

Q-Balancer®

Assure Your Business Continuity to the Cloud



It is crucial to have reliable Internet connectivity in order to keep your business always connected to the cloud as most of your customers do business on the cloud nowadays. In addition, Virtual Private Network (VPN) is widely used and increasingly popular as more global businesses emerge. Any delay or disruption of Internet connectivity and link failure between headquarters can cause a certain degree of loss on business opportunity or even business reputation.

Given these reasons aforementioned, providing 100% uptime and sufficient bandwidth become an important task for the IT. Q-Balancer LB Appliances offer assured connectivity and productivity to enterprise customers. Moreover, it enhances bandwidth utilization to achieve highest link performance by efficiently distributing traffic across the links. To provide business an assured connectivity and increased bandwidth in cost-effective way, Q-Balancer LB Series is definitely an ideal solution.

Key Benefits

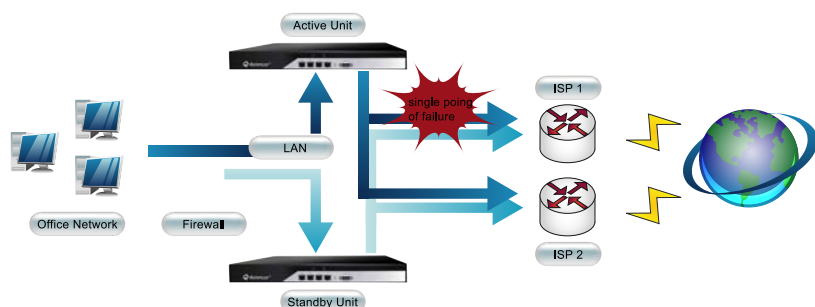
-  Increased Reliability
-  Accelerated Application Delivery
-  On Demand WAN Link and Throughput Scalability
-  Flexible Deployment
-  Cost Reduction
-  Management

Increased Reliability

WAN Failover

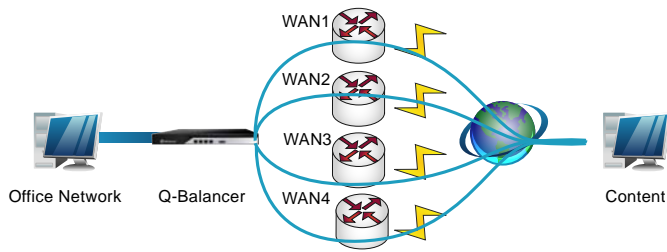
Q-Balancer assures continuous Internet connectivity for business in every situation by constantly monitoring the status of WAN link and automatically routing traffic down the remaining active links in the event of a link failure. Q-Balancer finds and takes the responsive WAN links, where the network congestions occur between you and your customers.

The outage on Internet connections could cause major issues to the servers hosted internally, which serve incoming request. Q-Balancer direct external requests to internal servers across the active and least-loaded links. This keeps uninterrupted accessibility to the internal servers.



Intelligent WAN Load Balancing

For Site-to-site VPN networks and MPLS networks, Q-Balancer is able to automatically re-route VPN traffic down the remaining active WAN links in few seconds upon link failure detection.



Global Server Load Balancing

Global Server Load Balancing (GSLB) is useful for its optimal direction of traffic between sites. It is also good at disaster recovery functionality. It assures failover and continuity for data center and multi-site deployment.

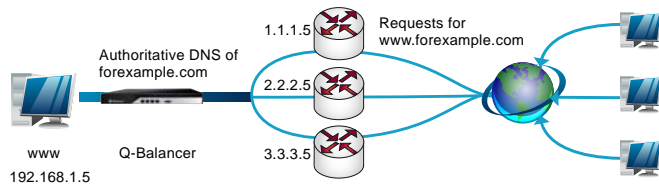
Accelerated Application Delivery

Outbound Load Balancing

Q-Balancer intelligently aggregate multiple Internet connections to speed up the application delivery. Business benefits from greater speed of Internet performance as the best performing and least-loaded links are always selected when requests come up.

Inbound Load Balancing

By applying Q-Balancer as an authoritative DNS for the domain, the requests from external clients to internal servers are distributed across the active and least-loaded links. You can direct traffic over the best path without purchasing high-end routers, coordinating with ISPs, or obtaining specialized staff to run BGP. This eliminates the deployment barriers and reduces cost of using BGP for multihoming networks. In addition, it guarantees the accessibility and improves the performance for the internal servers.

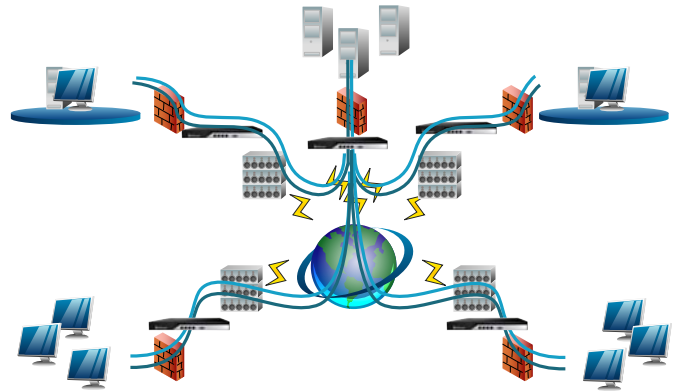


Link Bonding

Link Bonding combines multiple Internet connections into a virtual single connection, and therefore allows users to utilize the bonded links like a leased line. This helps business bidirectionally increase the capacity of Internet connection, and provides them greater speeds for mission-critical applications.

