

# Services, Protocols, and Ports

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## General Information

### Summary

This document lists protocols and ports used by various MikroTik RouterOS services. It helps you to determine why your MikroTik router listens to certain ports, and what you need to block/allow in case you want to prevent or grant access to the certain services. Please see the relevant sections of the Manual for more explanations.

Home menu level: */ip service*

### Related Documents

- [Firewall Filters](#)
- [Packet Marking \(Mangle\)](#)
- [Certificate Management](#)

### Modifying Service Settings

Home menu level: */ip service*

### Property Description

**name** - service name

**port** (*integer*: 1..65535) - the port particular service listens on

**address** (*IP address/mask*; default: **0.0.0.0/0**) - IP address(-es) from which the service is accessible

**certificate** (*name | none*; default: **none**) - the name of the certificate used by particular service (absent for the services that do not need certificates)

### Example

To set **www** service to use **8081** port accesible from the **10.10.10.0/24** network:

```
[admin@MikroTik] ip service> print
Flags: X - disabled, I - invalid
#    NAME      PORT  ADDRESS      CERTIFICATE
0    telnet     23    0.0.0.0/0
1    ftp        21    0.0.0.0/0
2    www        80    0.0.0.0/0
3    ssh        22    0.0.0.0/0
4    www-ssl    443   0.0.0.0/0    none
[admin@MikroTik] ip service> set www port=8081 address=10.10.10.0/24
[admin@MikroTik] ip service> print
Flags: X - disabled, I - invalid
#    NAME      PORT  ADDRESS      CERTIFICATE
0    telnet     23    0.0.0.0/0
1    ftp        21    0.0.0.0/0
2    www        8081  10.10.10.0/24
3    ssh        22    0.0.0.0/0
4    www-ssl    443   0.0.0.0/0    none
[admin@MikroTik] ip service>
```

## List of Services

### Description

Below is the list of protocols and ports used by MikroTik RouterOS services. Some services require additional package to be installed, as well as to be enabled by administrator, *exempli gratia* bandwidth server.

Port/Protocol	Description
<b>20/tcp</b>	<b>File Transfer Protocol FTP [Data Connection]</b>
<b>21/tcp</b>	<b>File Transfer Protocol FTP [Control Connection]</b>
<b>22/tcp</b>	<b>Secure Shell SSH remote Login Protocol (Only with security package)</b>
<b>23/tcp</b>	<b>Telnet protocol</b>
<b>53/tcp</b>	<b>Domain Name Server DNS</b>
<b>53/udp</b>	<b>Domain Name Server DNS</b>
<b>67/udp</b>	<b>Bootstrap Protocol or DHCP Server (only with dhcp package)</b>
<b>68/udp</b>	<b>Bootstrap Protocol or DHCP Client (only with dhcp package)</b>
<b>80/tcp</b>	<b>World Wide Web HTTP</b>
<b>123/udp</b>	<b>Network Time Protocol NTP (Only with ntp package)</b>
<b>161/udp</b>	<b>Simple Network Management Protocol SNMP (Only with snmp package)</b>
<b>443/tcp</b>	<b>Secure Socket Layer SSL encrypted HTTP(Only with hotspot package)</b>

<b>500/udp</b>	<b>Internet Key Exchange IKE protocol (Only with ipsec package)</b>
<b>520/udp</b>	<b>Routing Information Protocol RIP (Only with routing package)</b>
<b>521/udp</b>	<b>Routing Information Protocol RIP (Only with routing package)</b>
<b>179/tcp</b>	<b>Border Gateway Protocol BGP (Only with routing package)</b>
<b>1080/tcp</b>	<b>SOCKS proxy protocol</b>
<b>1701/udp</b>	<b>Layer 2 Tunnel Protocol L2TP (Only with ppp package)</b>
<b>1718/udp</b>	<b>H.323 Gatekeeper Discovery (Only with telephony package)</b>
<b>1719/tcp</b>	<b>H.323 Gatekeeper RAS (Only with telephony package)</b>
<b>1720/tcp</b>	<b>H.323 Call Setup (Only with telephony package)</b>
<b>1723/tcp</b>	<b>Point-to-Point Tunneling Protocol PPTP (Only with ppp package)</b>
<b>1731/tcp</b>	<b>H.323 Audio Call Control (Only with telephony package)</b>
<b>1900/udp</b>	<b>Universal Plug and Play uPnP</b>
<b>2828/tcp</b>	<b>Universal Plug and Play uPnP</b>
<b>2000/tcp</b>	<b>Bandwidth-test server</b>
<b>3986/tcp</b>	<b>Proxy for winbox</b>
<b>3987/tcp</b>	<b>SSL proxy for secure winbox (Only with security package)</b>
<b>5678/udp</b>	<b>MikroTik Neighbor Discovery Protocol</b>
<b>8080/tcp</b>	<b>HTTP Web proxy (Only with web-proxy package)</b>
<b>8291/tcp</b>	<b>Winbox</b>
<b>20561/udp</b>	<b>MAC winbox</b>
<b>5000+/udp</b>	<b>H.323 RTP Audio Stream (Only with telephony package)</b>
<b>/1</b>	<b>ICMP - Internet Control Message Protocol</b>
<b>/4</b>	<b>IP - IP in IP (encapsulation)</b>
<b>/47</b>	<b>GRE - General Routing Encapsulation (Only for PPTP and EoIP)</b>
<b>/50</b>	<b>ESP - Encapsulating Security Payload for</b>

	<b>IPv4 (Only with security package)</b>
<b>/51</b>	<b>AH - Authentication Header for IPv4 (Only with security package)</b>
<b>/89</b>	<b>OSPFIGP - OSPF Interior Gateway Protocol</b>
<b>/112</b>	<b>VRRP - Virtual Router Redundancy Protocol</b>