

Solution Overview

CITRIX AND TREND MICRO INTELLIGENT, SCALABLE WEB SECURITY



Application-Level Control,
Load Balancing,
High-Traffic Capacity

CITRIX[®]

 **TREND**
MICRO™

Securing Your Journey
to the Cloud

Table of Contents

The Challenge	3
The Solution: Citrix NetScaler and Trend Micro InterScan Web Security	4
A Field-Proven Solution: Government Agency Use Case	6
Opportunities – Other Use Cases	8
Summary – Lessons Learned	9
For More Information	10

The Challenge

Web traffic is exploding due to consumerization, expanding use of video, and the emergence of cloud computing services. IT departments are being asked to figure out what web activities introduce vulnerabilities, and how to protect resources such that employees and users can safely take advantage of the latest technology and services.

Businesses, government agencies, educators, and other enterprise organizations understand the ramifications of today's Internet threats. Almost daily, the media reports more corporate victims of hacking, phishing, and the latest cybercrime attacks.

To defend against these threats, companies and organizations are looking for web and cloud security solutions that are cost-effective, prove their diligence, and keep them out of the news. However, security products – especially those that require continuous scanning of web traffic – raise concerns about slowing down the user experience, and therefore lowering employee productivity.

As a result, performance has become the critical requirement for web and cloud security solutions. As the economy demands that everyone do more with fewer resources, organizations also need a solution that is easy to deploy and simple to operate while remaining invisible to applications and processes that have become extremely web-centric.

Management also wants a better view over valuable network resources, and they want controls that can block threats that would otherwise rapidly consume bandwidth and bring business to a crawl.

The Solution: Citrix NetScaler and Trend Micro InterScan Web Security

Citrix and Trend Micro account teams can now offer enterprises an intelligent, scalable solution that overcomes the challenges posed by web threats. Trend Micro™ InterScan™ Web Security lets businesses scan traffic at the corporate network gateway, quickly identifying risky web behaviors before they can lead to vulnerability-based attacks. Citrix® NetScaler® Application Delivery Controller, in front of multiple InterScan Web Security virtual appliances, provides high-speed load balancing and a variety of application and network acceleration features.

Since both products are available as virtual appliances, the joint solution can be easily and rapidly scaled to avoid performance impact without requiring the purchase of additional physical devices or servers. Defenses remain strong without impeding user experiences, even in environments with extremely high volumes of traffic.

In the case of the InterScan Web Security, a single license lets customers deploy unlimited instances. This also facilitates affordable scaling to keep up with traffic. (See Figure 1.)

