

# Prefix Lists

Document revision 1.2 (Wed Mar 24 12:31:52 GMT 2004)

This document applies to V2.8

## Table of Contents

[Table of Contents](#)

[General Information](#)

[Summary](#)

[Specifications](#)

[Related Documents](#)

[Description](#)

[Setup](#)

[Property Description](#)

[Notes](#)

[Example](#)

[Prefix List Rules](#)

[Property Description](#)

[Notes](#)

[Example](#)

## General Information

### Summary

Prefix lists are used to filter routes received from or sent to other routers.

### Specifications

Packages required: *routing*

License required: *level1*

Home menu level: */routing prefix-list*

Hardware usage: *Not significant*

### Related Documents

- [Package Management](#)
- [IP Addresses and ARP](#)
- [Routes, Equal Cost Multipath Routing, Policy Routing](#)
- [RIP](#)
- [BGP](#)

### Description

Filtering by prefix list involves matching the prefixes of routes with those listed in the prefix list. When there

is a match, the route is used. The prefix lists are used when specifying the BGP peers under **/routing bgp peer** or RIP interfaces under **/routing rip interface**.

To match a prefix-list entry, a route should have its prefix (i.e. destination address) matching **prefix** property of the entry, and it should have the length of its prefix (i.e. mask of destination address) matching **prefix-length** property of the entry.

## Setup

Home menu level: **/routing prefix-list**

## Property Description

**name** (*name*; default: "") - a name for the prefix list

**default-action** (*accept | reject*; default: **accept**) - default action for all members of the list

## Notes

An empty prefix list matches all prefixes

## Example

To add a **cybernet** list that rejects the routes by default:

```
[admin@MikroTik] routing prefix-list> add name=cybernet default-action=reject
[admin@MikroTik] routing prefix-list> print
# NAME                                DEFAULT-ACTION
0 cybernet                             reject
[admin@MikroTik] routing prefix-list>
```

## Prefix List Rules

Home menu level: **/routing prefix-list list <listname>**

## Property Description

**prefix** (*IP address/mask*; default: **0.0.0.0/0**) - network prefix to match

**prefix-length** (*integer*; default: **0-32**) - length (range) of the network prefix in bits

**action** (*accept | reject*; default: **accept**) - action to perform on list member

## Notes

There are two different values to match - prefix (i.e. destination address of the route applying the network mask) and prefix length. Prefix length matches network mask of the received route.

For example, if **prefix=172.16.0.0/16** and **prefix-length=16-24**, then received route for **172.16.24.0/24** will match, but route for **172.16.24.0/25** will not.

## Example

To accept the routes to the **172.16.0.0/16** network and any of its subnetworks that has their network mask between **16** and **24**:

```
[admin@MikroTik] routing prefix-list> list cybernet
[admin@MikroTik] routing prefix-list list cybernet> add prefix=172.16.0.0/16 \
\... prefix-length=16-24
[admin@MikroTik] routing prefix-list list cybernet> print
# PREFIX          PREFIX-LENGTH ACTION
0 172.16.0.0/16    16-24         accept
[admin@MikroTik] routing prefix-list list cybernet>
```