

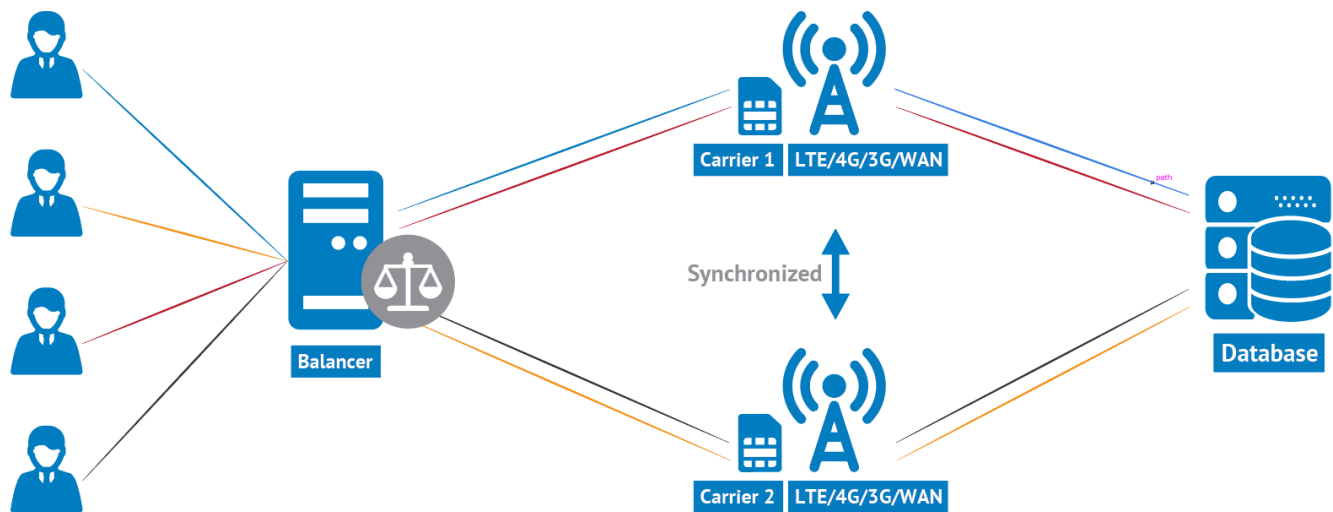


## BEC Internet Load Balancing Solution Guide

**Load balancing is especially important for networks where it's difficult to predict the number of requests that will be issued to a server. Load balancing aims to optimize resource use, maximize throughput, minimize response time, and avoid overload of any single resource.**

## Why Load Balancing?

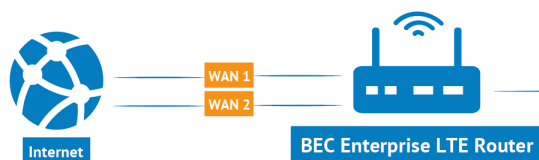
Load balancing is especially important for networks where it's difficult to predict the number of requests that will be issued to a server. Load balancing aims to optimize resource use, maximize throughput, minimize response time, and avoid overload of any single resource. Also, it balances traffic across multiple ISP links to ensure Internet continuity and availability, even during ISP outages. It balances outbound traffic intelligently, so users have Internet access whenever they need it. Application prioritization and granular quality-of-service (QoS) policies assure priority to business-critical application traffic – and the applications remain available even when links fail. In both BEC MX-200 and MX-1000 provide failover and bandwidth management for 4G/LTE and EWAN connections to assure continuous operation of applications and services if one of the link becomes unavailable.



## BEC Load Balance Feature

### Outbound Load Balance

The connections are distributed over WAN1 and WAN2 so that it can utilize bandwidth of both WAN ports. With Outbound load balance, traffic may be routed to a faster link when one of the WAN links is slower or congested so that user gains better throughput and less delay.



### Protocol Binding

Protocol Binding can let you select specific traffic to go out from a specific WAN port. Policies determine how specific types of Internet traffic are routed, for example, traffic from a particular IP address granted access to only one WAN port rather than using both WAN ports as with load balancing.



# Configuration

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## Outbound Load Balance

Save

1. In **General Setting**, please select **Load Balance** mode prior to configure this feature.

2. User can distribute outbound traffic based on **Session Mechanism** or **IP Hash Mechanism**.

A. **Balance by Session (Round Robin):**

Automatically assign requests/traffics to each WAN interface based on real-time WAN traffic-handling capacity.

B. **Balance by Session weight:** Manually Balance session traffic based on a weight ratio. Example: Session weight by 3:1 meaning forward 3 requests to WAN1 and 1 request to WAN2.

3. **Balance by weight:** Use an IP hash to balance traffic based on a ratio. It is to guarantee requests from the same IP address get forward to the same WAN interface.

## Protocol Binding

1. **Rule Index:** The numeric rule indicator. The maximum entry is up to 16.

2. **Active:** Click YES to activate the rule

3. **Bind Interface:** The dedicated WAN interface that guarantees to handle this traffic request.

4. **Source IP Address:** Enter the source IP address featuring the traffic origin.

5. **Subnet Mask:** Enter the subnet of the source

network.

6. **Port Number:** Enter the port number which defines the application.

7. **Destination IP Address:** Enter the destination IP address featuring the traffic destination.

8. **Subnet Mask:** Enter the subnet of the designation network.

9. **Port Number:** Enter the port number which defines the application.

10. **DSCP:** The DSCP value. Value Range from 0~64; 64 means Don't care

11. **Protocol:** Select a protocol, TCP, UDP, ICMP, to use for this traffic.

12. Click **Save** to apply the settings.

Save Delete

Protocol Binding List								
Index	Active	Interface	Source IP Address/Mask	Destination IP Address/Mask	Source Port	Destination Port	DSCP	Protocol
1	Yes	WAN1	192.168.1.100/255.255.255.0	0.0.0.0/0.0.0.0	8080	0	0	TCP

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1	Yes	WAN1	192.168.1.100/255.255.255.0	0.0.0.0/0.0.0.0	8080	0	0	TCP