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with best in class  
security solutions



## Virtualization and Cloud Computing Security



Securing Your Web World

The SUM Group  
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# Virtualization and Cloud Computing Security

## A New Paradigm for Securing the Virtualized Datacenter

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**Michael Lawson • Senior Sales Engineer • Trend Micro**

# Trend Micro Enterprise Security

## Endpoint Security

PC, Laptop, Mobile Device Security  
Extensive Platform/OS Support  
Unified Security & Systems Mgt

## Web Security

Web Gateway Security  
Website Security

## Messaging Security

Email Gateway Security  
Mail & Collaboration  
Server Security

## Data Center Security

Business Server Security  
Protection, Integrity, Compliance  
Physical/Virtual/Cloud Computing



## Solutions & Services

Regulatory Compliance  
Threat Management Services  
Premium Support Service & more

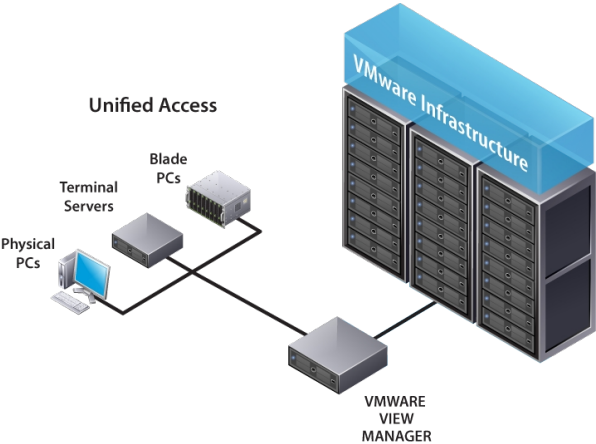
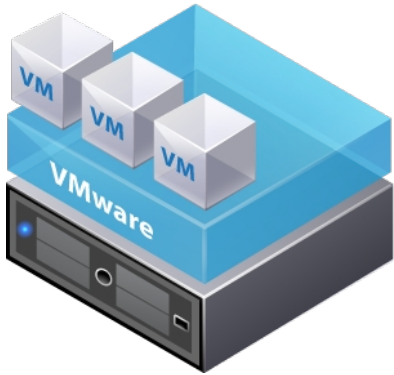
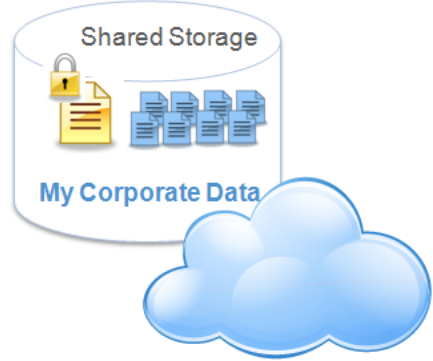
## Data Protection

Data Loss Prevention  
Email & Endpoint Encryption

## Central Management

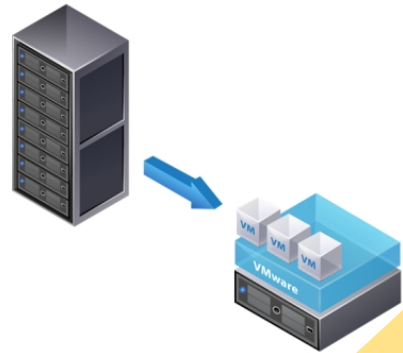
Centralized Security Mgt  
Unified Security & Systems Mgt

# Trend Micro: Security Built for VMware

<b>Desktops: VMware View</b>	<b>Servers: VMware vSphere</b>	<b>Cloud Computing</b>
 <p>Unified Access</p> <p>Physical PCs</p> <p>Terminal Servers</p> <p>Blade PCs</p> <p>VMWARE VIEW MANAGER</p> <p>VMware Infrastructure</p>	 <p>VM</p> <p>VM</p> <p>VM</p> <p>VMware</p>	 <p>Shared Storage</p> <p>My Corporate Data</p> <p>25</p>
<b>Trend Micro OfficeScan</b>	<b>Trend Micro Deep Security</b>	<b>Cloud Security Data Encryption</b>

