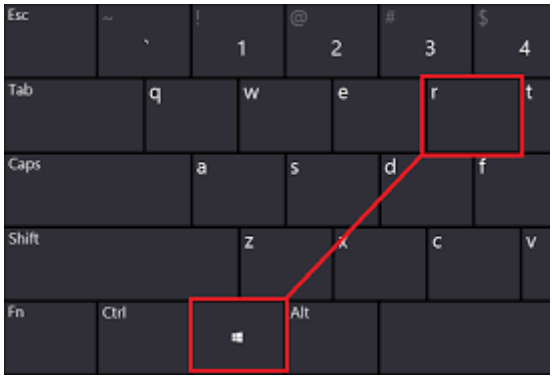
WINDOWS COMMAND LINE TOOLS

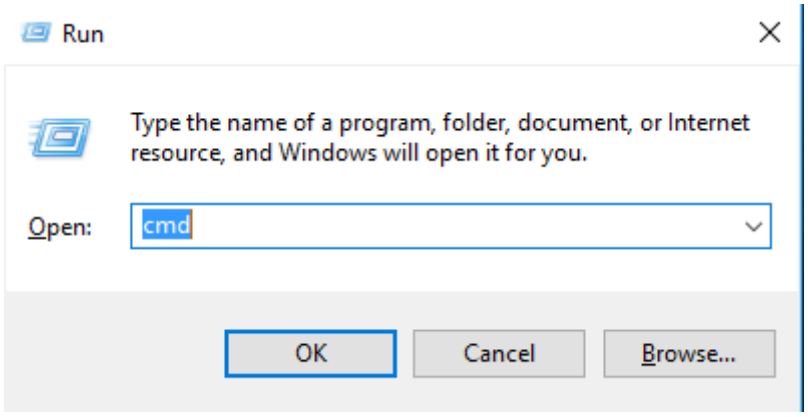
Command line tools are an excellent method of establishing the settings of a computer and obtaining valuable evidence or fixing connection problems.

Some of the information you can obtain from the command line is available elsewhere, some is not.

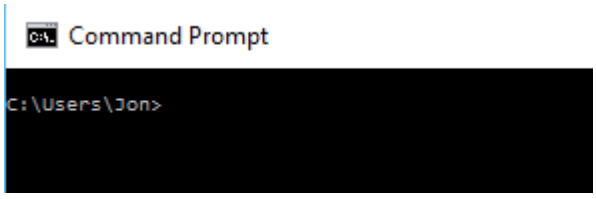
To open the command line on a Windows machine, hold the 'Windows Key' down and press the 'r' key



The 'Run' dialogue box will open. Type in the letters '**cmd**', which is short for command, and press 'OK'



This will open up the command line prompt. From here you can type the various commands discussed in this document.

