

Services

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Summary

This page 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 certain services. Please see the relevant sections of the Manual for more explanations.

The default services are:

Property	Description
telnet	Telnet service
ftp	FTP service
www	Webfig HTTP service
ssh	SSH service
www-ssl	Webfig HTTPS service
api	API service
winbox	Responsible for Winbox tool access, as well as Tik-App smartphone app and Dude probe
api-ssl	API over SSL service

Properties

Note that it is not possible to add new services, only existing service modifications are allowed.

Sub-menu: `/ip service`

Property	Description
address (<i>IP address/netmask IPv6/0..128</i> ; Default:)	List of IP/IPv6 prefixes from which the service is accessible
certificate (<i>name</i> ; Default: none)	The name of the certificate used by a particular service. Applicable only for services that depend on certificates (<i>www-ssl, api-ssl</i>)
name (<i>name</i> ; Default: none)	Service name
port (<i>integer: 1..65535</i> ; Default:)	The port particular service listens on
tls-version (<i>any only-1.2</i> ; Default: any)	Specifies which TLS versions to allow by a particular service
vrf (<i>name</i> ; Default: main)	Specify which VRF instance to use by a particular service

Example

For example, allow API only from a specific IP/IPv6 address range

```
[admin@dzeltenais_burkaans] /ip service> set api address=10.5.101.0/24,2001:db8:fade::/64
[admin@dzeltenais_burkaans] /ip service> print
Flags: X - disabled, I - invalid
#  NAME      PORT  ADDRESS      CERTIFICATE
0  telnet    23
1  ftp       21
2  www       80
3  ssh       22
4 X www-ssl  443      none
5  api       8728    10.5.101.0/24
                2001:db8:fade::/64
6  winbox    8291
```

Service Ports

Hosts behind a NAT-enabled router do not have true end-to-end connectivity. Therefore some Internet protocols might not work in scenarios with NAT.

To overcome these limitations RouterOS includes a number of [NAT](#) helpers, that enable NAT traversal for various protocols.



If connection tracking is not enabled then firewall service ports will be shown as inactive

Sub-menu: /ip firewall service-port

Helper	Description
FTP	FTP service helper
H323	H323 service helper
IRC	IRC service helper
PPTP	PPTP tunneling helper
UDPLITE	UDP-Lite service helper
DCCP	DCCP service helper
SCTP	SCTP service helper
SIP	SIP helper. Additional options: • sip-direct-media allows redirecting the RTP media stream to go directly from the caller to the callee. The default value is yes. • sip-timeout allows adjusting TTL of SIP UDP connections. Default: 1 hour. In some setups, you have to reduce that.
TFTP	TFTP service helper
RSTP	RTSP service helper



udplite, **dccp**, and **sctp** are built-in services of the connection tracking. Since these are not separately loaded modules, they cannot be disabled separately, they got disabled together with the connection tracking.

Protocols and ports

The table below shows the list of protocols and ports used by RouterOS.

Proto/Port	Description
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20/tcp	FTP data connection
21/tcp	FTP control connection
22/tcp	Secure Shell (SSH) remote login protocol
23/tcp	Telnet protocol
53/tcp 53/udp	DNS
67/udp	Bootstrap protocol or DHCP Server
68/udp	Bootstrap protocol or DHCP Client
80/tcp	World Wide Web HTTP
123/udp	Network Time Protocol (NTP)
161/udp	Simple Network Management Protocol (SNMP)
179/tcp	Border Gateway Protocol (BGP)
443/tcp	Secure Socket Layer (SSL) encrypted HTTP
500/udp	Internet Key Exchange (IKE) protocol
520/udp 521/udp	RIP routing protocol
546/udp	DHCPv6 Client message
547/udp	DHCPv6 Server message
646/tcp	LDP transport session
646/udp	LDP hello protocol
1080/tcp	SOCKS proxy protocol
1698/udp 1699/udp	RSVP TE Tunnels
1701/udp	Layer 2 Tunnel Protocol (L2TP)
1723/tcp	Point-To-Point Tunneling Protocol (PPTP)
1900/udp 2828/tcp	Universal Plug and Play (uPnP)
1966/udp	MME originator message traffic
1966/tcp	MME gateway protocol
2000/tcp	Bandwidth test server
5246,5247/udp	CAPsMAN
5350/udp	NAT-PMP client
5351/udp	NAT-PMP server
5678/udp	Mikrotik Neighbor Discovery Protocol
6343/tcp	Default OpenFlow port
8080/tcp	HTTP Web Proxy
8291/tcp	Winbox
8728/tcp	API
8729/tcp	API-SSL

20561/udp	MAC winbox
/1	ICMP
/2	Multicast IGMP
/4	IPIP encapsulation
/41	IPv6 (encapsulation)
/46	RSVP TE tunnels
/47	General Routing Encapsulation (GRE) - used for PPTP and EoIP tunnels
/50	Encapsulating Security Payload for IPv4 (ESP)
/51	Authentication Header for IPv4 (AH)
/89	OSPF routing protocol
/103	Multicast PIM
/112	VRRP