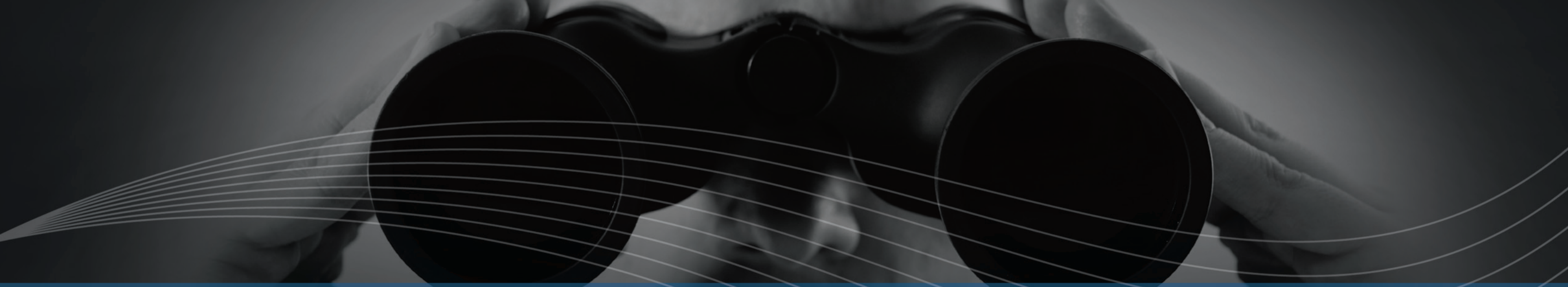

SonicWALL Business Insight

VIRTUALIZATION

Enabling Server Virtualization with Enterprise Security Solutions

The Server Virtualization Scenario

Enterprises worldwide are stepping up the rate at which they are employing server virtualization. As reported by Network World, Gartner expects the share of server workloads being run on virtualized servers to grow from 18 percent in 2009 to 28 percent in 2010, and reach nearly half by 2012.[1] This trend is not surprising given the considerable benefits this transformative technology has to offer.

To begin with, the ability to run multiple applications and associated operating systems – also known as workloads – on a single physical device can lead to substantial cost savings. Breaking the "one application, one server" model allows significantly greater levels of utilization to be achieved, thereby slashing the number of servers that enterprises need to purchase, deploy, operate, maintain, power, cool, and find space for.

The decoupling of workloads from underlying server hardware also delivers portability, a feature that makes it considerably easier for CIOs to achieve critical objectives pertaining to high availability, business continuity, and adaptability. By taking advantage of complementary management tools, enterprises can provision additional instances of a workload on demand, re-purpose server hardware as needed, and progressively unlock other gains associated with having a fully dynamic center. Better network and end-user performance can also be achieved in scenarios where applications that communicate with each other are brought together on the same physical system.

SonicWALL for Server Virtualization and Data Center Optimization

Accruing the many benefits of server virtualization, however, is not simply a matter of implementing related products from Citrix®, Microsoft®, VMware®, or any other vendor with an appropriate offering. In particular, IT departments must also be in a position to address several significant security challenges applicable to virtualized computing environments. Chief among these are the risks introduced by hypervisors, virtual networks, and workload migration capabilities. Fortunately, enterprise security solutions from SonicWALL® provide today's businesses with a highly effective and affordable means to address these concerns.

The Hypervisor Security Challenge

As a piece of software, the hypervisor – the core piece of technology that enables server virtualization – is a source of vulnerabilities that can be exploited and, therefore, requires protection. Its importance is elevated in this regard, however, for two reasons: not only is it a conduit through which all of the applications riding on top can be compromised, but it is also becoming a bigger target for hackers as virtualization grows in popularity.

Placing a SonicWALL E-Class Network Security Appliance (NSA) in front of the organization's virtual server farms is an ideal solution in this case. In contrast to narrowly focused stateful inspection firewalls, the E-Class NSA provides robust protection against the broadest spectrum of hypervisor and virtual machine – focused threats by integrating real-time gateway anti-virus, anti-spyware and intrusion prevention.

In addition, its multi-core architecture and high-speed Reassembly-Free Deep Packet Inspection™ engine ensures a high degree of scalability and exceptional performance, even for today's real-time applications and other complex workloads.

The Virtual Network Security Challenge

Virtual switching capabilities are an integral part of leading server virtualization solutions that allow administrators to re-create portions of their network within a single physical host. The problem this introduces, however, is how to enforce security policies on the traffic flowing between different virtual machines on the same server.

[1] "Gartner: Server virtualization now at 18% of server workload" dated October 20, 2009; http://www.networkworld.com/news/2009/102009-gartner-server-virtualization.html

SONICWALL®

PROTECTION AT THE SPEED OF BUSINESS™

Once again, SonicWALL E-Class NSA appliances offer enterprises a quick and straightforward solution – one that may even save them the effort of having to re-certify associated infrastructure for compliance purposes. Specifically, a "Clean VM Networking" arrangement can be established by routing all inter-VM communications via a strategically located E-Class NSA that enforces all of the organization's access control policies and thoroughly scrubs associated traffic for embedded threats.

The Workload Migration Security Challenge

Another capability common to most server virtualization solutions is live migration, a helpful feature that allows dynamic re-location of workloads from one physical server to another – for instance, so that scheduled maintenance can be performed without interrupting operations. The challenge this presents is that conventional security devices are unable to properly protect associated workloads – at least not without operator intervention – due to their dependence on network-layer attributes for enforcing policies.

IT organizations that implement SonicWALL E-Class NSA appliances, however, have nothing to worry about. This is because the embedded Application Intelligence is not dependent on network-centric details such as IP address, directional orientation, and other characteristics of the physical or logical environment. The SonicWALL Application Intelligence Service is equally capable of enforcing policies and inspecting communications traffic for threats based on higher-layer attributes, such as the specific applications and services being used, who is using them, and when. This gives E-Class NSA appliances an unmatched level of granularity and resilience in terms of being able to account for and fully protect dynamically shifting workloads.

Bottom Line

E-Class Network Security Appliances pave the way for today's enterprises to fully realize the benefits of server virtualization and resulting dynamic datacenters by providing IT departments with a highly effective and affordable solution to a handful of related security challenges.

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