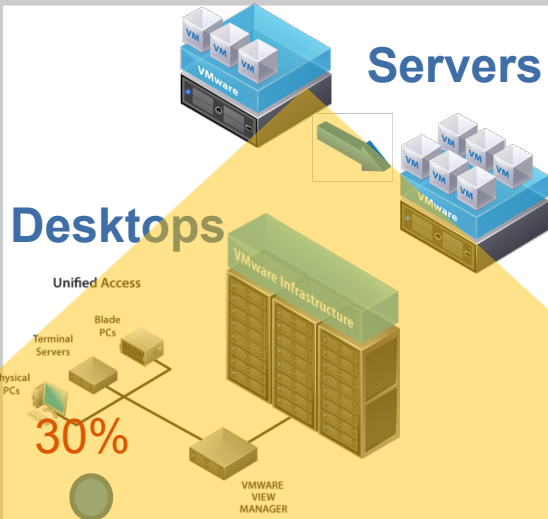
# Virtualization Journey Stages

<p><b>Stage 1: IT Production</b> Benefit: Cost Efficiency</p>	<p><b>Stage 2: Business Prodn.</b> + Quality of Service</p>	<p><b>Stage 3: ITaaS</b> + Business Agility</p>
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15%

Virtualization Adoption Rate



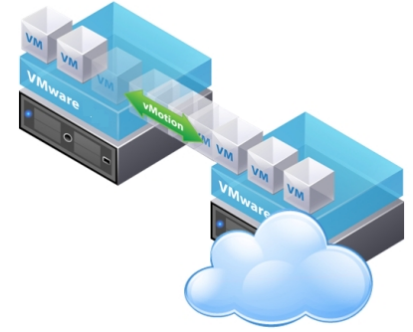
30%

Servers

Desktops

70%

85%

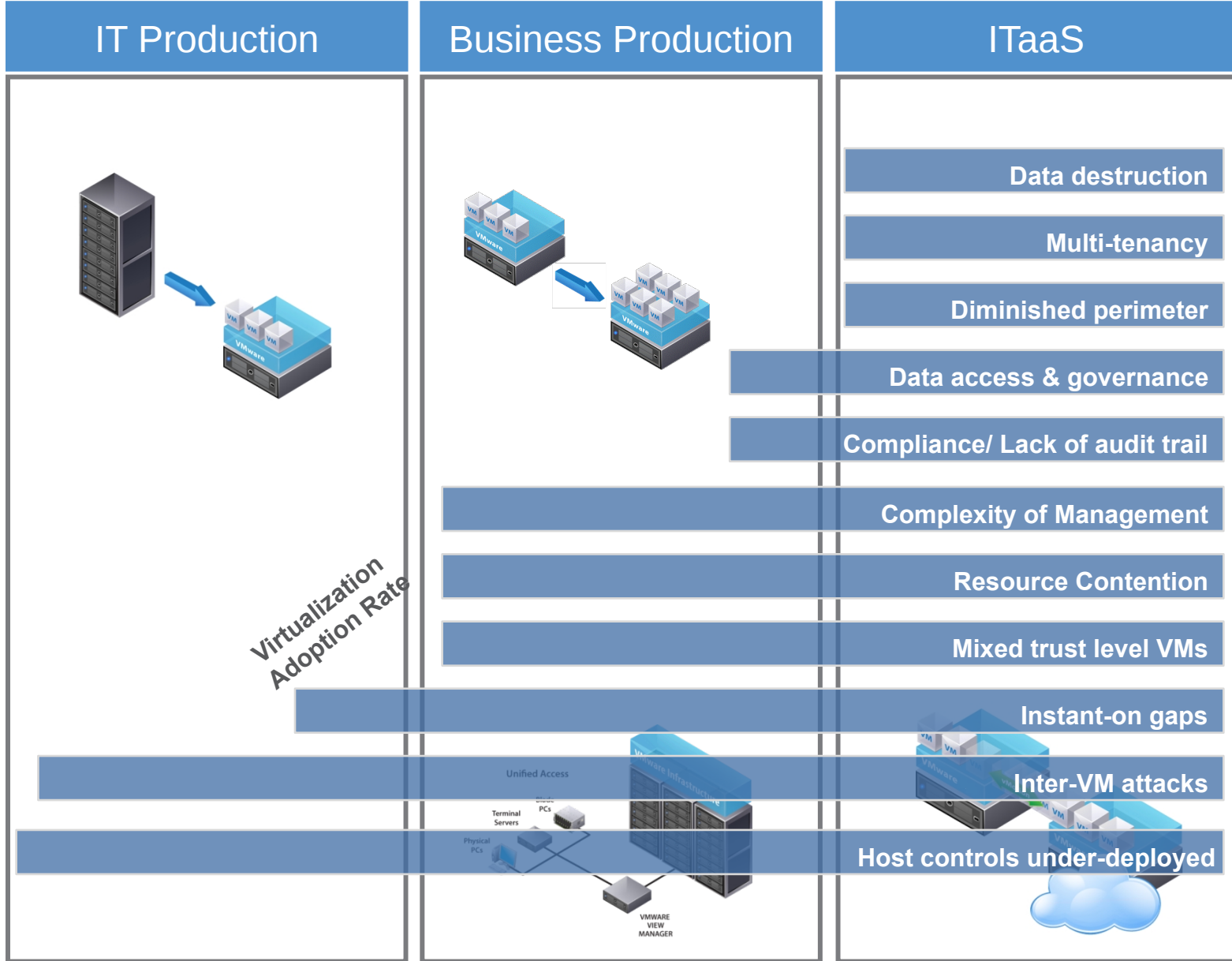


