

Load Balancing

- [Failover \(WAN Backup\)](#)
- [Firewall Marking](#)
- [Bonding Load Balancing](#)

Introduction

Network load balancing is the ability to balance traffic across two or more WAN links without using routing protocols like BGP.

Load Balancing's aim is to spread traffic across multiple links to get better link usage. This can be done on one per-packet or per-connection basis.

Method		Per-connection	Per-packet
With the Firewall features	Firewall marking	Yes	Yes
	ECMP (Equal Cost Multi-Path)	Yes	No
	PCC (Per Connection Classifier)	Yes	No
	Nth	Yes	Yes
Bonding		No	Yes
OSPF		Yes	No
BGP		Yes	No

Route Failover

This example explains how to use multiple gateways with one taking over when first fails. It begins with adding the gateways. Configure larger **distance** value for the secondary one, and **check-gateway** for the first one:

```
/ip route add gateway=192.168.1.1 distance=1 check-gateway=ping
/ip route add gateway=192.168.2.1 distance=2
```

The first gateway will begin as its distance is smaller (default 1); the *check-gateway* will make sure it is up. When the ping will fail, it will disable the first gateway and the second will take over and when the first one comes up, it will return to its function.