Ping

Summary

Ping uses the Internet Control Message Protocol (ICMP) Echo messages to determine if a remote host is active or inactive and to determine the round-trip delay when communicating with it. Ping tool sends ICMP (type 8) message to the host and waits for the ICMP echo-reply (type 0). The interval between these events is called a round trip. If the response (that is called pong) has not come until the end of the interval, we assume it has timed out. The second significant parameter reported is TTL (Time to Live). Is decremented at each machine in which the packet is processed. The packet will reach its destination only when the TTL is greater than the number of routers between the source and the destination.

Quick Example

RouterOS Ping tool allows you to configure various additional parameters like:

- arp-ping;
- address;
- src-address;
- count;
- dscp;
- interface;
- interval;
- routing-table;
- size;
- ttl;

Let's take a look ar very simple example:

```
[admin@MikroTik] > /tool/ping address=10.155.126.252 count=5 interval=200ms
  SEQ HOST                                 SIZE TTL TIME
STATUS

    0 10.155.126.252                         56   64 0ms
    1 10.155.126.252                         56   64 0ms
    2 10.155.126.252                         56   64 0ms
    3 10.155.126.252                         56   64 0ms
    4 10.155.126.252                         56   64 0ms
    sent=5 received=5 packet-loss=0% min-rtt=0ms avg-rtt=0ms max-rtt=0ms
```

The same we can achieve with more shorter CLI command:

```
[admin@MikroTik] > /ping 10.155.126.252 count=5 interval=50ms
  SEQ HOST                                 SIZE TTL TIME
STATUS

    0 10.155.126.252                         56   64 0ms
    1 10.155.126.252                         56   64 0ms
    2 10.155.126.252                         56   64 0ms
    3 10.155.126.252                         56   64 0ms
    4 10.155.126.252                         56   64 0ms
    sent=5 received=5 packet-loss=0% min-rtt=0ms avg-rtt=0ms max-rtt=0ms
```

It is also possible to ping multicast address to discover all hosts belonging to multicast group:

```
[admin@MikroTik] > /ping ff02::1
HOST                                    SIZE  TTL TIME  STATUS
fe80::20c:42ff:fe49:fceb                 56   64  1ms   echo reply
fe80::20c:42ff:fe72:a1b0                 56   64  1ms   echo reply
fe80::20c:42ff:fe28:7945                 56   64  1ms   echo reply
fe80::21a:4dff:fe5d:8e56                 56   64  3ms   echo reply
     sent=1 received=4 packet-loss=-300% min-rtt=1ms avg-rtt=1ms max-rtt=3ms
```

Ping by DNS name:

```
[admin@MikroTik]  > /ping www.google.com count=5 interval=50ms
  SEQ HOST                                  SIZE TTL TIME
STATUS
    0 216.58.207.228                         56   51 14ms
    1 216.58.207.228                         56   51 13ms
    2 216.58.207.228                         56   51 13ms
    3 216.58.207.228                         56   51 13ms
    4 216.58.207.228                         56   51 13ms
     sent=5 received=5 packet-loss=0% min-rtt=13ms avg-rtt=13ms max-rtt=14ms
```

ⓘ When you use the domain name and CLI for ping, router DNS will be used to resolve the address. When you use the Winbox Tools/Ping, your computer's DNS will be used to resolve the given address.

MAC Ping

This submenu allows enabling the mac ping server.

When mac ping is enabled, other hosts on the same broadcast domain can use the ping tool to ping mac address:

```
[admin@MikroTik]  > /tool mac-server ping set enabled=yes
```

Ping MAC address:

```
[admin@MikroTik]  > /ping 00:0C:42:72:A1:B0
HOST                                    SIZE  TTL TIME  STATUS
00:0C:42:72:A1:B0                        56       0ms
00:0C:42:72:A1:B0                        56       0ms
     sent=2 received=2 packet-loss=0% min-rtt=0ms avg-rtt=0ms max-rtt=0ms
```