Protocol Version 4 (TCP/IPv4)" protocol, since we want to change IPv4 address.



IPv4 Selected

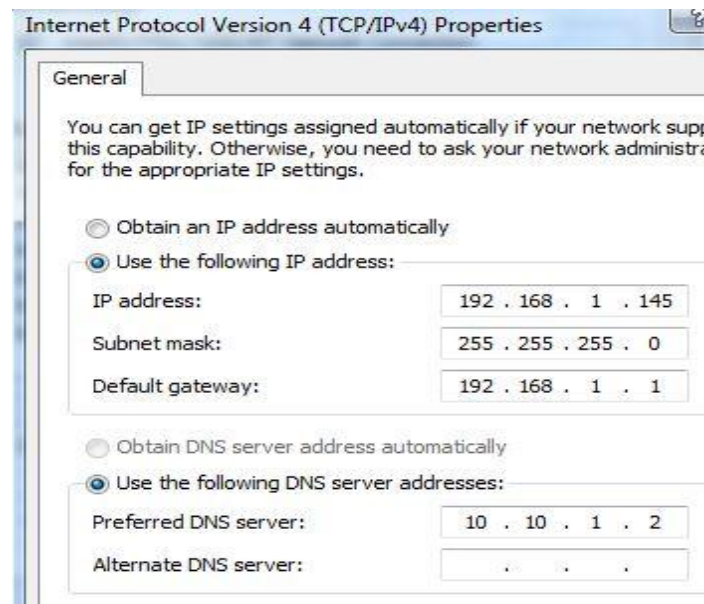
When we click the Properties button again, we will be able to enter new IPv4 settings. Notice that currently we have the "Obtain an IP address automatically" option selected.



IPv4 Properties

This means that our computer will use DHCP to get the connection information.

To enter the information manually we can simply select the "Use the following IP address" option. In our case we want our computer to always use the same IP address, so we will enter 192.168.1.145 as an IPv4 address, 255.255.255.0 as the subnet mask, 192.168.1.1 as our default gateway, and we will use the 10.10.1.2 as our DNS server. Our configuration now looks like this.



IPv4 Configured

To check if our connection works we should try to communicate with another host on the network. To do that we can use the "ping" tool in command line. Let's try and communicate with the default gateway (192.168.1.1).

```
C:\Users\Admin>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=3ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 0ms
```

Ping

In our case everything works fine. If we have trouble communicating with another host, we can try and ping our own IP address, which is 192.168.1.145 in our case. If that does not work, we should try and ping the local loopback address which is 127.0.0.1, which will check if the IPv4 stack is properly installed. To check you IP address and subnet mask we can use the "ipconfig /all" command. If everything seems OK, but the "ping" action still does not work when we try to communicate with another host on the network, we should check our firewall settings.

In **Windows Firewall with Advanced Security**, in **Inbound Rules** section, we have to make sure that "**File and Printer Sharing (Echo Request - ICMPv4-In)**" rule allows communication.

Source: <http://www.utilizewindows.com/7/networking/427-configure-ipv4-in-windows-7>