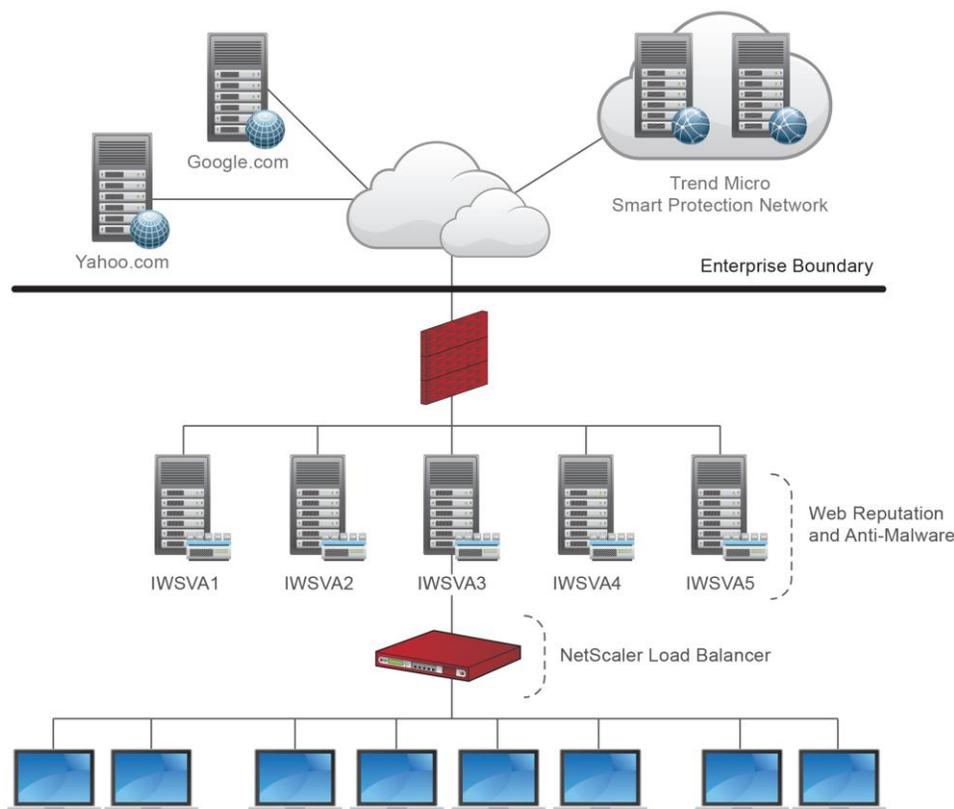


Figure 1. NetScaler deployment as a forward-proxy load-balancer of outbound traffic that is being scanned by multiple InterScan Web Security virtual appliance instances.

InterScan Web Security

InterScan Web Security is designed to dynamically protect against traditional and emerging web threats at the Internet gateway. Traffic is scanned in real time for phishing, viruses, spyware, and other malware. Flexible URL and active code filtering, combined with in-the-cloud web reputation and correlated threat data, block access to malicious sites, stop drive-by downloads, and enable object-level blocking within web pages.

The newest version of InterScan Web Security provides greatly enhanced application visibility and control. Organizations can allow employees to safely employ the web and cloud-based services and applications, while enforcing acceptable use policies to mitigate risks and conserve resources.

The simplicity of the virtual appliance and the targeted protection at the gateway make InterScan Web Security an effective, cost-efficient solution. Deployed within popular virtualized server environments, InterScan Web Security offers highly available protection. Businesses can close windows of vulnerability that would otherwise expose them to risk in the case of any hardware failure.

NetScaler

NetScaler offers advanced application delivery functionality, including load balancing, cache redirection, and consolidated logging services. When configured in front of multiple InterScan Web Security virtual appliances, NetScaler gives customers the ability to scale their web gateway security and efficiently balance traffic across the multiple InterScan Web Security instances to minimize scanning times. Even during times of heavy Internet use, users can enjoy consistent web experiences with the confidence that they have in-depth protection.

NetScaler's capabilities also provide increased intelligence for improving control of traffic flow and customizing security policies at the application level. Security policies and scanning can be adjusted based on application or category, the user, and where the traffic originates.

Customers can combine InterScan Web Security (hardware or virtual appliance) with any NetScaler device, with all NetScalers offering full feature parity. The NetScaler virtual appliance, however, allows the most flexible, scalable architecture that can grow with traffic and application needs. Expansion does not require any additional hardware costs. The virtual appliance also promotes consolidation of multiple devices and higher server utilization rates, for better overall return on investment.

A Field-Proven Solution: Government Agency Use Case

This customer deployment of the joint Citrix and Trend Micro solution underscores both the simplicity and the far-reaching benefits. (See Figure 2.)

