VMware Virtualisation Security with IBM Security Solutions

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What I'll cover

- New Risks Associated with Server Virtualisation
- Limitations of Traditional Security Controls
- Securing Virtual Environments with IBM Solutions
  - IBM X-Force
  - IBM Security Virtual Server Protection

It’s a virtual world

- 80% of Australian organisations planning or implementing virtualisation
- VMWare is the platform of choice
- Gartner expects exponential growth
  - "There will be more VMs deployed during 2011 than in 2001-2009 combined.” [1]
  - "Virtual Machine sprawl is potentially more dangerous than server sprawl”
    such ease of deployment!

1. Gartner: Server Virtualization: From Virtual Machines to Clouds
http://www.gartner.com/it/content/1462900/1462925/december_14_server_virtualization_tbittman.pdf (Dec 2010)

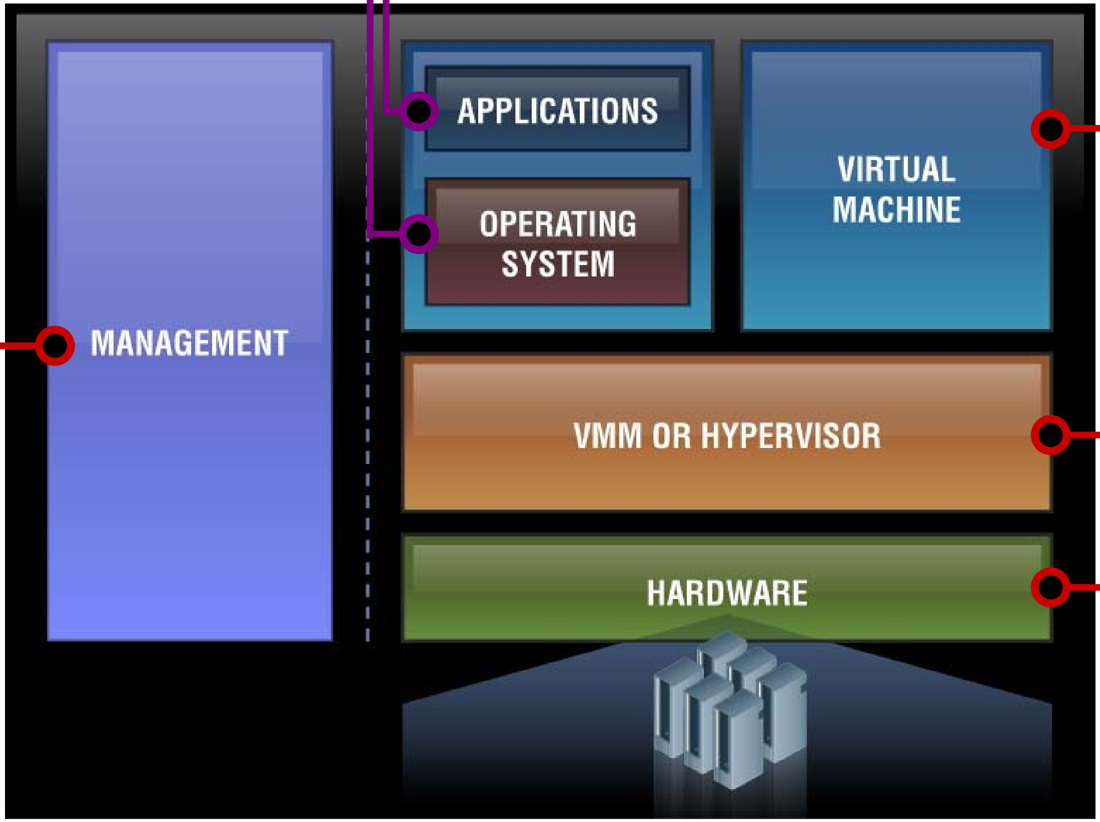
Security Challenges with Virtualisation: New Risks

● Traditional Threats

● New threats to VM environments

Traditional threats can attack VMs just like real systems

- Management Vulnerabilities
- Secure storage of VMs and the management data
- Requires new skill sets
- Insider threat



