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~Apollo & Zeus Step by Step Networking Guide ~

- ➢ *What you'll need –*
    - o *A standard Network cable (if connecting through a switch or router)*
    - o *A crossover Network Cable (if connecting directly from PC to DVR)*
    - o *Access to a PC on the network*
    - o *Access to the DVR itself*
    - o *Access to the administrator page of the router (if connecting over internet)*
    - o *A Static IP Address which is provided by the ISP (if connecting over internet)*

1. Using a PC connected to the network, take the following steps to determine what settings to apply to the DVR.
    a. Click - Start > Run >
    b. In the input box type "cmd" and click OK
    c. You will be presented with a black command prompt like below...
    d. Type the following command "ipconfig" and hit the Enter Key.
    e. You then see the current ip settings being used by the PC as you can see below. We can use these settings to decide what settings to use in the DVR.

> The ipconfig command lists the ip settings being used by the pc right now.
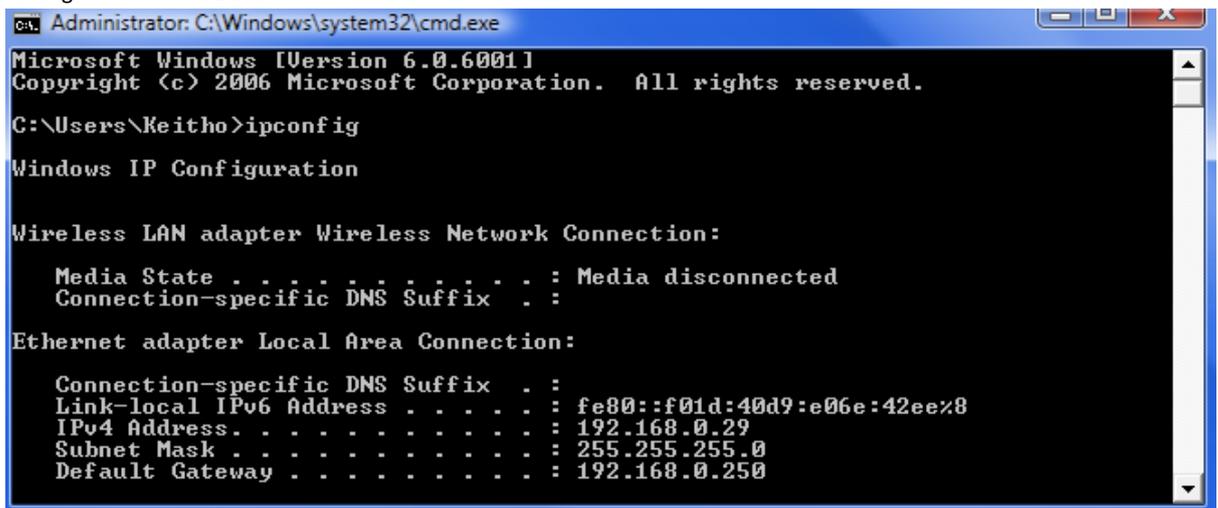

```
Administrator: C:\Windows\system32\cmd.exe

Microsoft Windows [Version 6.0.6001]
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C:\Users\Keitho>ipconfig

Windows IP Configuration

Wireless LAN adapter Wireless Network Connection:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :

Ethernet adapter Local Area Connection:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::f01d:40d9:e06e:42ee%8
   IPv4 Address. . . . . . . . . . . : 192.168.0.29
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.0.250
```