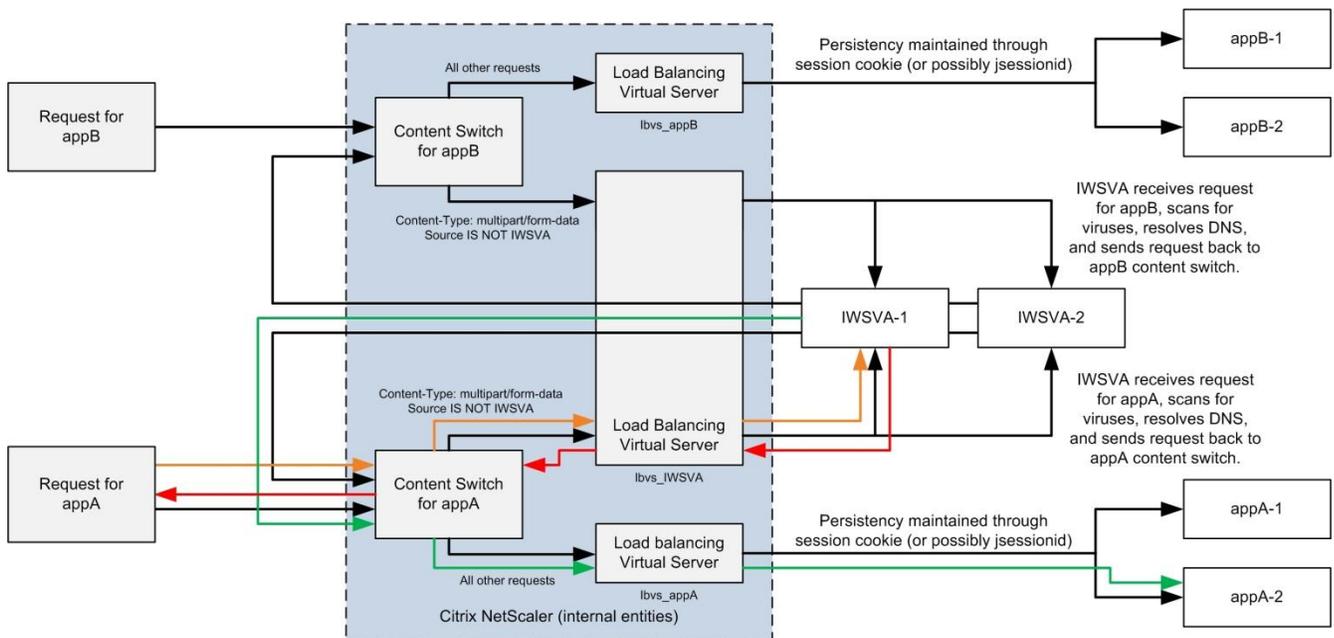


Figure 2. NetScaler balances traffic across two InterScan Web Security virtual appliances, to maximize high availability and to restrict security policy enforcement to targeted applications.

The Customer

The deployment of the joint solution was carried out for a large local government agency, with approximately 35,000 in-house endpoints. The agency was already a Trend Micro customer for endpoint security. InterScan Web Security had previously been licensed for gateway protection but not yet deployed.

The Challenge

When the Citrix account manager was helping the customer introduce an application load balancing solution, he brought in Trend Micro to help address the customer’s related web security requirements. For this particular application, the agency had no control over the end users of their application. The end-user systems might have security software, or might not. If they have it, it might not be up to date. Since the end users will be uploading large files to the agency’s servers, the application represented a major security risk and called for additional security measures.

The Solution

To scan the inbound traffic, Trend Micro recommended that the agency take advantage of the capabilities of the InterScan Web Security to build in robust application protection behind an application-aware NetScaler load balancer.

As shown in the diagram, two virtual InterScan Web Security instances were configured behind a NetScaler virtual appliance. By combining InterScan Web Security with NetScaler load balancing, the agency gains auto-failover and also achieves the performance benefits of parallel scanning whenever multiple uploads are invoked simultaneously.

The Results

Using NetScaler allows the agency to apply specific in-depth file scanning to the traffic associated with this particular application. Any other incoming web traffic is handled by various other existing endpoint and gateway security policies and solutions.

The end results include a very satisfied customer, since the virtual appliances provide a very cost-effective solution. No new hardware was required to introduce traffic scanning as well as the load balancing that ensures performance and application-specific security.

The solution intelligently analyzes the complete application stack, up through layer 7, for maximum protection and fine-grained control. Today, the joint Citrix and Trend Micro solution analyzes incoming traffic, identifies traffic relating to this particular application, and determines if that traffic includes a file upload that requires scanning by InterScan Web Security. NetScaler manages this traffic analysis and routing, and also efficiently balances requests across the multiple InterScan Web Security instances.