- Virtual server sprawl
- Dynamic state
- Dynamic relocation

- Resource sharing
- Single point of failure
- Loss of visibility

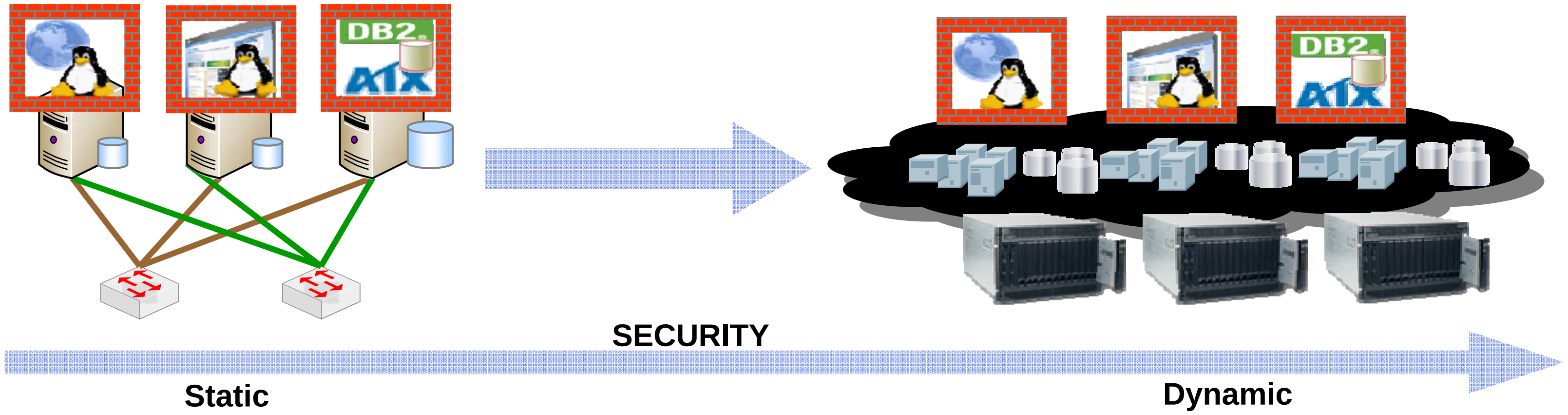
- Stealth rootkits

MORE COMPONENTS = MORE EXPOSURE

Security Must Evolve

Physical	
Network IPS	Blocks threats and attacks at the perimeter
Server Protection	Secures each physical server with protection and reporting for a single agent
System Patching	Patches critical vulnerabilities on individual servers
Security Policies	Policies are specific to critical applications in each network segment and server

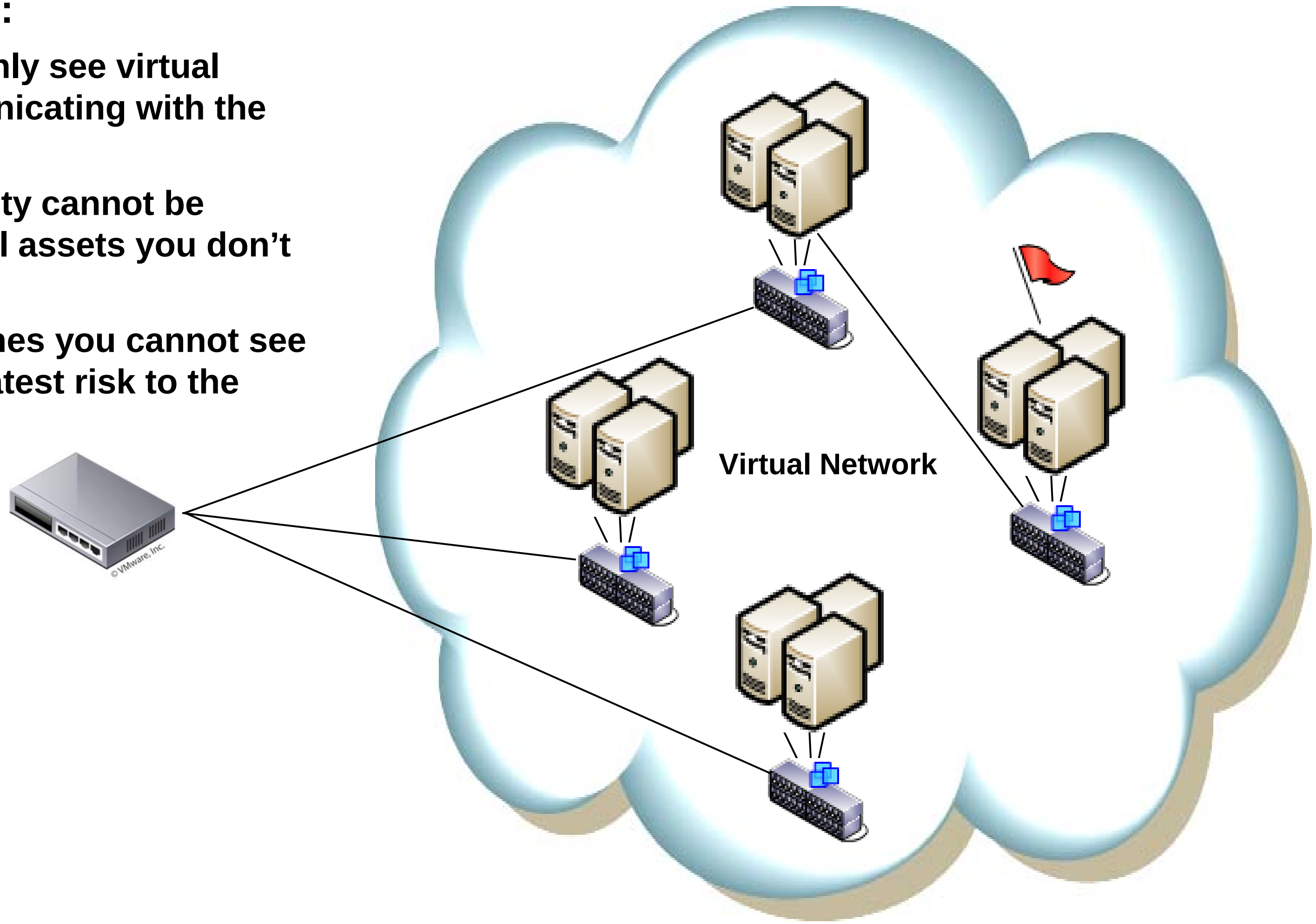
Virtualised	
Network IPS	Should protect against threats at perimeter and between VMs
Server Protection	Securing each VM as if it were a physical server adds time, cost and footprint
System Patching	Needs to protect against vulnerabilities that result from VM state changes
Security Policies	Policies must be able to move with the VMs