    f. You can see the pc here is using the ip address 192.168.0.29. we must choose an ip address (IPv4 in vista) within this **range** and we do this by changing **only** the last block of numbers. Make a note of the subnet mask (255.255.255.0) and the gateway address (192.168.0.250) as these will need to be used by the DVR.
    g. Choose an ip address for example 192.168.0.123 *(note that the max number that can be used in a block is ".254")*   Because every IP address on a network **must** be unique, it is necessary to check that the ip address you have chosen isn't already in use on the network. We do this by using the "PING" command.
    h. In the command prompt, type the following "ping 192.168.0.***" (replacing the *** with your own choice) and hit enter. You will either get 4x "Request timed out/destination host unreachable" of 4x "reply from 192.168.0.***". If you get a reply, the address is in use and you need to choose another one and repeat step (.h) If you received a "time out" then the address you have chosen is currently available. Make a note of this address as it will now be used as the IP address of the DVR. Leave the command prompt running as it will be used to test the connection to the DVR once all the settings have been applied.
2. At the DVR, log in, click settings> networking
    a. Enter the IP address that you have found to be available and have taken note of.
    b. Enter the subnet mask which you have taken a note of.
    c. Enter the gateway address which you have taken a note of.
    d. Save settings, Connect the DVR using a straight through network cable and restart the DVR.
3. Back at the PC use the ping command to check connectivity between the DVR and the rest of the network.
    a. At the command prompt type the following "ping 192.168.0.***" and hit enter. This time you should receive 4x "reply from 192.168.0.***" Once you do so, you have connectivity and can now locally connect to the DVR.
4. You can now use Internet Explorer to connect to the DVR using the following steps.
    a. As the dvr will require a small application to install on the first connection, you will need to allow it to do so. Do this by adding the DVR as a "trusted site".

b. Open Internet Explorer, Click tools, Internet options, Security, Trusted Sites and then click the "sites" button. Un-check the check box on the bottom of this page as the DVR doesn't support server Verification. Add the IP address of the DVR to the list with the prefix "http://" and click add.

c. Close all open windows until your back to Internet explorer's Main window.

d. Type the IP address of the DVR in to the address bar and hit go. You will then see the login page followed by a request to install the viewing software.

e. Install the viewing software and login! You should now see the Live viewer page.

You Have now successfully set your DVR up for remote viewing on a local network. The following section will guide you through setting the DVR up for **remote viewing over the internet**.

Connecting to your networked DVR over an internet connection (at this point, it is assumed that you have completed the Previous guide)

1. Contact the ISP and ask for the static IP address associated with the broadband line in use.
    a. This IP address is used when connecting to the DVR from outside the local network.

2. You must use a feature called "PORT FORWARDING" to direct *network traffic* to and from your DVR. (The following guide is aimed at an Eircom router with the default settings applied)
    a. At the DVR, in the main menu, settings, Network settings: Take note of the TCP and the HTTP ports used by the DVR. The default settings are... TCP: 37777 and HTTP: 80. There is no reason to change these port numbers unless they are already in use on your network.
    b. At a PC, Open Internet Explorer and in the Address Bar, enter the Gateway Address that you took note of earlier.
    c. Click "Custom Services" on the left hand side.
    d. Click on "define custom Services".
    e. Make Sure "port forwarding: Range of ports" is checked and click next.
    f. For service Name Choose "DVR port1", for "Global port range" put in "80" – "80" and for "base host port", put in "80".
    g. Make Sure "Protocol" is set to "TCP" and click next. You will then see a message saying "The NAT service has been added". Click done.
    h. You will now need to repeat steps d-g but this time, choose the service name "DVR port2" and set all port numbers to "37777"

3. Once these two services have been added, you can create the rule to forward traffic on these ports using the following steps...
    a. In the Drop down list called "service name" click it and click on the service "DVR port1" (it will be located at the very bottom of the list) and Click "ENABLE"
    b. You will now need to choose the IP address to forward this port range to. Select the IP address of the DVR that you have taken note of in the previous section, Click Enable.
    c. Repeat Step "a. & b." But this time choose the service name "DVR port2".

4. Once completed you should see the two services listed on the bottom half of the screen. You can now use the static IP address to connect to the DVR from anywhere outside the local network using the following steps...
    a. Open internet Explorer on a PC that is **NOT** on the local network.
    b. As the dvr will require a small application to install on the first connection, you will need to allow it to do so. Do this by adding the DVR as a "trusted site".
    c. Open Internet Explorer, Click tools, Internet options, Security, Trusted Sites and then click the "sites" button. Un-check the check box on the bottom of this page as the DVR doesn't support server Verification. Add the Static IP address of the DVR's Site to the list with the prefix "http://" and click add.
    d. Close all open windows until your back to Internet explorer's Main window.
    e. Type the Static IP address of the DVR's site in to the address bar and hit go. You will then see the login page followed by a request to install the viewing software.
    f. Install the viewing software and login! You should now see the Live viewer page.

You have now completed the Setup of Remote Viewing over an Internet connection. The port forwarding settings listed, are aimed at the default Eircom netopia router. For guides on other routers, please visit http://www.portforward.com