**THE SECURITY INHIBITORS TO VIRTUALIZATION**



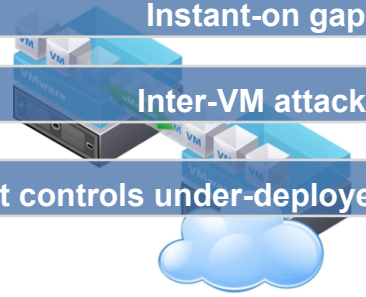
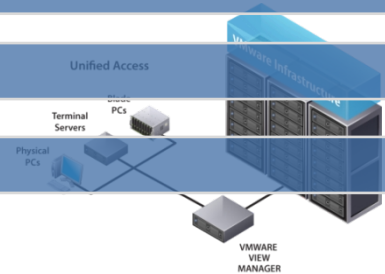
# Security Challenges Along the Virtualization Journey

VMware and Trend Micro help customers address these issues, and accelerate the journey



Virtualization Adoption Rate

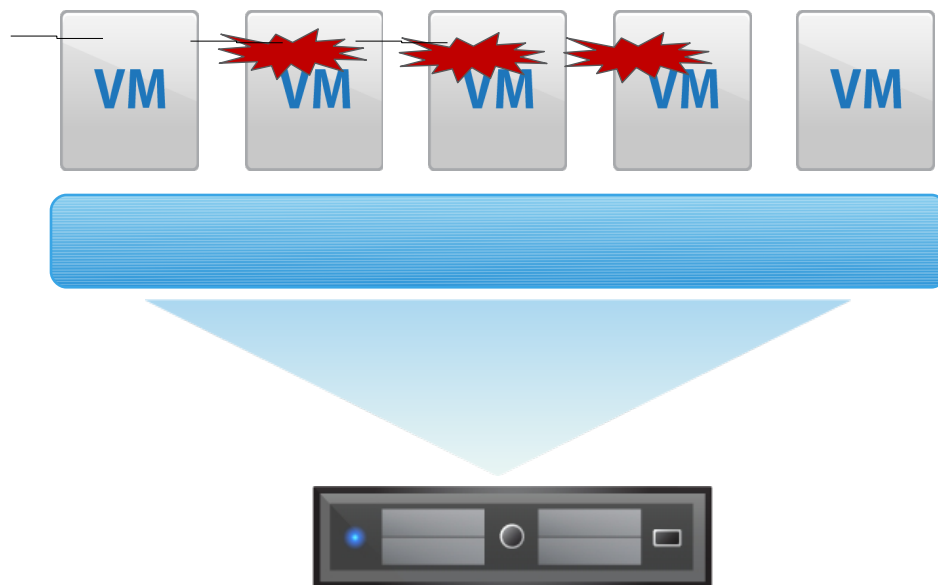
- 11
- 10
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1