Limitations of Existing Controls and Processes

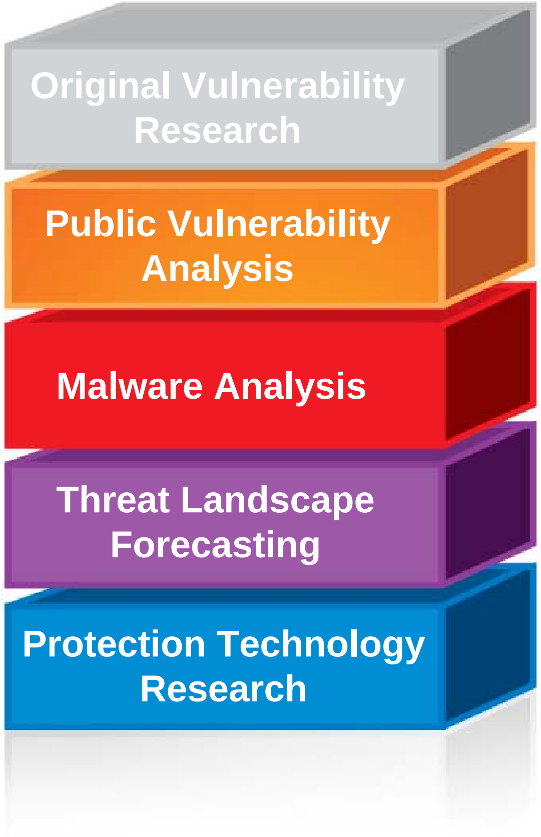
Impact on Security:

- **Discovery tools only see virtual machines communicating with the physical network**
- **Host-based security cannot be deployed to virtual assets you don't know about**
- **The virtual machines you cannot see represent the greatest risk to the environment**



The X-Force team Drives IBM ISS Security Innovation

Research → **Technology** → **Solutions**


Original Vulnerability Research
Public Vulnerability Analysis
Malware Analysis
Threat Landscape Forecasting
Protection Technology Research

