

Manual:IP/Address

From MikroTik Wiki

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Applies
to



RouterOS: 2.9, v3,
v4 +

Summary

Sub-menu: /ip address

Standards: IPv4 RFC 791

IP addresses serve for a general host identification purposes in IP networks. Typical (IPv4) address consists of four octets. For proper addressing the router also needs the network mask value, id est which bits of the complete IP address refer to the address of the host, and which - to the address of the network. The network address value is calculated by binary AND operation from network mask and IP address values. It's also possible to specify IP address followed by slash "/" and the amount of bits that form the network address.

In most cases, it is enough to specify the address, the netmask, and the interface arguments. The network prefix and the broadcast address are calculated automatically.

It is possible to add multiple IP addresses to an interface or to leave the interface without any addresses assigned to it. In case of bridging or PPPoE connection, the physical interface may not have any address assigned, yet be perfectly usable. Putting an IP address to a physical interface included in a bridge would mean actually putting it on the bridge interface itself. You can use /ip address print detail to see to which interface the address belongs to.

MikroTik RouterOS has following types of addresses:

- Static - manually assigned to the interface by a user
- Dynamic - automatically assigned to the interface by DHCP or an established PPP connections

Properties

Property	Description
address (<i>IP/Mask</i> ; Default:)	IP address
broadcast (<i>IP</i> ; Default: 255.255.255.255)	roadcasting IP address, calculated by default from an IP address and a network mask. Starting from v5RC6 this parameter is removed
interface (<i>name</i> ; Default:)	Interface name the IP address is assigned to
netmask (<i>IP</i> ; Default: 0.0.0.0)	Delimits network address part of the IP address from the host part
network (<i>IP</i> ; Default: 0.0.0.0)	IP address for the network. For point-to-point links it should be the address of the remote end. Starting from v5RC6 this parameter is configurable only for addresses with /32 netmask (point to point links)

Read only properties

Property	Description
actual-interface (<i>name</i>)	Name of the actual interface the logical one is bound to. For example, if the physical interface you assigned the address to, is included in a bridge, the actual interface will show that bridge

Two IP addresses from the same network assigned to routers different interfaces are not valid unless VRF is used. For example, the combination of IP address 10.0.0.1/24 on the **ether1** interface and IP address

10.0.0.132/24 on the **ether2** interface is invalid, because both addresses belong to the same network 10.0.0.0/24. Use addresses from different networks on different interfaces, or enable proxy-arp on ether1 or ether2.

Example

```
[admin@MikroTik] ip address> add address=10.10.10.1/24 interface=ether2
[admin@MikroTik] ip address> print
Flags: X - disabled, I - invalid, D - dynamic
#  ADDRESS          NETWORK      BROADCAST    INTERFACE
0  2.2.2.1/24        2.2.2.0      2.2.2.255    ether2
1  10.5.7.244/24     10.5.7.0     10.5.7.255   ether1
2  10.10.10.1/24     10.10.10.0   10.10.10.255 ether2

[admin@MikroTik] ip address>
```

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