# Stage 1 Security Inhibitors

1

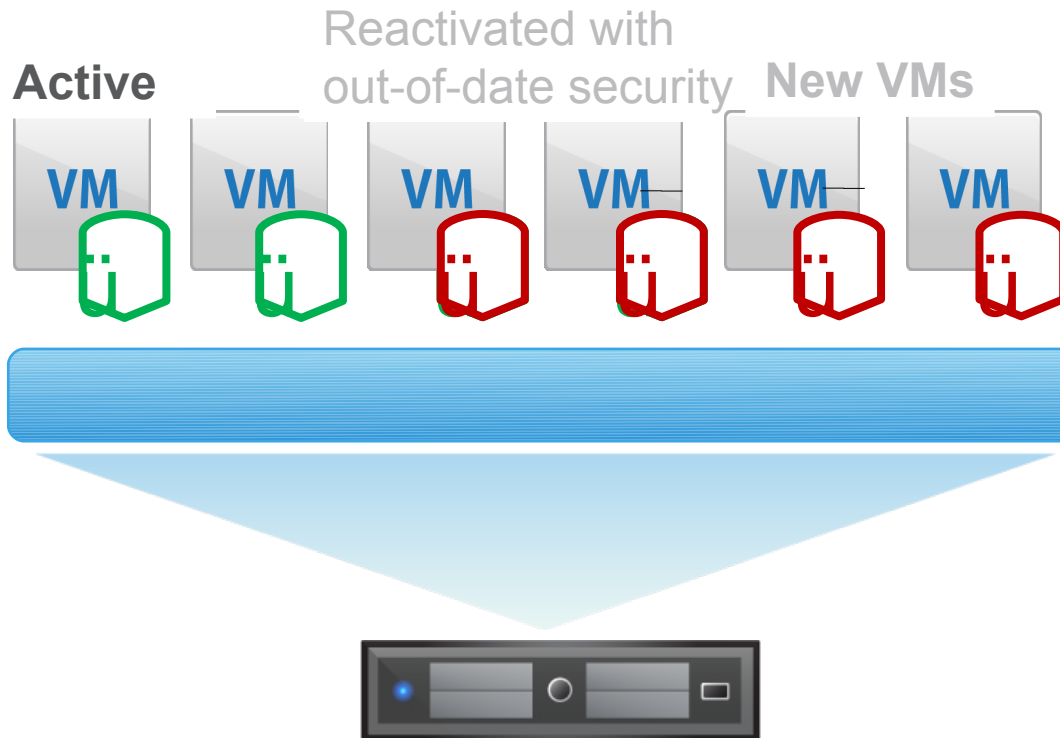
Inter-VM attacks/ blind spots



# Security Inhibitors to Virtualization

2

## Instant-on gaps

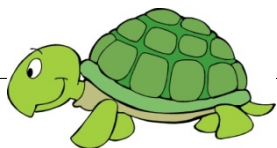




# Stage 2 Security Inhibitors

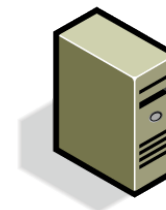
3

## Resource contention

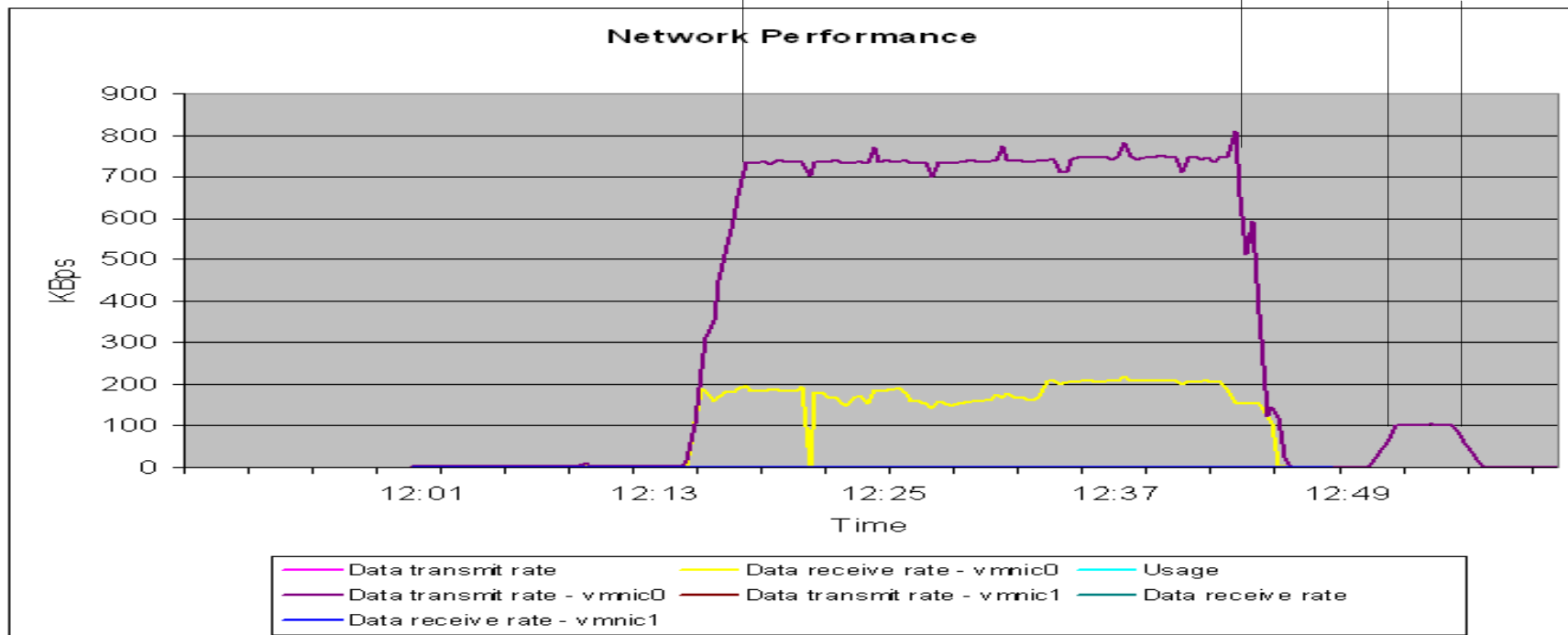


