

Internet Reliability and Bandwidth Optimization with the Barracuda Link Balancer

Organizations today are faced with an increasing demand for cost-effective bandwidth and reliable Internet connectivity for day-to-day operations. Business critical applications, like ERP, CRM, or VoIP require uninterrupted, scalable Internet connections that are not solved by increasing bandwidth alone. The Barracuda Link Balancer combines active Internet link health checking and load balancing technology that provides an economical solution for organizations of all sizes to meet high bandwidth requirements while maintaining a high level of Internet reliability.

Link Monitoring and Failover

The Barracuda Link Balancer provides transparent switching and failover across multiple Internet links based on active monitoring of link health, availability of resources, and policy. Link balancing allows organizations to maintain the highest bandwidth possible while eliminating concerns about link availability, link contention, and oversubscription. The increased reliability allows for a reduction in both IT overhead and productivity losses due to Internet downtime. Further, organizations can replace expensive T1/T3 lines with multiple Internet links such as cable and xDSL from multiple Internet Service Providers.

In order to provide maximum reliability, the Barracuda Link Balancer uses multiple techniques to check for the health of Internet links. These techniques allow the Barracuda Link Balancer to detect link issues due to physical failures or configuration errors so traffic can be immediately rerouted to minimize disruption in connectivity. The Barracuda Link Balancer also offers real-time monitoring and system alerts over the availability and throughput of each WAN link. Using the simple graphical interface, network administrators can gain insights into their network traffic and budget resources as necessary.

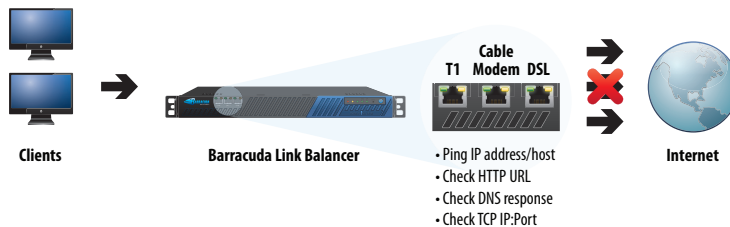


Figure 1. The Barracuda Link Balancer monitors Internet link health and directs traffic to available Internet links

Outbound Link Balancing

The Barracuda Link Balancer employs a variety of techniques to balance traffic across available links. By analyzing traffic load and throughput, the Barracuda Link Balancer prevents congestion or link overutilization. Moreover, the Barracuda Link Balancer enables organizations that maintain unused backup or passive Internet connections to actively employ their primary and backup Internet connections simultaneously to maximize throughput while intelligently managing resources.

The Barracuda Link Balancer handles traffic distribution across multiple WAN links using a combination of powerful algorithms such as weighted round robin or weighted least connections. The Barracuda Link Balancer also tracks IP addresses of each client (source) and server (destination) pair to provide high performance through persistent connections between the same pairs.



Figure 2. The Barracuda Link Balancer distributes traffic across multiple active Internet links

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Inbound Link Balancing

The Barracuda Link Balancer enables organizations to provide multiple paths to reach their host machines from the Internet. This happens through failover and load balancing on inbound traffic. For example, an organization hosting its corporate Web site can now utilize more than one Internet link to the Web server. The Barracuda Link Balancer automatically chooses the most appropriate link for clients based on availability and throughput.

The Barracuda Link Balancer provides inbound link balancing through authoritative DNS services. Inbound traffic to host machines can be balanced across multiple links without the overhead of using specialized routers, Border Gateway Protocol (BGP), or additional ISP support. Configuration is as simple as assigning each host a different Internet IP address for each Internet link. The Barracuda Link Balancer can then distribute inbound traffic across multiple Internet links to the host by returning the IP address of the most appropriate Internet link when responding to DNS queries.

Figure 3 illustrates a single domain www.acme.com, reachable over either of the two available DSL links.

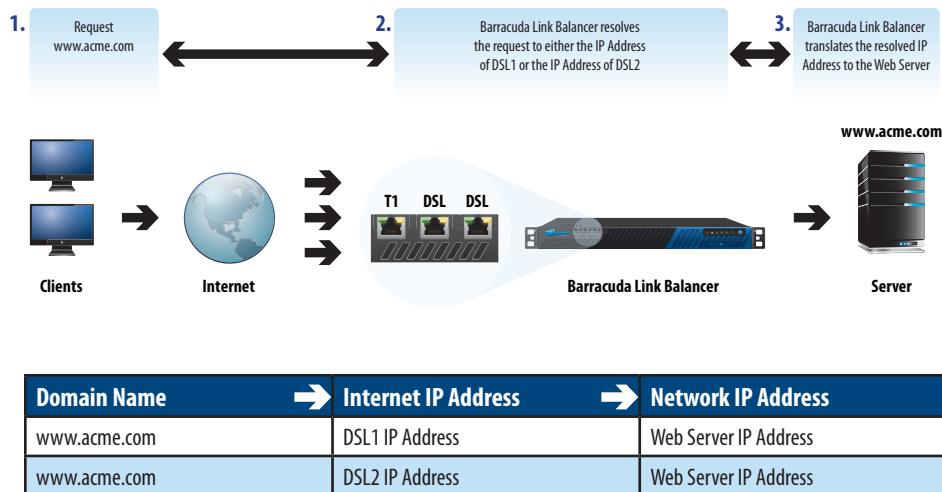


Figure 3. Barracuda Link Balancer directs inbound traffic across multiple links by selectively providing DNS responses specific to each Internet link

