

PingTool

ping

Ping sends ICMP echo request messages to a remote host and waits for ICMP echo replies to determine the [latency](#) between those hosts. The output shows the [Round Trip Time](#) (RTT) between the host machine and the remote target. Ping is often used to determine whether a remote host is reachable. Unfortunately, it is quite common these days for ICMP traffic to be blocked by packet filters / firewalls, so a ping timing out does not necessarily mean that a host is unreachable.

(Another method for checking remote host availability is to `telnet` to a port that you know to be accessible; such as port 80 (HTTP) or 25 (SMTP). If the connection is still timing out, then the host is probably not reachable - often because of a filter/firewall silently blocking the traffic. When there is no service listening on that port, this usually results in a "Connection refused" message. If a connection is made to the remote host, then it can be ended by typing the escape character (usually 'CTRL ^']) then `quit`.)

The

`-f` flag may be specified to send ping packets as fast as they come back, or 100 times per second - whichever is more frequent. As this option can be very hard on the network only a super-user (the `root` account on *NIX machines) is allowed to specify this flag in a ping command.

The `-c` flag specifies the number of Echo request messages sent to the remote host by ping. If this flag isn't used, then the ping continues to send echo request messages until the user types `CTRL C`. If the ping is cancelled after only a few messages have been sent, the RTT summary statistics that are displayed at the end of the ping output may not have finished being calculated and won't be completely accurate. To gain an accurate representation of the RTT, it is recommended to set a count of 100 pings. The MS Windows implementation of ping just sends 4 echo request messages by default.

Ping6 is the IPv6 implementation of the ping program. It works in the same way, but sends ICMPv6 Echo Request packets and waits for ICMPv6 Echo Reply packets to determine the RTT between two hosts. There are no discernable differences between the Unix implementations and the MS Windows implementation.

As with [traceroute](#), Solaris integrates IPv4 and IPv6 functionality in a single `ping` binary, and provides options to select between them (`=-A <AF>=`).

See [fping](#) for a `ping` variant that supports concurrent measurements to multiple destinations and is easier to use in scripts.

Implementation-specific notes

- [Differences in ping size between a Juniper and a Cisco router](#)

– Main.TobyRodwell - 06 Apr 2005

-- Main.MarcoMarletta - 15 Nov 2006 (Added the difference in size between Juniper and Cisco)