3:00am Scan

Typical AV Console



# Efficient Resource Utilization - Bandwidth



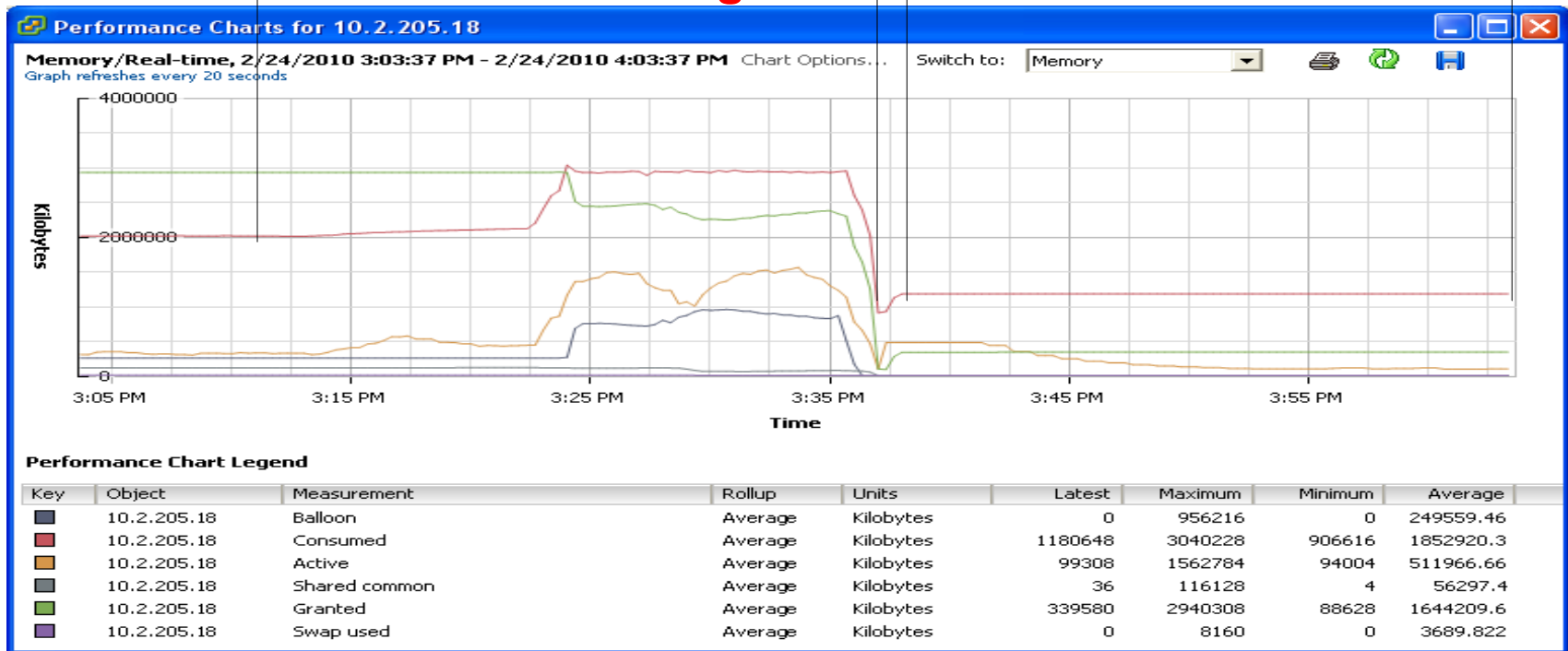
**Traditional agent based approach**

**Security Virtual Appliance using  
Vmware Seraph (EPSEC API)**



# Efficient Resource Utilization - Memory

Scan server approach means no agent footprint, less memory and management overhead