X-Force Protection Engines

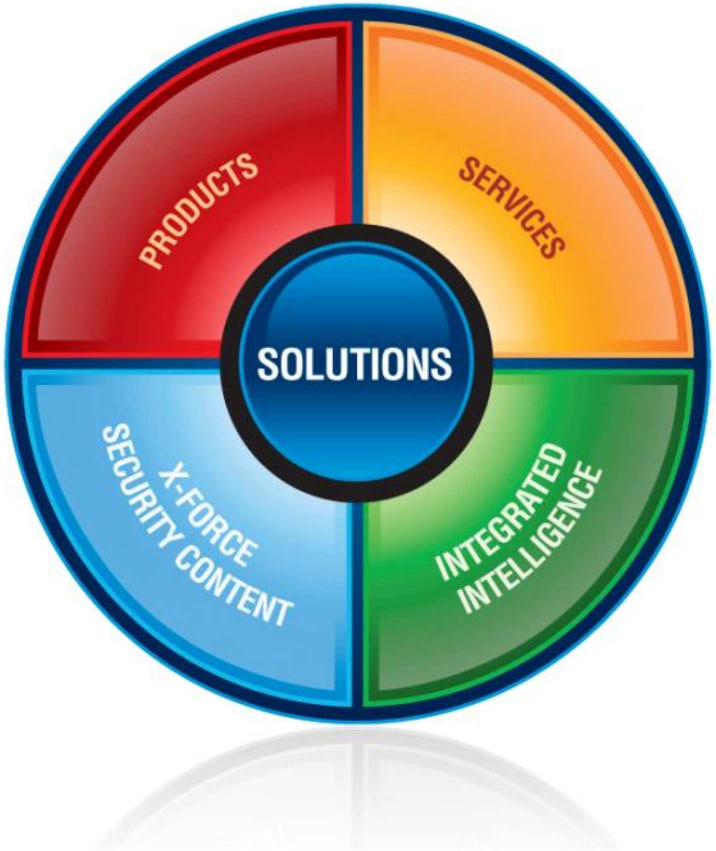
- Extensions to existing engines
- New protection engine creation

X-Force XPU's

- Security Content Update Development
- Security Content Update QA

X-Force Intelligence

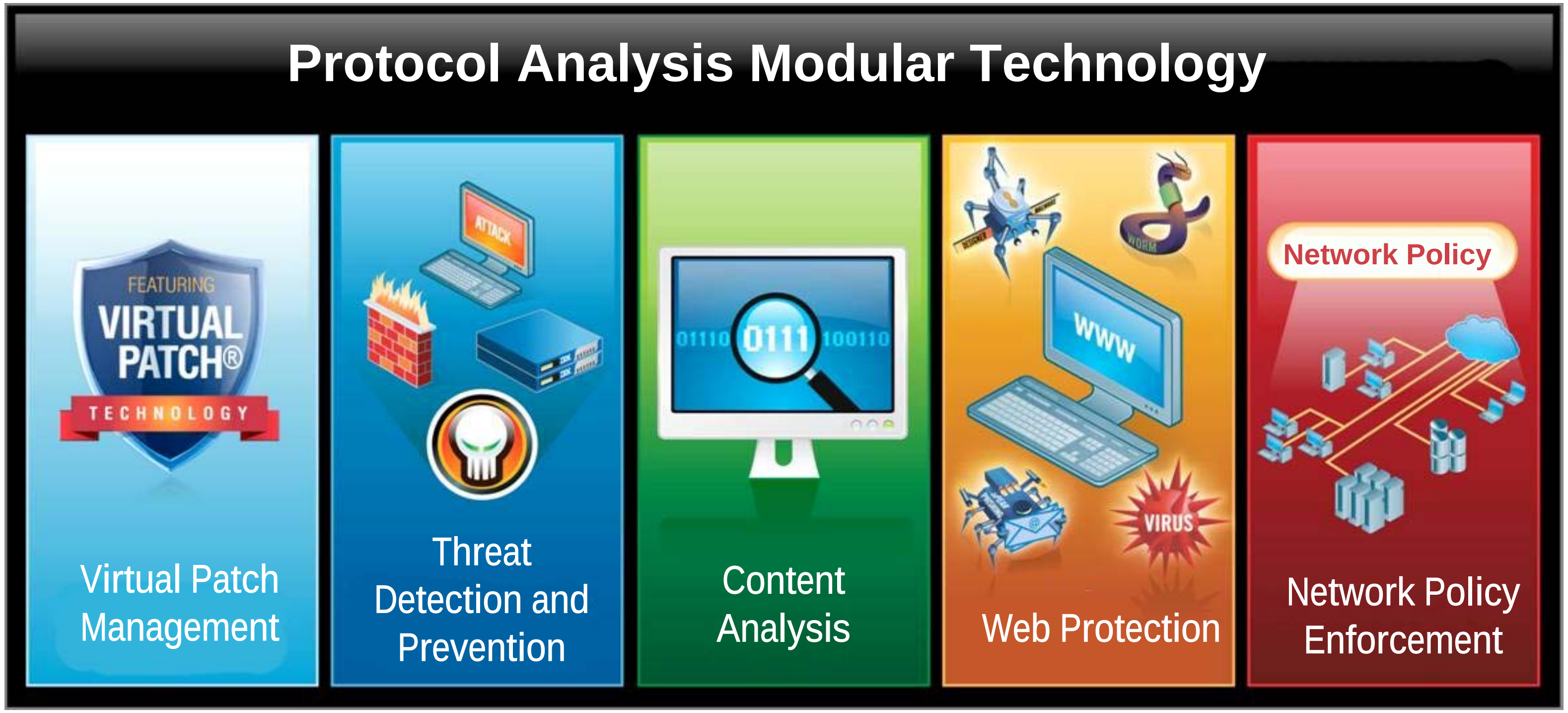
- X-Force Database
- Feed Monitoring and Collection
- Intelligence Sharing



