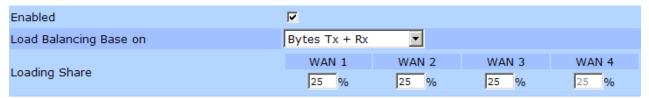# How Does FBR-4000 Load Balance Work

When computers are surfing the web or just one computer is downloading a web page multiple TCP sessions are established, certain protocol are utilized, primary TCP through advanced algorithms and many different calculations the FBR-4000 devices are able to determine where to send the next TCP session, WAN1 or WAN2. or WAN3, WAN4 By using this algorithm the devices are able to evenly distribute traffic load between multiple WAN ports.

Load Balance Type:

1. **Bytes Tx+Rx:** The load balance base on **least number of bytes** transmitted through the WAN port

Enabled	☑			
Load Balancing Base on	Bytes Tx + Rx ▾			
	WAN 1	WAN 2	WAN 3	WAN 4
Loading Share	25 %	25 %	25 %	25 %

2. **Packets Tx+Rx:** The load balance with the **least number of packets** transmitted through the WAN port. (Packets may have different size)

3. **Session Established:** The link with the **least number of sessions** built on the WAN port
A session may think of connection line. A connection line could contain no data. For Example: "super scan" attack tool. It also could have packets for a session,

4. **IP Address:** The load balance base on least number of Host IP addresses built on the WAN port. That means the load balance base on which WAN port contains least IP address.

5. **Auto Learning:** The load balance based on the **largest unused** bandwidth on Basic Requirement

6. **Fastest**: The Load Balance base on the **largest upload** bandwidth will be chosen first on Basic

Load Balancing Base on	Fastest			
	WAN 1	**WAN 2**	**WAN 3**	**WAN 4**
Bandwidth Download	250 KB	250 KB	250 KB	250 KB
Upload	64 KB	120 KB	32 KB	16 KB

Load Balance: WAN2 → WAN1→ WAN3 → WAN4

7. **Priority**: The load balance base on with the **highest priority** (i.e. lower priority number) on Basic Requirement

    Load Balance Priority: WAN3 > WAN2 > WAN1 > WAN4

Load Balancing Base on	Priority			
	WAN 1	**WAN 2**	**WAN 3**	**WAN 4**
Bandwidth Download	250 KB	250 KB	250 KB	250 KB
Upload	32 KB	32 KB	32 KB	32 KB
	WAN 1	**WAN 2**	**WAN 3**	**WAN 4**
Priority(1~8)	3	2	1	4

8. **Round Robin:** The load balance is chosen in **sequential order.**

    1→ 2→ 3 →4 →1→2→3 →4

9. **Weight Round Robin:** The load balance based on the weight placed accordingly

    The bigger weight give it a bigger loading. WAN1 > WAN2 WAN3 > WAN4

Load Balancing Configuration				
Enabled	☑			
Load Balancing Base on	Weight Round Robin			
	WAN 1	**WAN 2**	**WAN 3**	**WAN 4**
Weight(1~64)	64	32	16	8