Traditional agent based approach

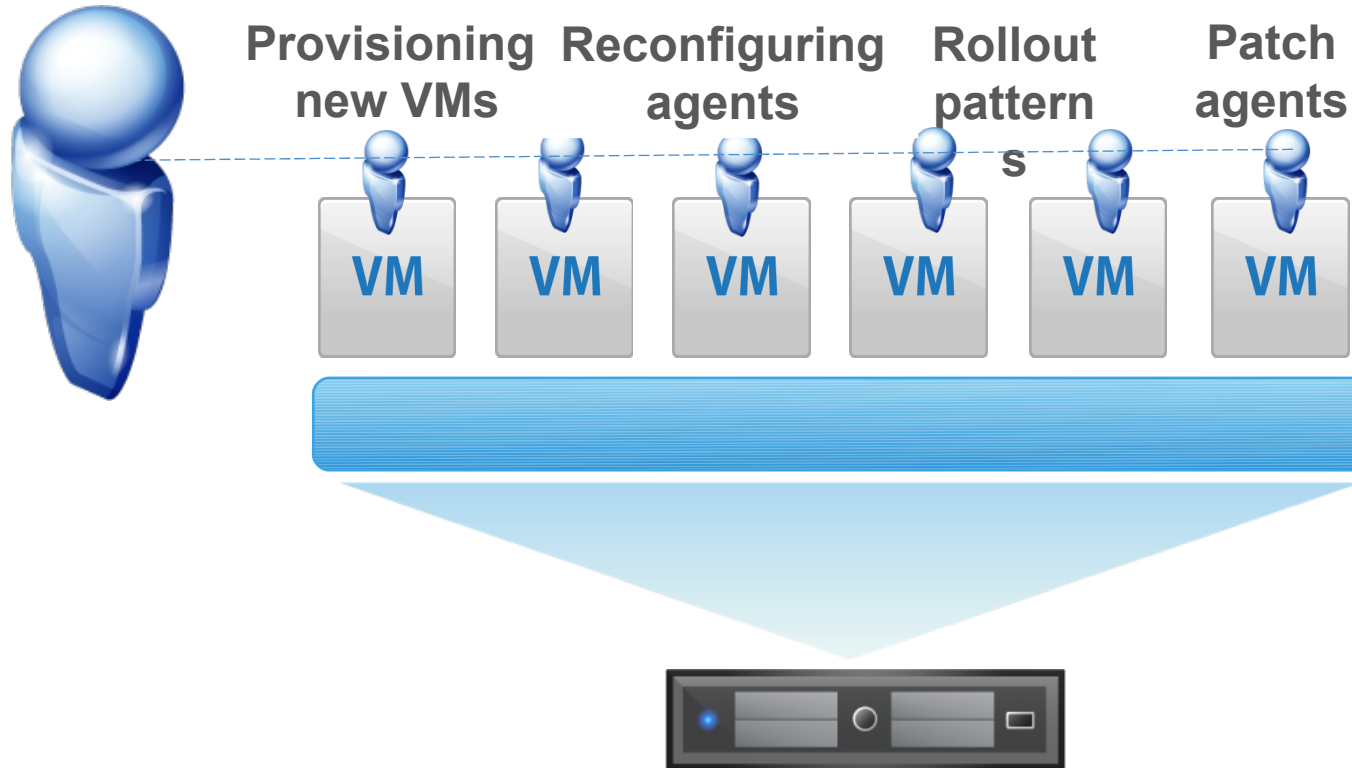
Security Virtual Appliance using  
Vmware Seraph (EPSEC API)



