

MAXIMIZE INTERNET & UPTIME PERFORMANCE

The Business Case for a Link Balancing Solution

Over the past few years, dependence on technology teams and the network based applications they support have grown exponentially. The increase in federal and state regulatory pressure on the healthcare industry to adopt electronic health records (EHR) by the 2015 deadline has triggered many organizations to consider cloud-based or hosted offerings to help offset the cost of compliance while preserving their competitive edge. Some examples of these bandwidth hungry applications might be patient management systems, medical billing systems, email environments, remote medical systems, extranets and remote disaster recovery services.

When an outage occurs, the result of such downtime could simply be a loss of productivity; however, given the litigious nature of the healthcare industry, recent amendments to the FRCP, HIPAA, HITECH, as well as aforementioned state and federal regulations, the price tag associated with downtime can be measured in tens of thousands of dollars.

This document highlights the importance of integrating a layer of redundancy and performance enhancements to mitigate downtime, potential liabilities and the ensuing loss of revenue and productivity.

Elfiq's award winning line-up of link balancers is well positioned to enable healthcare organizations of all sizes to reduce the cost and complexity associated with maximizing uptime while drastically improving the performance of their mission critical network based applications.



Elfiq Link Balancing 101

Deployed between the firewall and routers, a link balancer is a network appliance that enables multiple ISPs, private wide area network (WAN) links and data circuits to operate in a seamless, concurrent fashion and in accordance with predetermined organizational policies.



Maximizing Internet Uptime

Increasing the number of ISP links and further diversifying link technologies in conjunction with an Elfiq Link Balancer enables any organization to maximize uptime to 99.99%. When a given carrier link fails, whether scheduled or otherwise, all traffic is re-routed to the remaining links within fractions of a second. It is important to note that even if the link balancer loses power, traffic is rapidly diverted to the primary carrier link allowing for a seamless end user experience. As connectivity no longer depends on a single link and ISP, a commonly overlooked single point of failure is averted.

Proactive Bandwidth Management

Link balancers are able to direct traffic types to certain links based on availability and corporate strategy. For example, symmetrical links such as T1s are better suited to upstream applications, file transfers, online course delivery or remote patient diagnostics, while a cable modem is a preferred type of link for accessing Web based databases given that it provides such rapid download speeds.

Link balancers also enable quality of service (QoS) to promote or limit traffic based on predetermined criteria. Key applications (VPNs, VoIP) will consistently have the bandwidth they require to function optimally; whereas, less critical traffic is permitted though proactively limited in accordance with organizational preferences.

Return on Investment

There are many facets to consider when evaluating the total cost of ownership (TCO) associated with a link balancing solution. Beyond the immediate savings gained by using lower cost, more appropriate ISP links, it is also important to take into consideration the current hard costs, network latency, productivity loss, corrective action, financial penalties, lack of communication with remote sites, corporate image loss and legal ramifications caused as a result of network downtime.

Using a high performing redundant link balancer will achieve new levels of network-based application availability, interoperability, resilience, failover and granularity of control.

The foundation for a Smarter Network always starts with an Elfiq Link Balancer.

"Having experienced service outages on our Internet connection in the past, we added a second line from another provider using a different technology. The Elfiq Link LB has made our Internet connection extremely reliable so we can continue operations without fear of an interruption."

James Dever, IS Manager Lapointe Rosenstein LLP

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Product Highlights

Highly Scalable Architecture

Entry level or enterprise class, large numbers of ISP carrier links and impressive amounts of bandwidth become available. Additional links can be deployed as demand increases in a plug and play fashion without disrupting normal network traffic.

Wide Range of Supported Links

Elfiq fully supports a vast range of links, and it is highly recommended to diversify link providers to ensure maximum levels of uptime. Some of the more common links include DSL, T1s, DS3s, cable modems, fiber, 3G and fixed wireless technologies.

Ease of Deployment

The Elfiq link balancer is typically positioned between the routers and the firewall. Elfiq's Professional Services or Elfiq partners will ensure proper configuration and deployment requiring minimal assistance from customer IT staff. It is important to note that the solution requires no changes to on site networking equipment including firewalls and routers.

Seamless Interoperability

Communication between satellite medical centers, rural offices, business associates and partners is essential for any organization. When these lines of communication are severed, business operations grind to a halt until the problem can be identified and corrected. In the case of point to point applications such as VPNs and VoIP, Elfiq offers the SitePathMTPX feature, which enables bandwidth virtualization between multiple points.

By using an Elfiq unit at each end, new levels of performance and resilience are achieved using all links on each end concurrently for the applications. Should a link fail, the SitePathMTPX will simply redirect the traffic between both endpoints without affecting or resetting any VPN tunnels or traffic.