

FatPipe's MPVPN

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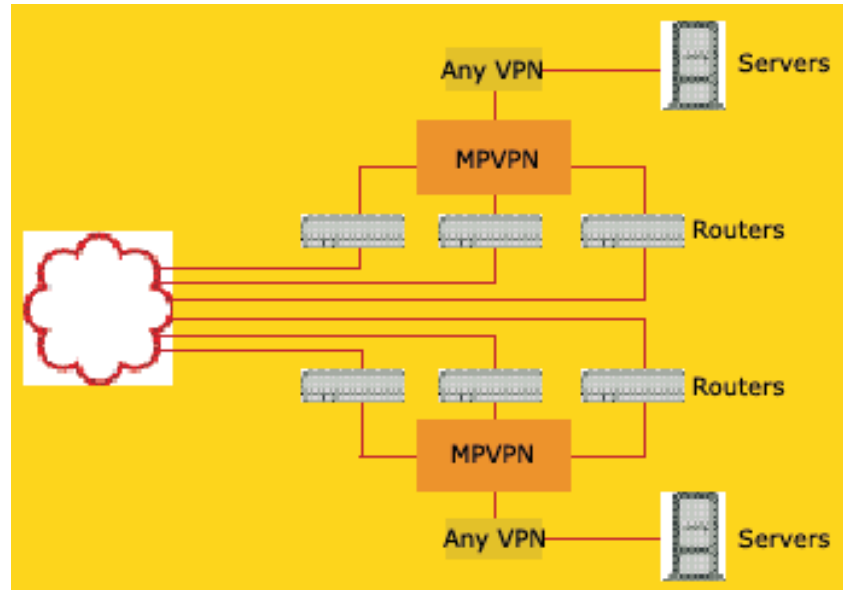
by Doug Allen, 12/04/2002, 8:19 PM ET

Post September 11, 2001, interest in multihoming and route control traffic management has grown, while IP VPN adoption continues to lag. Everyone agrees that IP VPNs are the wave of the future, but fears of all kinds of attacks have increased customer skepticism in VPN security, manageability, and QoS over the Internet. But with the current provider meltdown, perhaps the most substantial concern is availability. What happens to a customer's traffic when the next WorldCom outage hits?

FatPipe Networks (www.fatpipeinc.com), a Salt Lake City-based start-up, uses router clustering to offset the Internet's checkered "best effort" reputation. An extension of existing clustering principles, router clustering results from combining multiple router lines that make up a company's subnets into one onsite network device, which then forwards the aggregated traffic to the Internet according to specific transport policies.

In FatPipe's case, that onsite network device is the MultiPath VPN (MPVPN). MPVPN can bond up to three router lines, and then send out that traffic across three outgoing WAN links, regardless of access protocol, through the company's Redundant Array of Independent Lines (RAIL) technology, which bonds these lines to form a "virtual fatpipe."

And here's the kicker: Bi-directional VPN traffic can be run over multiple WAN paths for redundancy, as in a typical multihoming solution. Furthermore, individual traffic flows-not just aggregate traffic-can be split over 2 or 3 lines or ISPs



Bondage. MPVPN 3.0 bonds multiple router lines for multihomed IP delivery.

and reassembled at the other end, such as at a remote or branch office. No Border Gateway Protocol (BGP) programming or upgrades at the ISP POP is required: Implementation is entirely in the hands of the customer, not the provider.

Catering specifically to VPNs as opposed to ordinary data traffic, MPVPN understands how VPNs are constructed and enhances key security and QoS elements. For instance, MPVPN does the load balancing between outgoing connections, ensuring that WAN links are maximized to reduce congestion (thus increasing uptime), and also stabilizing bandwidth consumption (more predictable bandwidth use means less chance of spending money on additional capacity). According to FatPipe, these measures ensure

that your VPN will stay up regardless of router, ISP line, or backbone failures over any path.

This integrated functionality paves the way for one of MPVPN's key features: the proprietary MPSec, which distributes IP VPN packets over up to three different links. With MPSec, redundancy is increased by three times, and security by a factor of nine. If a hacker breaks into a flow on one line, he or she would only be getting one-third of that VPN flow, which would still be encrypted with either standard IPsec or MPSec's own encryption.

MPVPN's latest version, 3.0, adds a "Fastest Route" load balancing algorithm for faster routing, as well as dynamic load balancing between MPVPN peers, which determines the packet ratio of each line to a given destination. Policy routing allows administrators to

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choose the order of port priority (port reordering) for outbound traffic in sequential or non-sequential order, or assign each port a given application for more predictable QoS. An enhanced Reverse Mapping feature offers additional redundancy for remote VPN clients using IPSec, Point-to-Point Tunneling Protocol (PPTP), and other custom encryption algorithms to ensure connectivity even when a WAN line failure occurs on a remote network running MPVPN.

The MPVPN line has proved itself steadily over the last few years, winning a majority of the company's 1,000 or so customers, which include small-to-medium-sized law firms, financial firms such as Tucker Anthony, educational institutions such as the Juilliard School in New York, as well as sports teams such as the NFL's Jacksonville Jaguars and the Green Bay Packers.

"FatPipe's solution is kind of unique and interesting," said William Terrill, an analyst at the Burton Group (www.tbg.com). "I would generally view this as a good solution for small-to-mid-sized organizations in most cases. They do top out at about 155Mbps/sec, which means that without multiple units and load balancing between the units, it wouldn't handle the total needs of a very large corporation."

"However," Terrill notes, "As a method to provide some extra VPN security to remote offices and sites, while offering the capability to utilize all of the available ISP/WAN links, it would fit into almost any infrastructure. If a site must have access to the corporate

headquarters, for example, then this provides a cost-effective way to guarantee that connectivity and offers balancing of the overall load between those links."

MPVPN 3.0 is currently available in three different flavors: a 2Mbps/sec unit at \$6,500; 50Mbps/sec for \$14,500; and a high-end 155Mbps/sec unit at \$19,500. The company reports that most customers go with the 50Mbps/sec unit for their main offices, and use the 2Mbps/sec version for their branch offices.