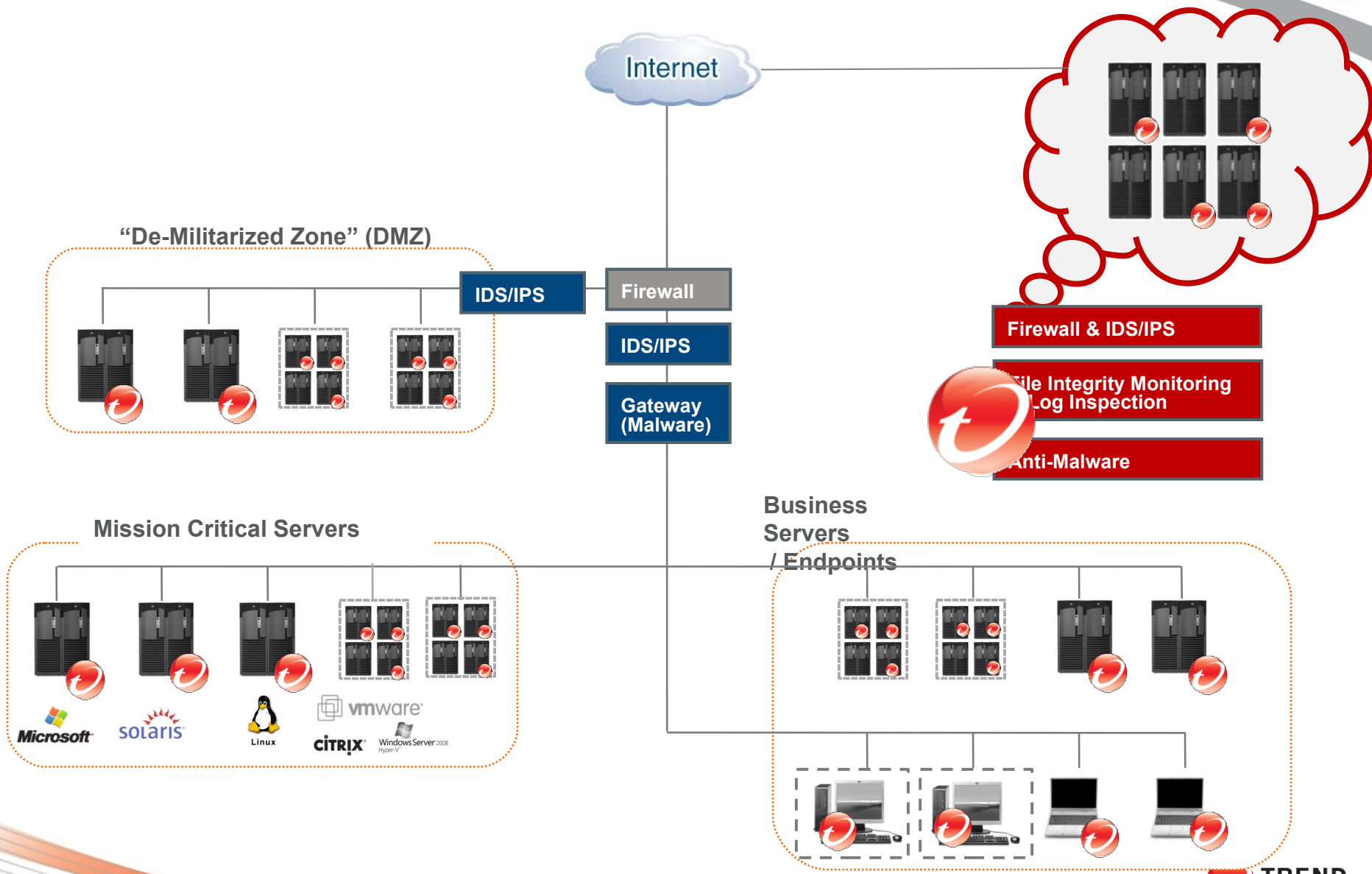
# Security Inhibitors to Virtualization

4

## Complexity of Management



# Retreat To The Server!



# Addressing Payment Card Industry (PCI) Requirements

## Key Deep Security features & capabilities

- ☑ (1.) – Network Segmentation
- ☑ (1.x) – Firewall
- ☑ (6.1) – Virtual Patching\*
- ☑ (6.6) – Web Application Firewall
- ☑ (10.6) – Review Logs Daily
- ☑ (11.4) – Deploy IDS / IPS
- ☑ (11.5) – Deploy File Integrity Monitoring

