



Question: How do I “PING” a network device?

Answer: If you are having problems with “Pinging” a network device, Examine the response from the ping command as this gives an indication as to the problem.

There are four basic types of error -

==> **Network unreachable**

==> **Protocol unreachable**

==> **Host unreachable**

==> **Port unreachable.**

Network unreachable messages mean that there is no route to the target network (subnet) specified. Specifically, this response comes from a router, effectively that router is telling us that it cannot see the destination network on its remote port (nor can it see the next router along the path in order to pass on the request). An example : consider a small environment consisting of a single router with an address of 192.168.1.1, and all devices are on the same subnet, ie: 192.168.1.???. Attempting to ping an address on a different subnet such as 192.168.2.??? will result in “Destination net unreachable”.

Host unreachable messages usually indicate delivery failure to the target device. The target network (subnet) specified in the network portion of the IP address can usually be reached but not the specific host indicated in the address. It is usually generated as a result of a configuration error such as a wrong IP address or wrong subnet mask. Typically the error returned is “Destination host unreachable”.

Protocol unreachable messages generally mean that the destination does not support the protocol specified in the TCP/IP packet. This error is less likely to be seen as most devices have standardised on TCP as a protocol.

Port unreachable messages imply that the TCP socket or port on the destination device is not available. It might be as a result of port re-mapping undertaken by a router or a configuration error.

Most commonly you will see the message “Request timed out”. This implies a valid but not necessarily correct configuration at the PC end but the target device has not responded in the time allowed - so check the network settings on the DVR.

The most common reasons for a “time out” are...

==> target device (eg DVR) has a configuration error

==> target device is not switched on

==> target device is not physically plugged in or connected

==> router is down or off

==> network response is too slow and has exceeded the default response time of 1 second

As most problems are a result of a configuration error somewhere, it is fair to say “check & double check” every device : PC, DVR and router if you have one.

This CCTV installation tip is aimed at helping you to install CCTV equipment. If you are looking for answers on “how to fit CCTV” or perhaps “how to network a DVR or NVR” or even “how to get CCTV on your mobile phone” why not check out our full range of CCTV installation tips at: www.systemq.com

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