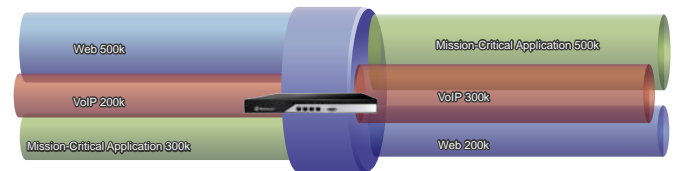
VPN Bonding

Large files and applications such as VoIP and Video Conferencing are frequently used between headquarter and branch offices. Therefore, it requires high level of bandwidth capacity. VPN Bonding maximizes the bandwidth capacity by efficiently bonding multiple channels at each location. Our VPN Bonding works on static IP, dynamic IP, and even private IP. It can be integrated into existing VPN networks with minimal impact.



Bandwidth Management

The granular control of bandwidth utilization over multiple Internet connections results in an improved client experience, more economical bandwidth consumption, and improved productivity.



Multi-Link Data Compression

Data Compression increases network capacity up to three times by compressing traffic over WAN links. It brings substantial cost savings immediately to customers by significantly reducing bandwidth consumption without comprising the quality of Internet connections.

Web Proxy

Web Proxy allows business to reduce bandwidth consumption through content caching. Users enjoy faster download speed with frequently-used content cached locally. It helps business avoid spending large amounts of money on upgrading WAN links in order to cope with ever-demanding bandwidth growth.

On Demand WAN Link and Throughput Scalability

Minimal Upfront Investment

Q-Balancer enables business to add extra WAN Links incrementally as business grows. This helps business minimize the upfront investment, and flexibly and incrementally increase its bandwidth by aggregating the legacy and newly deployed links. Q-Balancer is capable of aggregating smaller and older lines to improve data transmission without major network addressing changes.

Scalability

Q-Balancer comes with capacity from 40Mbit/s to 3Gbit/s of throughput, and supports from 27 up to 52 WAN Links. All Q-Balancer models are designed for business-grade capacity. All Ethernet ports can be defined as LAN, DMZ or WAN ports. By deploying Q-Balancer, you add upgrade bandwidth capacity as your business grows.

Flexible Deployment

Transparent Installation

Q-Balancer can be deployed transparently into an existing network to failover and aggregate traffic across the legacy and newly added WAN links. Removing Q-Balancer from a live network can be transparently completed too.

Virtual Appliance

Q-Balancer virtual appliances are for easy deployment in large and complex environments. Optimized hardware allocation and reduced hardware expenditure is available since physical computers are able to run multiple instances of the software in parallel by using the underlying VMware virtualization infrastructure. Thus, it is perfectly applicable for managed services providers and those responsible for the consolidation of several departmental networks.

Mixture between IPv6 and IPv4

Q-Balancer is able to handle routing through IPv4 and IPv6 WAN link. For organizations migrating to IPv6 and still keeping IPv4, Q-Balancer provides a cost-effective alternative. You can host IPv4 services while providing access to IPv6 customers and translate between them without burdening the network.

USB 3G Modems Supported

The Branch office and Remote office networks can instantly be deployed and connected with Internet access anywhere and anytime by plugging in USB 3G modems.

Cost Reduction



MPLS/Leasd Line Replacement

The prices of private network services such as leased lines and MPLS are still costly and vary with the distance and capacity. Replacing the expensive dedicated service with VPN by using Q-Balancer to handle VPN tunnels failover and aggregation brings down the cost substantially, yet it provides link resiliency and flexibility to upgrade the speed. For single-site business, Q-Balancer makes low-cost and shared Internet connections perform like leased line at a fraction of the cost. Besides, it makes adding and degrading bandwidth

for seasonal requirements quicker and easier.

Management

Monitoring, Logging, and Reporting

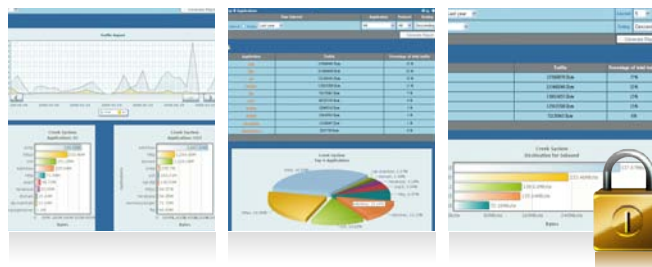
You can see who and what is using bandwidth resource in real time through the Monitoring mechanism. Logging and Reporting offers visibility into activity within organizations. It records activity on the network, and provides a number of analytical reports in a variety of angles for different needs. With the historical report and real-time information, Q-Balancer lets you accurately plan the bandwidth resources.