81% NOT  
PCI compliant  
prior to breach

Verizon 2009 Data Breach  
Investigation Report

\* *Compensating control subject to QSA approval*

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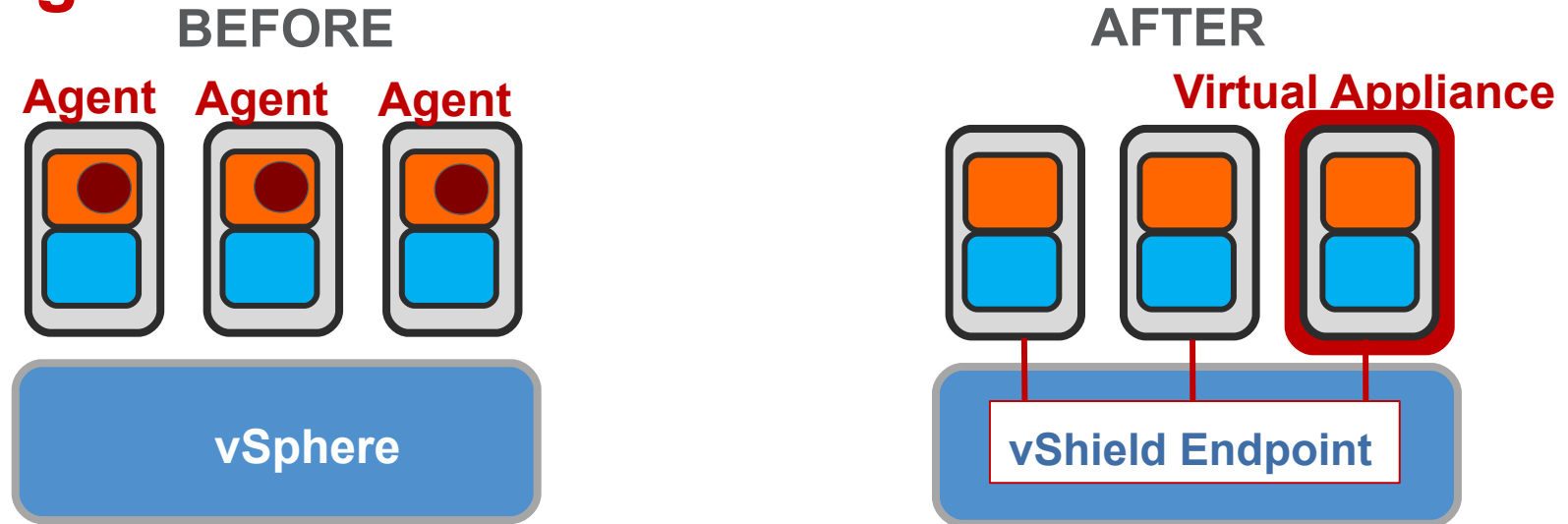


# Over 100 applications protected

Deep Security rules shield vulnerabilities in these common applications

<b>Operating Systems</b>	Windows (2000, XP, 2003, Vista, 2008, 7), Sun Solaris (8, 9, 10), Red Hat EL (4, 5), SuSE Linux (10,11)
<b>Database servers</b>	Oracle, MySQL, Microsoft SQL Server, Ingres
<b>Web app servers</b>	Microsoft IIS, Apache, Apache Tomcat, Microsoft Sharepoint
<b>Mail servers</b>	Microsoft Exchange Server, Merak, IBM Lotus Domino, Mdaemon, Ipswitch, IMail,, MailEnable Professional,
<b>FTP servers</b>	Ipswitch, War FTP Daemon, Allied Telesis
<b>Backup servers</b>	Computer Associates, Symantec, EMC
<b>Storage mgt servers</b>	Symantec, Veritas
<b>DHCP servers</b>	ISC DHCPD
<b>Desktop applications</b>	Microsoft (Office, Visual Studio, Visual Basic, Access, Visio, Publisher, Excel Viewer, Windows Media Player), Kodak Image Viewer, Adobe Acrobat Reader, Apple Quicktime, RealNetworks RealPlayer
<b>Mail clients</b>	Outlook Express, MS Outlook, Windows Vista Mail, IBM Lotus Notes, Ipswitch IMail Client
<b>Web browsers</b>	Internet Explorer, Mozilla Firefox
<b>Anti-virus</b>	Clam AV, CA, Symantec, Norton, Trend Micro, Microsoft
<b>Other applications</b>	Samba, IBM Websphere, IBM Lotus Domino Web Access, X.Org, X Font Server prior, Rsync, OpenSSL, Novell Client

# The Promise of Agentless Anti-malware



- Significantly improved manageability - no agents to configure, update and patch
- Faster performance – Freedom from AV Storms
- Stronger security – Instant ON protection + tamper-proofing
- Higher consolidation levels – Inefficient operations removed

# Thank You!

[www.trendmicro.com/deepsecurity](http://www.trendmicro.com/deepsecurity)

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