Ping

This document applies to V3.0

Table of Contents

Table of Contents
General Information
   Summary
   Specifications
   Description
The Ping Command
   Property Description
   Notes
   Example of ping command
Resolve IP address:
   'Ping', using arp requests:
MAC Ping Server
   Property Description
   Example

General Information

Summary

Ping uses 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.

Specifications

Packages required: system
License required: level1
Home menu level: /, /tool mac-server ping
Standards and Technologies: ICMP
Hardware usage: Not significant

Description

Ping sends ICMP echo (ICMP type 8) message to the host and waits for the ICMP echo-reply (ICMP type 0) from that host. The interval between these events is called 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 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.

The Ping Command
Command name: /ping

**Property Description**

(IP address|MAC address) - IP or MAC address for destination host

count (integer; default: 0) - how many times ICMP packets will be sent
  • 0 - Ping continues till [Ctrl]+[C] is pressed
do-not-fragment - if added, packets will not be fragmented

interface (name) - ping, using ARP requests on this interface, instead of ICMP requests.

interval (time: 10ms..5s; default: 1s) - delay between messages

size (integer: 28..65535; default: 64) - size of the IP packet (in bytes, including the IP and ICMP headers)

src-address (IP address) - Source address for ping
ttl (integer: 1..255; default: 255) - time To Live (TTL) value of the ICMP packet

**Notes**

If DNS service is configured, it is possible to ping by DNS address. To do it from Winbox, you should resolve DNS address first, pressing right mouse button over its address and choosing Lookup Address.

You cannot ping with packets larger that the MTU of that interface, so the packet size should always be equal or less than MTU. If ‘pinging’ by MAC address, minimal packet size is 50 bytes.

Only neighbour MikroTik RouterOS routers with MAC-ping feature enabled can be 'pinged' by MAC address.

**Example of ping command**

An example of Ping command:

```
/ping 159.148.95.16 count=5 interval=500ms
159.148.95.16 64 byte ping: ttl=59 time=21 ms
159.148.95.16 ping timeout
159.148.95.16 ping timeout
159.148.95.16 ping timeout
159.148.95.16 64 byte ping: ttl=59 time=16 ms
5 packets transmitted, 2 packets received, 60% packet loss
round-trip min/avg/max = 16/18.5/21 ms
```

[admin@MikroTik] >

**Resolve IP address:**

To resolve IP address from a DNS name, type the command:

```
/ping www.google.lv
```

and press the [Tab] key:

```
[admin@MikroTik] > /ping 66.102.11.104
```

The DNS name **www.google.lv** changed to IP address 66.102.11.104!

**'Ping', using arp requests:**
To ping a host in our local network, using ARP requests instead of ICMP:

```
/ping 10.5.8.130 interface=local
10.5.8.130 with hw-addr 00:30:4F:14:AB:58 ping time=1 ms
10.5.8.130 with hw-addr 00:30:4F:14:AB:58 ping time=1 ms
10.5.8.130 with hw-addr 00:30:4F:14:AB:58 ping time=1 ms
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 1/1.0/1 ms
```

**MAC Ping Server**

Home menu level: `/tool mac-server ping`

**Property Description**

**enabled** (yes | no; default: yes) - whether MAC pings to this router are allowed

**Example**

To disable MAC pings:

```
[admin@MikroTik] tool mac-server ping> set enabled=no
[admin@MikroTik] tool mac-server ping> print
  enabled: no
[admin@MikroTik] tool mac-server ping>
```