Ping

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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***

Related Documents

- Software Package Management

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

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

(*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

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)

ttl (*integer*: 1..255; default: **255**) - time To Live (TTL) value of the ICMP packet

src-address (*IP address*) - Source address for ping

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 iz 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:

```
/pi 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 arp-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
[admin@MikroTik] >
```

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>
```