Maximize Your Return on Investment for Virtualization and Cloud Computing

Increase Performance and Cost Savings with Platform-aware Security

As you look to virtualization and cloud computing for more flexibility and cost savings, you'll need security that helps you maximize those benefits. Ideally, you'll have a solid security foundation for all aspects of this journey—***server virtualization, virtual desktop infrastructure (VDI), and private and public clouds.***

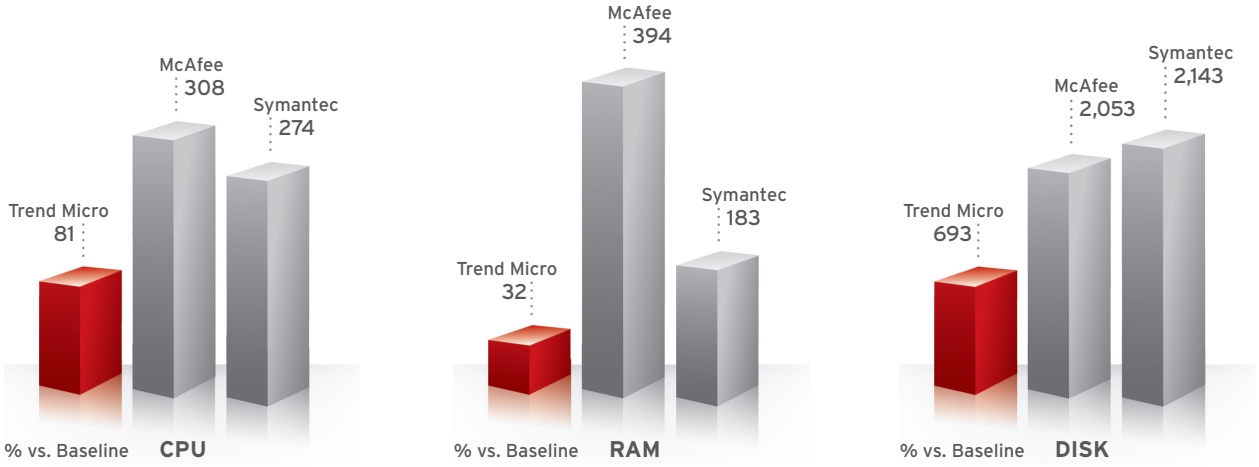
Major threats are the same across platforms—data-stealing malware, web threats, viruses, and more. So you may have been tempted to extend your conventional physical server security to virtual and cloud environments. But this isn't a good idea. It won't address unique infrastructure concerns, such as antivirus storms and inter-virtual machine attacks in virtual environments. And it will likely leave you with lower than expected virtual machine densities. However, with integrated security designed for virtual servers, VDI, and the cloud, you can remain secure without sacrificing performance or management, ultimately maximizing your return on investment (ROI).

Trend Micro:
Higher ROI with better virtual machine densities
Trend Micro supports 40-60% more server virtual machines per host than McAfee or Symantec

Symantec and McAfee:
Performance degradation and resource consumption
Symantec and McAfee consume 3-12 times more resources in scheduled scans

Virtualization-Aware Security Maintains Performance and Productivity

Performance can impact your bottom line. In independent tests, **Tolly Enterprises** compared the performance of Trend Micro, McAfee, and Symantec antivirus solutions in a virtual environment. Each solution conducted a full on-demand scan of 25 virtual machines. Trend Micro automatically ran only one scan at a time because it is designed for a virtual environment running shared resources. The McAfee and Symantec products initiated a simultaneous scan of the 25 virtual machines and significantly degraded performance.