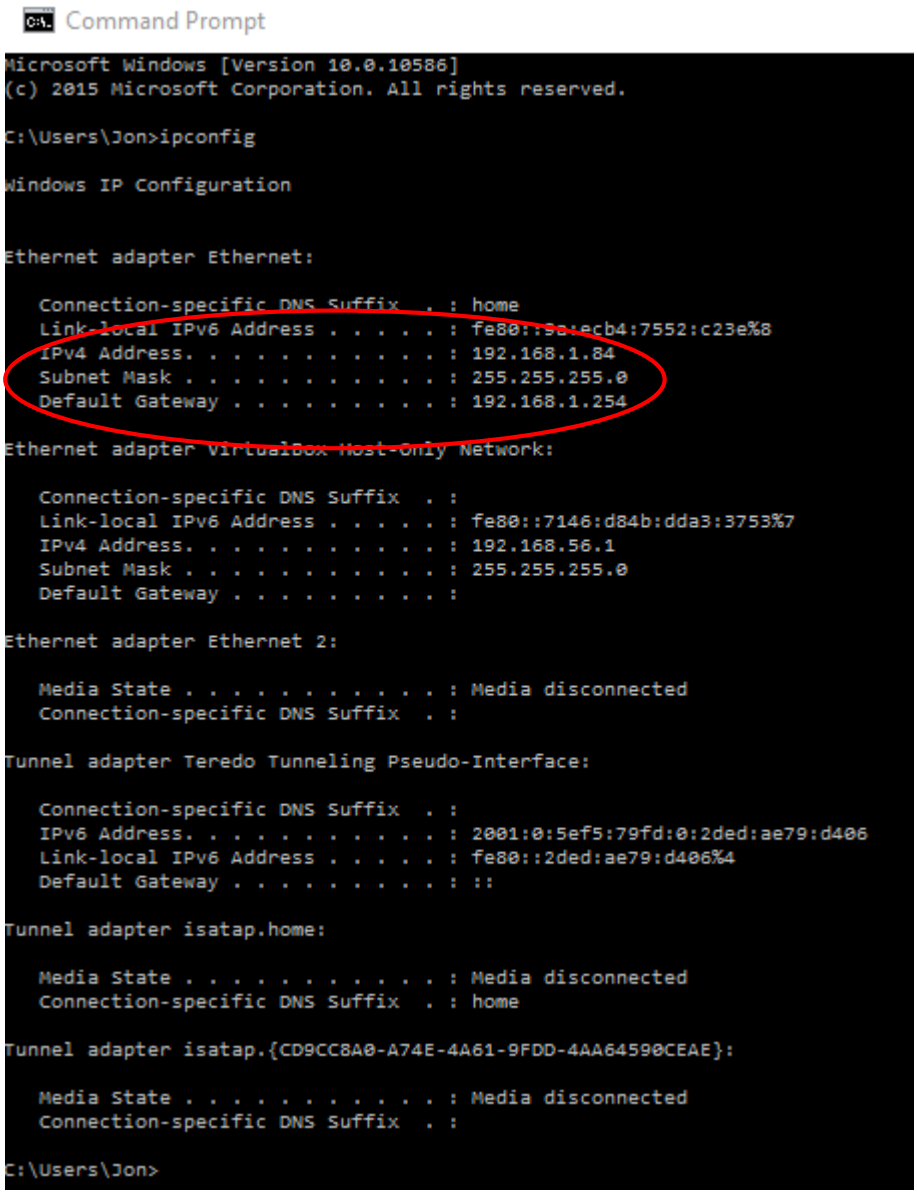


ipconfig

This tool displays the current configuration of your computers IP connections, including your LOCAL IP address on your network and your DEFAULT GATEWAY (router). This is useful if you want to address the default gateway (router) directly and alter its settings.

Also displayed here is the SUBNET MASK which helps you establish how large a network may be or how it is configured.

There are sometime many connections displayed, the current active one is the one which has an IP address after DEFAULT GATEWAY. Non active connections will not have this field populated.

