Using the PING Command to Test Network Connections

Document relates to: All Laplink Products

SUMMARY

I want to connect using the TCP/IP protocol. This might be over the Laplink Ethernet Cable or a Local Area Network (LAN). How can I test the TCP/IP protocol?

SOLUTION

The PING command sends a test packet of data to a designated IP address.

Open up a DOS command prompt:

1. From the Windows Start menu, click Run. (In Windows Vista and newer, simply type the command in step 2 into the search field and hit enter instead of clicking Run.)
2. Type CMD and click OK.
3. Do this step on both computers.

Identify the IP address on the target computer: See Technical Document 204: How to Determine the IP Address on a Computer for more information.

Testing the network connection using PING:

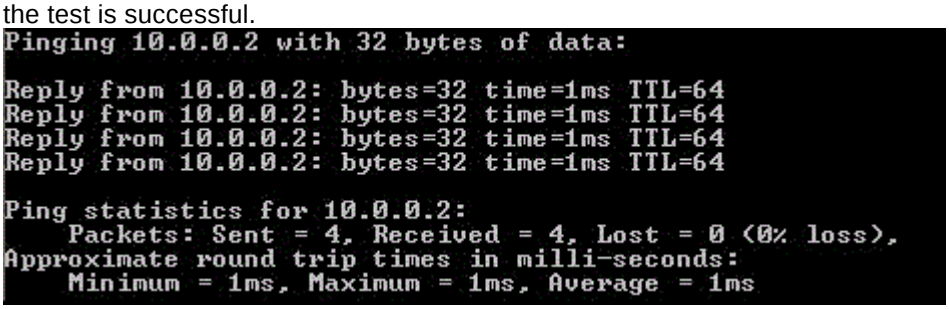
1. In the command prompt of the source computer, type the following:

   PING *IP Address of the target computer*

   Then press Enter. For example, PING 10.0.0.2

Understanding the results:

Each PING test makes 4 tries, and gives back a response for each attempt. If the response looks like this, the test is successful.



If the response looks like either of these examples, the test failed.

```
Pinging 10.0.0.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms
```

```
Pinging 100.0.0.2 with 32 bytes of data:

Reply from 204.203.4.14: Destination host unreachable.
Reply from 204.203.4.14: Destination host unreachable.
Reply from 204.203.4.14: Destination host unreachable.
Reply from 204.203.4.14: Destination host unreachable.

Ping statistics for 100.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms
```

Resolving the problem:
There are several things that can cause a PING test to fail, such as:

- Pinging the incorrect IP address. Verify that you are pinging the correct IP address of the host computer.
- Firewall software may be blocking PING requests, and you will need to disable the firewall. Typically, if a firewall is blocking PING requests, it will very likely block Laplink connections as well. To configure a firewall for Laplink connections, please see Technical Document 633: Overview for Configuring a Firewall or Router to Allow LapLink Connections.
- The network may be incorrectly configured. This can be due to a number of different factors including incorrect IP address and/or subnet mask. Subnet masks determine the valid range of IP addresses for a network. Both machines should have IP addresses that fall within the range determined by the subnet mask. If the machines are on the same subnet then they must have the same subnet mask. For more information, contact your network administrator.
- Hardware failure, i.e. a bad ethernet adapter, cable, router, hub, etc.

This Article can be found by searching for:

Keywords: Cable: Laplink Ethernet Cable, Connections: LAN, Connections: Network, Network: TCP/IP, Configuration: Network, How To: Windows

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