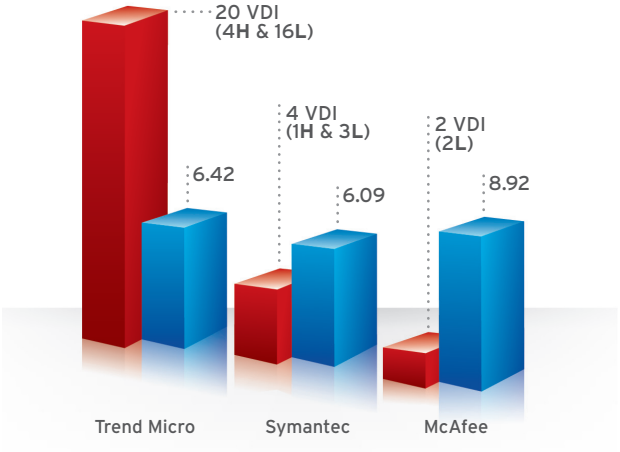
Source: Tolly Enterprises Test Report, Trend Micro Deep Security vs. McAfee and Symantec, February 2011.

Products that are not virtualization-aware, like Symantec and McAfee, suggest the use of randomization or grouping to avoid resource contention. However, randomization doesn't help to avoid times of high system usage and requires that a long period of time be reserved for the full scan cycle. Grouping doesn't allow for the mobile nature of virtualization, requiring reconfiguration when virtual machines are migrated or cloned. Virtualization-aware technology is required to minimize resource usage and increase virtual machine densities.

VDI-aware Endpoint Security Provides Higher Virtual Machine Densities

Higher virtual machine density means lower costs. **Indusface Consulting** conducted independent performance evaluations of Trend Micro, Symantec, and McAfee antivirus products in a VDI environment. For this test, the infrastructure was designed to support 20 virtual desktop images using the sizing guidelines suggested by VMware (the actual number of VDI instances a virtual server can support varies based on hardware configurations and VDI resource usage).

Number of VDI Images Supported at Constant IOPS*



ROI for 1000 VDI Images

Trend Micro vs. Traditional Antivirus

- Fewer servers used = 32**
- CAPEX saving per server = $16,515***
- Power, Cooling, & Rackspace 3-year savings = $4,239***

Total 3-year savings = $664,128

For a customized ROI result, visit www.trendmicro.com/VDI-ROI

* *Source: Indusface Consulting, Endpoint Security Solutions: VDI Performance Analysis Report, June 2010*

** *Based on a conservative savings estimate:*
1. VDI ratio from Indusface report (20 DVMs per server vs. 4 per server = 1/5)
2. 128 DVMs baseline on servers with a 2 Quad-Core processor (avg. ~64)

*** *Savings estimates from VMware TCO Calculator*

Number of VDI's
IOPS (in MB/S)
H Heavy user
L Light user

Trend Micro endpoint security preserved performance, maintaining the same VDI consolidation ratio as the baseline without antivirus scanning. Symantec and McAfee both significantly reduced VDI consolidation ratios.

Better Protection Reduces Security Costs

Performance alone is not enough. To maximize ROI, security solutions must provide effective data protection to avoid costly remediation. When compared to other industry-leading antivirus solutions, Trend Micro is repeatedly proven to be the most effective solution in independent tests conducted by AV-Test.org.

Monthly antivirus tests covered enterprise endpoint security solutions by Trend Micro, Microsoft, McAfee, Sophos, and Symantec. In one year, from June 2010 to May 2011, Trend Micro consistently tested as the most effective solution with an average antivirus effectiveness of 93 percent. The next highest was Microsoft with an average of only 77 percent, then Sophos at 74 percent, Symantec at 66.5 percent, and McAfee at 66 percent.

Integrated Security for Virtualization and the Cloud

These independent performance and security tests show that Trend Micro outperforms other vendors for virtualization and cloud antivirus security. But Trend Micro also goes beyond just antivirus and provides advanced, integrated protection for physical, virtual, and cloud environments with intrusion detection and prevention, firewall, integrity monitoring, log inspection, agentless anti-malware, and encryption capabilities. Trend Micro server and desktop security provide cost-effective protection as your data center evolves from physical to virtual to cloud.

Secure Virtual Servers

Trend Micro solutions that are optimized to secure virtual servers

- Deep Security
- Core Protection for Virtual Machines

Protect Virtual Desktops

Trend Micro solutions that are optimized to secure virtual desktops

- Deep Security
- OfficeScan

Safeguard the Cloud

Trend Micro solutions that are optimized to secure cloud environments

- Deep Security
- SecureCloud

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