



## SECURITY OR PERFORMANCE: DEAL OR NO DEAL?

FOR MOST NETWORK MANAGERS SECURITY BREACHES AND NETWORK PERFORMANCE ARE TOP PRIORITIES - BUT ARE THEY MUTUALLY EXCLUSIVE? PAUL JUDD OF FORTINET UK COMMENTS

company millions of pounds (Source: TABB Group). For any organisation, the smallest hint of latency can disrupt communications between the business and its clients, impeding business decision making, and frustrating users.

Of course, latency increases over distance. Even under perfect conditions, a 1 KB packet takes 33 milliseconds to travel from Tokyo to New York. Various external factors mean that the reality is around six times worse, and you can double that to accurately measure the round trip. This really comes in to play with the rising adoption of Security-as-a-Service. If network performance is a key concern, then you'll need to consider exactly where services are to be located. Tokyo, for example, may not be your best bet. Those that see performance as paramount will likely pay extra for optimised services, or take the latency challenge on in-house.

As-a-service, or in-house, what does all this latency really mean for security? Most stand-alone firewalls start dropping packets under modest amounts of traffic (3 Mbps). Under heavy multicast loads (around 10 Mbps), firewalls can completely freeze (Source: Firewall Latency Optimisation Workshop-FLOW 2009). Then go and add your other security functions on top and, one by one, you can add intimidating bundles of performance-sapping latency, to frustrate and disrupt.

### TACKLING SECURITY AND PERFORMANCE

Good security and acceptable performance can co-exist, it just needs to be planned and managed. These points will help:

- Deploy fewer network elements -

consolidate functionality, decreasing the number of appliances data travels through; it will reduce latency

- Explore hardware accelerated security appliances - high processing power will increase the speed of data checking
- Implement sophisticated analytics - to continually map and monitor all sources of latency
- Explore WAN optimisation technologies as part of your security solutions
- Minimise IP packet disassembly/reassembly - avoid numerous point solutions involving disparate source codes to optimise packet inspection
- Employ better QoS (quality of service) - prioritise business applications and protect them from latency with dedicated network capacity
- Future proof scalability to the next order of magnitude - if 1 Gbps is in use, 10Gbps will be required in the near future.

As you face this conundrum, cybercriminals enjoy the bandwidth increase driven by real-time and collaborative applications, finding new ways to penetrate the enterprise. These threats themselves aren't just becoming more present; they are becoming more complex, and more blended. Because of this, network security cannot limit itself to IP packet inspection anymore and requires complete content protection.

These threats can easily slip through all of your individual security nets. Instead, they require a blended response, or one tightly woven net. As such, interrogating traffic in a single 360 degree pass will be the only way to avoid the latency caused by multiple device handoffs, and still tighten security. Why not have your cake and eat it? **NC**

Network managers are waking up to the fact that the firewall is the biggest culprit when it comes to network latency. It stands to reason; all traffic has to be 'stopped' and thoroughly verified to ensure the safety of the corporate network. Recent research from Fortinet partners found that the firewall was responsible for 65% of latency in some industries. But firewalls are only one element of a security arsenal. Add anti-virus, IPS, traffic shaping and anti-spam, and the latency will increase.

We know that skimping on security is not a risk that any level-headed board-member will consider. Similarly, they will be quick to judge if technology impedes business performance. So, whilst cutting back on security is not an option, neither is adversely impacting network performance.

### MEASURING LATENCY AND ITS IMPACT

Do you really mind a few milliseconds or even microseconds of latency? To put it into perspective, 300 milliseconds is the time it takes for the blink of a human eye, yet just 10 milliseconds of latency could lose a financial