Protocol Analysis Module (PAM) clearly differentiates our IBM Internet Security Systems™ from others.

The Protocol Analysis Module (PAM)

PAM is the engine behind the preemptive protection afforded by many of the solutions of the IBM Proventia product family. PAM is comprised of five key technologies.

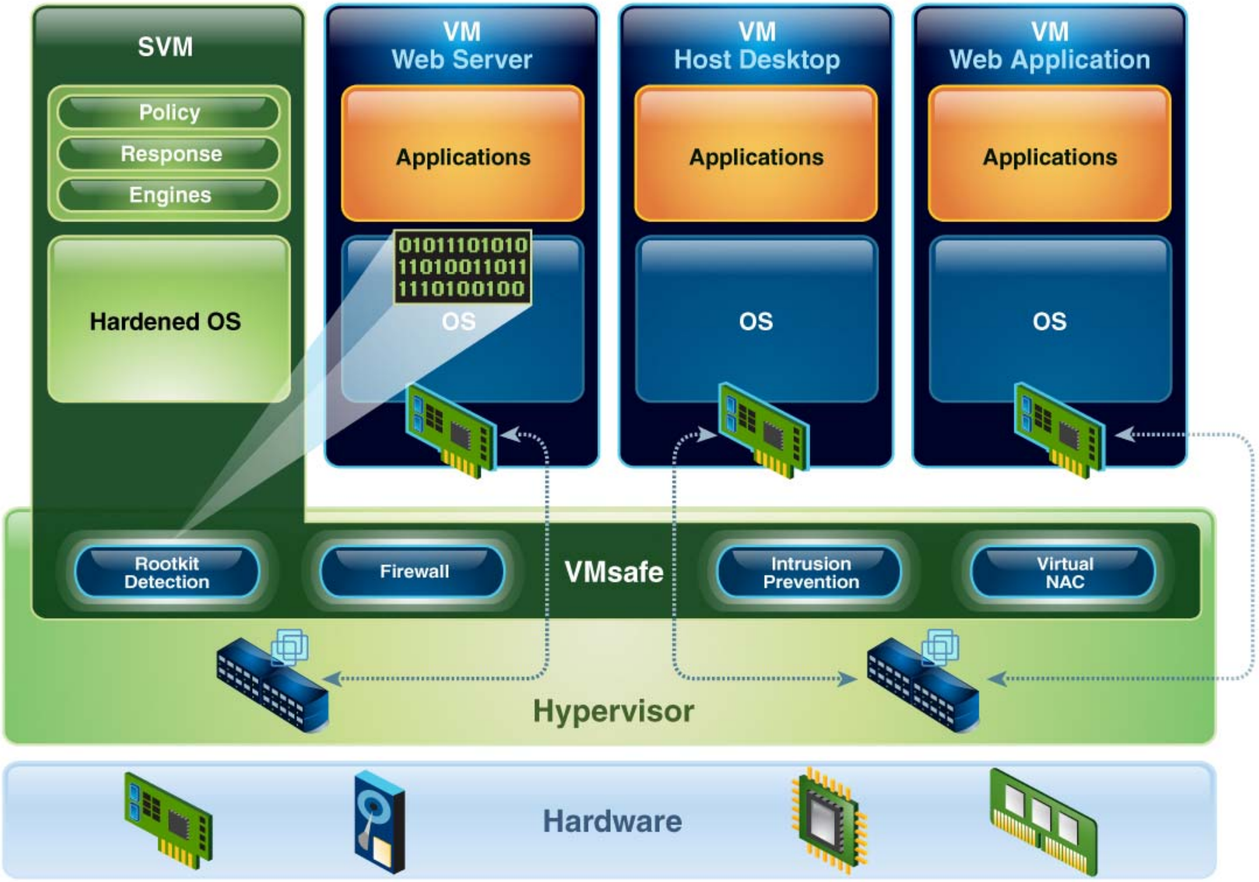


IBM Solution For Virtual Server Protection

Introducing IBM Virtual Server Protection for VMware

Integrated threat protection for VMware vSphere 4

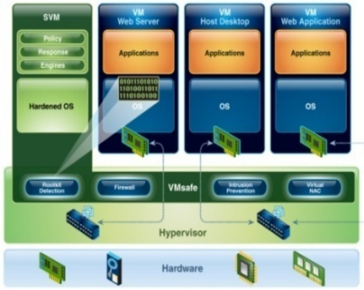
Helps customers to be more secure, compliant and cost-effective by delivering integrated and optimised security for virtual data centers.



- VMsafe Integration
- Firewall and Intrusion Prevention
- Rootkit Detection/Prevention
- Inter-VM Traffic Analysis
- Automated Protection for Mobile VMs (VMotion)
- Virtual Network Segment Protection
- Virtual Network-Level Protection
- Virtual Infrastructure Auditing (Privileged User)
- Virtual Network Access Control

Three reasons you need virtualisation infrastructure protection

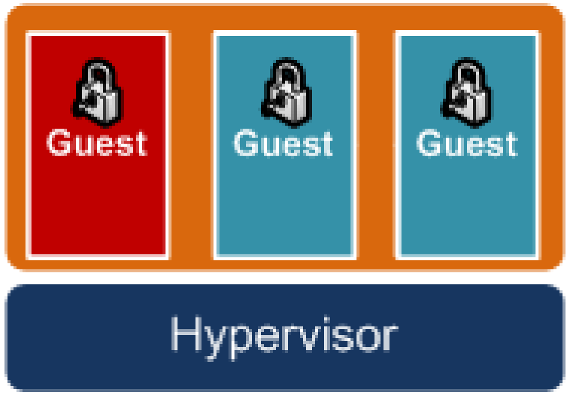
Need	How IBM Virtual Server Protection for VMware® helps