Centralized Management

Centralized Management lowers the cost of operation and management. Managing multiple devices from central office or Network Operation Center can be helpful for administrators.

Simplified Management

Q-Balancer incorporates full features such as WAN Load Balancing, QoS, Firewall, VPN, and Reporting in a box. By deploying Q-Balancer, you take almost full control of your network with a single box.



Technical Spec

WAN

- Static
- DHCP Client
- PPPoE
- PPTP
- L2TP
- USB 3G Modems Support
- IPv6 Support
- Bandwidth Quota

LAN

- Multiple Subnet
- IPv6 Support
- Wireless LAN Gateway
- DHCP Server
- DHCP Relay

Outbound Load Balancing

- Round-Robin
- Round-Robin by Weight
- Least Traffic
- Least Connection
- Least Response
- Connection-based
- Bandwidth
- Policy-based Redirect to Proxy
- Schedule
- Packet-based
- IP Host
- Grouped IP Hosts
- Service
- Grouped Services
- FQDN
- Grouped FQDN

Inbound Load Balancing

- Bottleneck
- Least Traffic
- Round-Robin by Weight
- Priority
- Failover
- Built-in DNS Server
- Support External DNS Server
- Multi-Domains
- Multi-Records

Global Server Load Balancing

- Failover
- By Country

VPN

- NAT Traversal
- Client-to-Site VPN Failover
- Site-to-Site VPN
- Failover
- Load Balancing
- Policy-based Routing
- Dynamic IP
- DHCP Relay
- Tunnel Encryption (DES, 3DES, AES)
- PPTP Server
- IPSec VPN

Bandwidth Management

- Individual
- Shared
- Max. and Min. Bandwidth
- Priority
- Policy-Based
- Schedule
- Link
- IP Host
- Grouped Hosts
- Service
- Grouped Services
- Application
- Custom Application
- Grouped Applications
- FQDN
- Grouped FQDN

Networking

- Mixture between IPv4/IPv6
- Multilink Traffic Compression
- Web Cache
- IEEE 802.1Q VLAN
- NAT and Server Mapping
- Static Route
- RIP V1/2 and OSPF
- DNS Server
- DNS Relay
- Dynamic DNS (DDNS)
- H.323 NAT Traversal

Security

- Stateful Firewall
- Applications Filtering
- Web Filtering
- DoS Prevention
- IP/MAC Binding
- Multiple DMZ

Logging and Reporting

- Event Logs
- Syslog Server Support
- FTP Server Support
- Historical Analysis
- Built-in Report System
- Scheduled Report by Email

Monitoring

- System
- Link Status
- Sessions Status
- Bandwidth Usage

Management

- Email Alert
- Local Administrator Database
- Multiple levels of administration
- Users' Action Log
- Web-based UI (HTTP/HTTPS)
- Command Line Interface (RS232, SSH)
- SNMP (v1, v2C, v3)
- Automated Configuration Backup
- Remote Firmware Upgrade
- NTP Server Support
- Built-in Diagnostic Tools
- System Auto Recovery



Hardware Platforms



LB400 Series



LB600 Series



LB3000 Series



LB5000 Series

Model Comparison

Models	LB410	LB415	LB420	LB622	LB625	LB630	LB635	LB3040	LB3080	LB3120	LB5150	LB5200	LB5300
Targeting Business	ROBO			Small Business				Mid - Size Business			Large Enterprise		
Throughput (Mbps)	100	150	200	220	250	300	350	400	800	1200	1500	2000	3000
WAN Links Support	15	15	15	15	27	27	27	52	52	52	52	52	52
Hardware													
Form Factor	Desktop	Desktop	Desktop	1U	1U	1U	1U	1U	1U	1U	2U	2U	2U
10/100/1000 Base-TX	4	4	4	6	6	6	6	6	6	6	6	6	6
Gigabit Fiber Ports (SFP)	X	X	X	X	X	X	X	X	X	X	4	4	4
Weight (Kgs)	2.2	2.2	2.2	7	7	7	7	9.8	9.8	9.8	21.6	21.6	21.6
Max. Power Consumption (Watt)	60	60	60	84	84	84	84	270	270	270	300	300	300
Redundant Power Supply	X	X	X	X	X	X	X	X	X	X			
Features													
Transparent Installation													
Load Balancing/Failover													
Inbound Load Balancing													
Link Bonding													
MPLS Redundancy													
Automated VPN Failover													
VPN Bonding													
Policy-based QoS													
Compression													
Web Proxy													
Web Filtering													
Firewall													
DoS Prevention													
Mixture between IPv4/IPv6													
Monitoring/Logging/Reporting													
Virtual Appliance	X	X	X	X	X	X	X						
Centralized Management	X	X	X	X	X	X	X						
User Defined Port													
High Availability													