Quality of Service Management

Employees today use a variety of Web applications for both business and non-business needs. Using the Barracuda Link Balancer, administrators can regulate bandwidth usage based on application type, client, or link. Moreover, administrators can customize bandwidth policies to ensure that a higher priority is given to mission-critical applications while lower priority is given to other traffic like Web browsing.

The Barracuda Link Balancer includes bandwidth shaping and Quality of Service control to assign specific links and bandwidth priorities to built-in or user defined applications. Also, the Barracuda Link Balancer allows administrators to route client machines or requests to specific Internet links. For example, e-commerce and VoIP applications can be configured to use high bandwidth connections while employee Web browsing can be routed to low bandwidth connections.

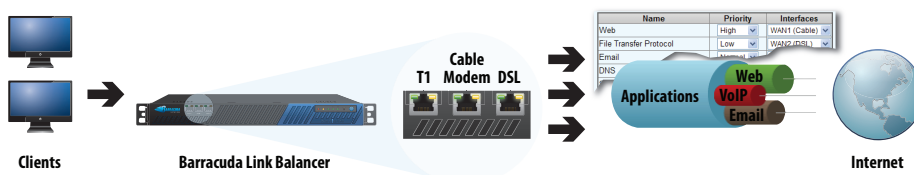


Figure 4. The Barracuda Link Balancer enables administrators to set application-specific priority and link balancing policy

Site-to-Site VPN

In today's global business environment, organizations constantly access resources across geographical boundaries. Documents, business planning systems, and data management across branch and central offices require secure and reliable Internet connections. A Virtual Private Network (VPN) provides an elegant solution but can be complex to implement and often requires specialized hardware or dedicated Internet links. Using the Barracuda Link Balancer, IPSec based VPN tunnels can be easily established between sites with link balancing and failover across multiple Internet links. Using 256 bit AES or 168 bit 3DES encryption, the Barracuda Link Balancer can establish highly secure VPN tunnels with any device that supports IPSec VPN tunnels. Also, administrators can control VPN traffic through the Quality of Service Management features to provide the required bandwidth for site-to-site traffic.

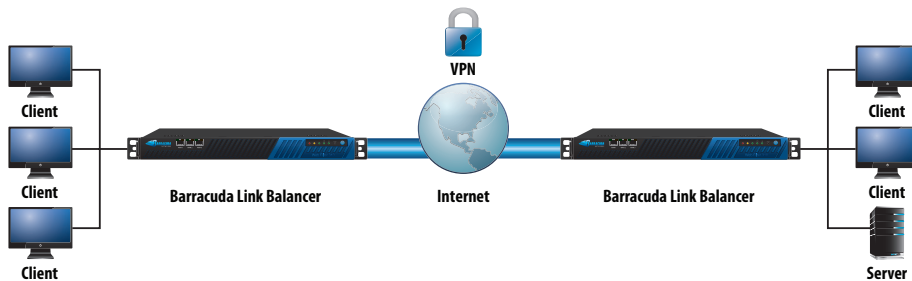


Figure 5. The Barracuda Link Balancer provides link failover for site-to-site IPSec VPN traffic

Through its powerful feature set and simplicity of use at an affordable price, the Barracuda Link Balancer provides an easy and effective way for organizations to improve both the reliability and performance of their Internet infrastructure.

For questions about the Barracuda Link Balancer, please visit <http://www.barracuda.com/link> or call Barracuda Networks for a free 30-day evaluation at 1-888-ANTI-SPAM or +1 408-342-5400. For more information on our other security and productivity solutions, please visit <http://www.barracuda.com/products>.

About Barracuda Networks Inc.

Barracuda Networks Inc. combines premise-based gateways and software, cloud services, and sophisticated remote support to deliver comprehensive security, networking and storage solutions. The company's expansive product portfolio includes offerings for protection against email, Web and IM threats as well as products that improve application delivery and network access, message archiving, backup and data protection.

Coca-Cola, FedEx, Harvard University, IBM, L'Oreal, and Europcar are among the more than 100,000 organizations protecting their IT infrastructures with Barracuda Networks' range of affordable, easy-to-deploy and manage solutions. Barracuda Networks is privately held with its International headquarters in Campbell, Calif. For more information, please visit www.barracudanetworks.com.



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