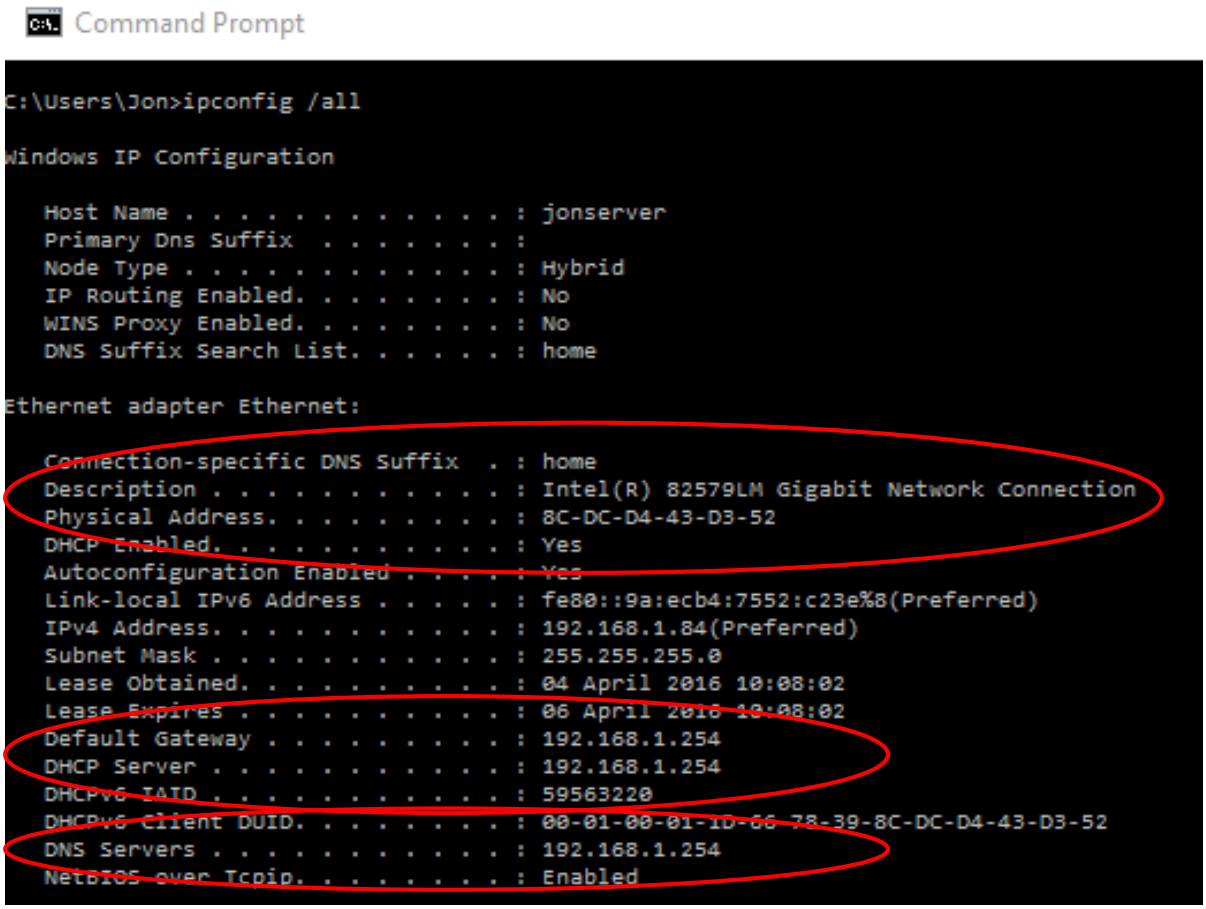


ipconfig /all

This tool is similar to ipconfig, but provides more information.

This most important pieces of extra information displayed are a description of the network, the PHYSICAL or MAC ADDRESS of the connection to the network, the address of the DNS servers being used if any and the address of the DHCP server, which deals with allocating IP addresses on a local network.

As with ipconfig, there are sometimes many connections displayed, the current active one is the one which has an IP address after DEFAULT GATEWAY. Non active connections will not have this field populated.