Mitigate new risks and complexities introduced by Virtualisation	Provides dynamic protection for every layer of the virtual infrastructure
Maintain compliance standards and regulations	Helps meet regulatory compliance by providing security and reporting functionality customised for the virtual infrastructure
Drive operational efficiency	Increases ROI of the virtual infrastructure

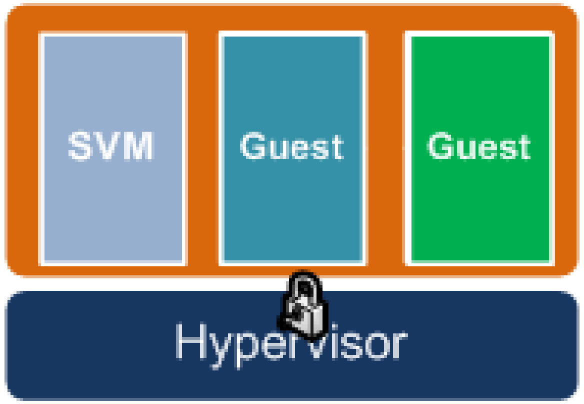


Host-based vs. Integrated Virtual Server Protection

Host-Based Agent	
Isolation	Firewall functions only in the context of the VM
Attack Prevention	Requires agent to be present
VM State	Security is impacted by VM state change
Security Policies	Policy is enforced only within the VM

Virtual Server Protection	
Isolation	Firewall enforces virtual network-wide policy
Attack Prevention	Secures all virtual machines automatically
VM State	Security is not impacted by VM state change
Security Policies	Policy is enforced outside of the VM and irrespective of the VMs location





Summary

- Virtualisation does impact security posture
- New products adapted for virtual environments are available
- Consider your wider network security strategy

Thank you
and questions!

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