The Future

As application traffic increases or the user base expands, the agency can easily add additional InterScan Web Security virtual instances without increasing the cost of the solution. The agency fully appreciates the simplicity of the solution, and can now remain focused on the delivery of high-quality services, rather than on security issues.

Opportunities – Other Use Cases

The previously described use case demonstrates that the Citrix and Trend Micro solution increases a customer's ability to control traffic and apply security flexibly based on application-level criteria.

The combination of load balancing, layer 7 intelligence, and in-depth traffic scanning and threat blocking that is possible with the joint Citrix and Trend Micro solution are ideal for any customer dealing with:

- **High volumes of Internet traffic.** Where a single InterScan Web Security device might slow the user experiences, customers can easily scale performance with multiple instances of the virtual appliance.
- **Stringent performance requirements.** NetScaler provides efficient, high-performance load balancing and caching for faster response times, as well as TCP connection multiplexing to improve proxy performance. AppExpert policy also allows customers to optimize the redirection to control traffic to InterScan Web Security. To eliminate common worries about performance impact from security, this solution boosts security while reducing the associated delays.
- **Outside partners.** Doing business over the Internet puts organizations in a position of accepting traffic from users and endpoints with unknown security. Increasing gateway security minimizes these risks, and load balancing allows protection to scale as traffic increases.
- **Cloud services or consumer applications.** The increasing volumes of traffic from social networking sites and smart devices are straining traditional perimeter security solutions. Citrix and Trend Micro help organizations introduce scalable security architectures.
- **Virtualized data centers.** The affordability of the virtual appliances, including no-cost scalability, and the ease of management make the Citrix and Trend Micro solution an excellent security boost for any security-conscious, Internet active organization.

Summary – Lessons Learned

The established partnership between Citrix and Trend Micro continues to give customers of both companies solutions that are well suited to today's dynamic data centers, networks, and business models. The recent deployment of this intelligent, scalable web security solution underscores the alignment of two industry leaders, and builds on field-gained experiences from both customer support organizations.

InterScan Web Security offers unmatched, in-depth protection against current Internet threats. The Trend Micro real-time anti-malware defenses and in-the-cloud threat reputation complement the Citrix application-level control and intelligence. Combined, the two products also give network managers and security architects a host of tools for gaining visibility over traffic flows, resource utilization, and threats.

In summary, the capabilities of the joint solution directly address high-priority enterprise needs. Additionally, the solution increases the return on investment for virtualized servers, for load balancing solutions, and for gateway security by making it possible to leverage existing licenses of the virtual appliance versions of the products. Citrix and Trend Micro, with the intelligent, scalable web security solution, bring to market an extremely high-value solution.

For More Information

The InterScan Web Security and NetScaler solution are easy to deploy, requiring no programmatic configuration. By duplicating the proven use case NetScaler settings (involving just a few lines of configuration details), installation can be rapidly accomplished.

For more information about the joint solution, please visit:

http://trendedge.trendmicro.com/pr/tm/te/document/IWSVA_3_1_and_Citrix_NetScaler_TrendEdge_090226.pdf

To learn more about InterScan Web Security and download a free trial version, please visit:

<http://us.trendmicro.com/us/products/enterprise/inter-scan-web-security-virtual-appliance/>

To learn more about NetScaler or to download a free trial version of NetScaler, please visit:

<http://www.citrix.com/English/ps2/products/subfeature.asp?contentID=2300454>

About Trend Micro

Trend Micro Incorporated (TYO: 4704; TSE: 4704), a global cloud security leader, creates a world safe for exchanging digital information with its Internet content security and threat management solutions for businesses and consumers. A pioneer in server security with over 20 years' experience, we deliver top-ranked client, server, and cloud-based security that fits our customers' and partners' needs, stops new threats faster, and protects data in physical, virtualized, and cloud environments.

Powered by the Trend Micro Smart Protection Network cloud computing security infrastructure, our industry-leading cloud-computing security technology, products, and services stop threats where they emerge, on the Internet, and are supported by 1,000+ threat intelligence experts around the globe.

Additional information about Trend Micro Incorporated and the products and services is available at www.trendmicro.com.



Securing Your Journey
to the Cloud