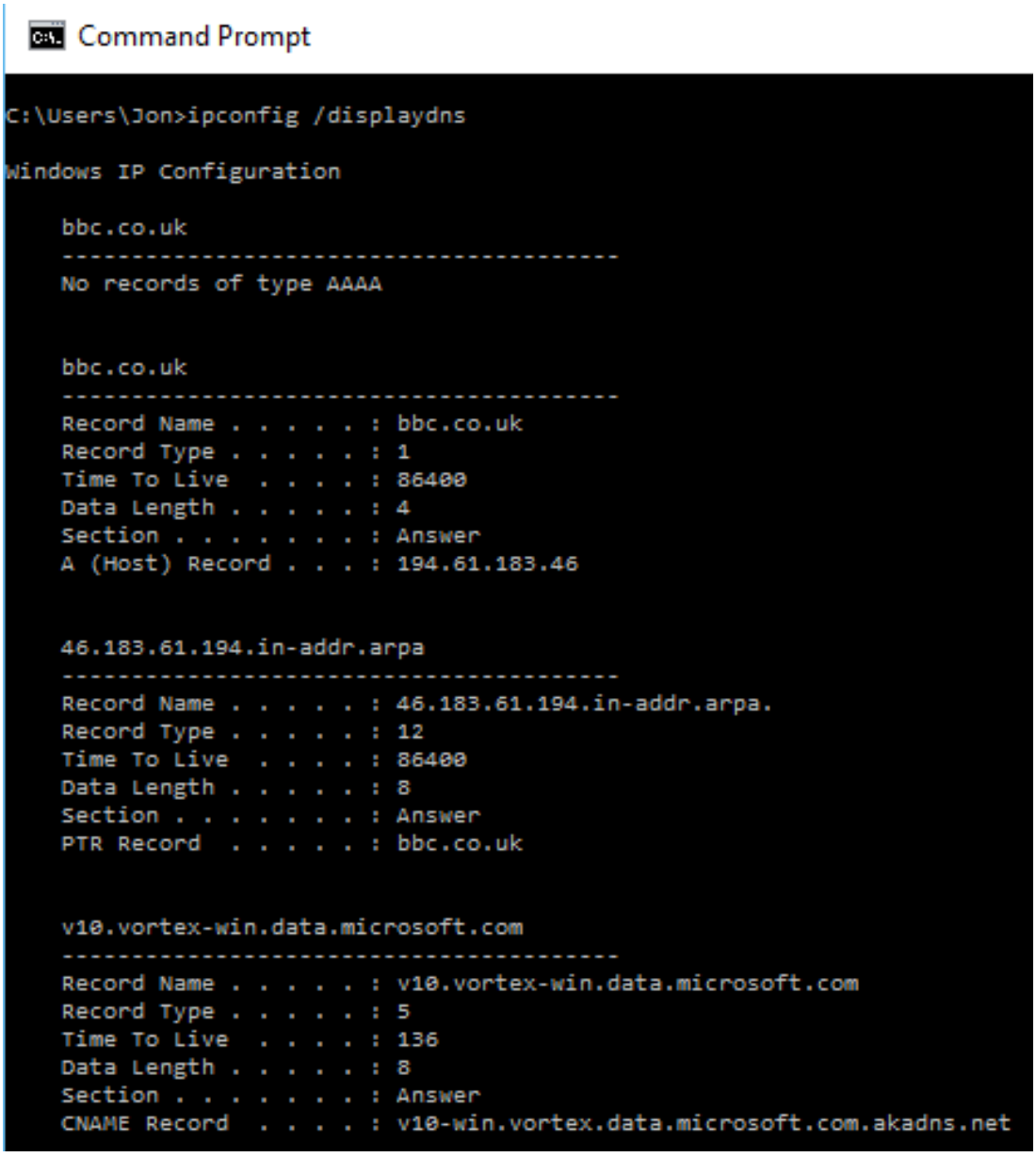


ipconfig /displaydns

This is a useful tool which displays internet activity on a computer, even if the history is deleted from the browser.

This is VOLATILE CACHE and is over written or deleted after a set period of time.

The entry Time To Live (TTL) specifies how long that record will remain in the cache, in seconds.

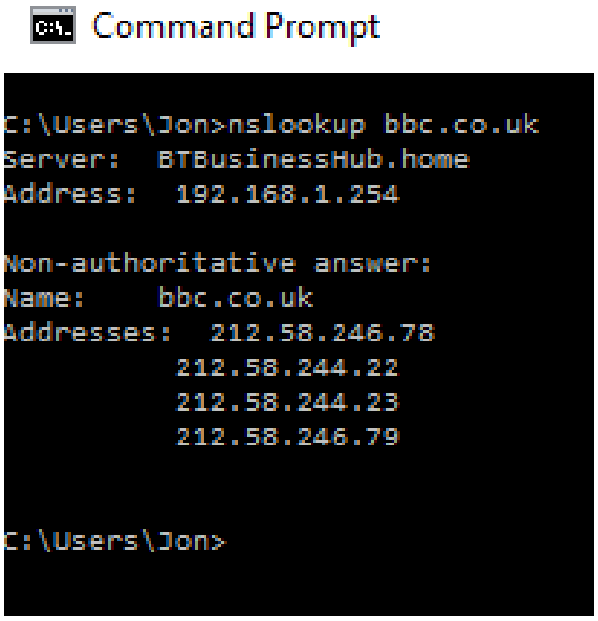


nslookup

This tool is NAMESERVER LOOKUP.

It returns the IP address where a website is hosted and uses DNS to obtain this information. It also displays the name and IP address of the default gateway used to carry out the DNS enquiry.

nslookup bbc.co.uk



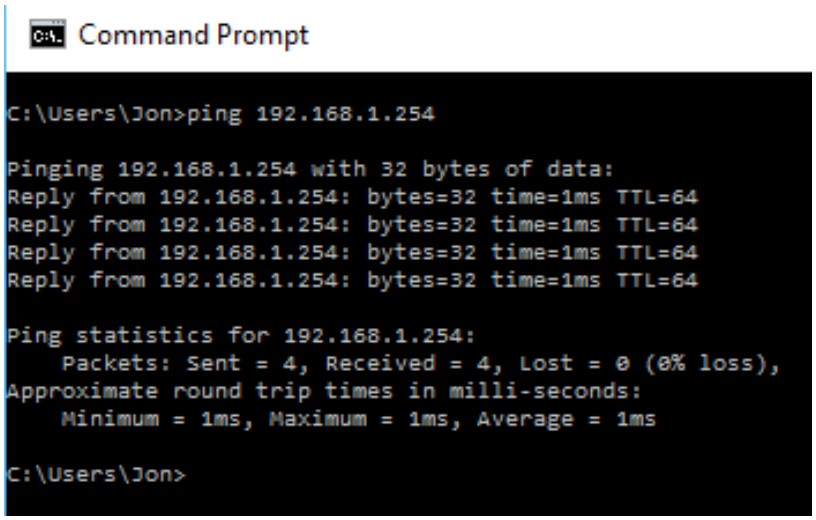
ping

The ping tool establishes if a connection exists between a local machine and a local or external resource, such as a website or server. If a connection is available, the time taken and the efficiency of the connection is displayed.

If no connection is available, the request will time out.

To test your connection to your default gateway (router) you can ping it, having obtained its IP address using **ipconfig**

ping 192.168.1.254



Or you can ping a domain, which is a good way of testing your connection to the Internet

ping google.com