

Securing the Virtual Infrastructure – Achieving a Trusted Cloud

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Agenda

- **Cloud Computing**
- **VMware and Security**
 - Network Security
- **Use Case**
 - Securing View Deployments
- **Questions**

IT consumption is changing



Enterprise IT is Aligning to Consumption

Empowered,
Secure Mobile
Workforce



Faster
Time-to-Market
for Modern
Applications



A More Flexible,
Scalable, Efficient
Infrastructure
for All Apps



Existing Datacenters



Public Cloud Services

Paul Maritz
CEO



“VMware enables our customers’ success by simplifying and automating IT in the Cloud Era.”

Future of Cloud Computing



80%

of new commercial enterprise apps will be deployed on cloud platforms in 2012

predicted cloud computing market in 2020

\$241 B



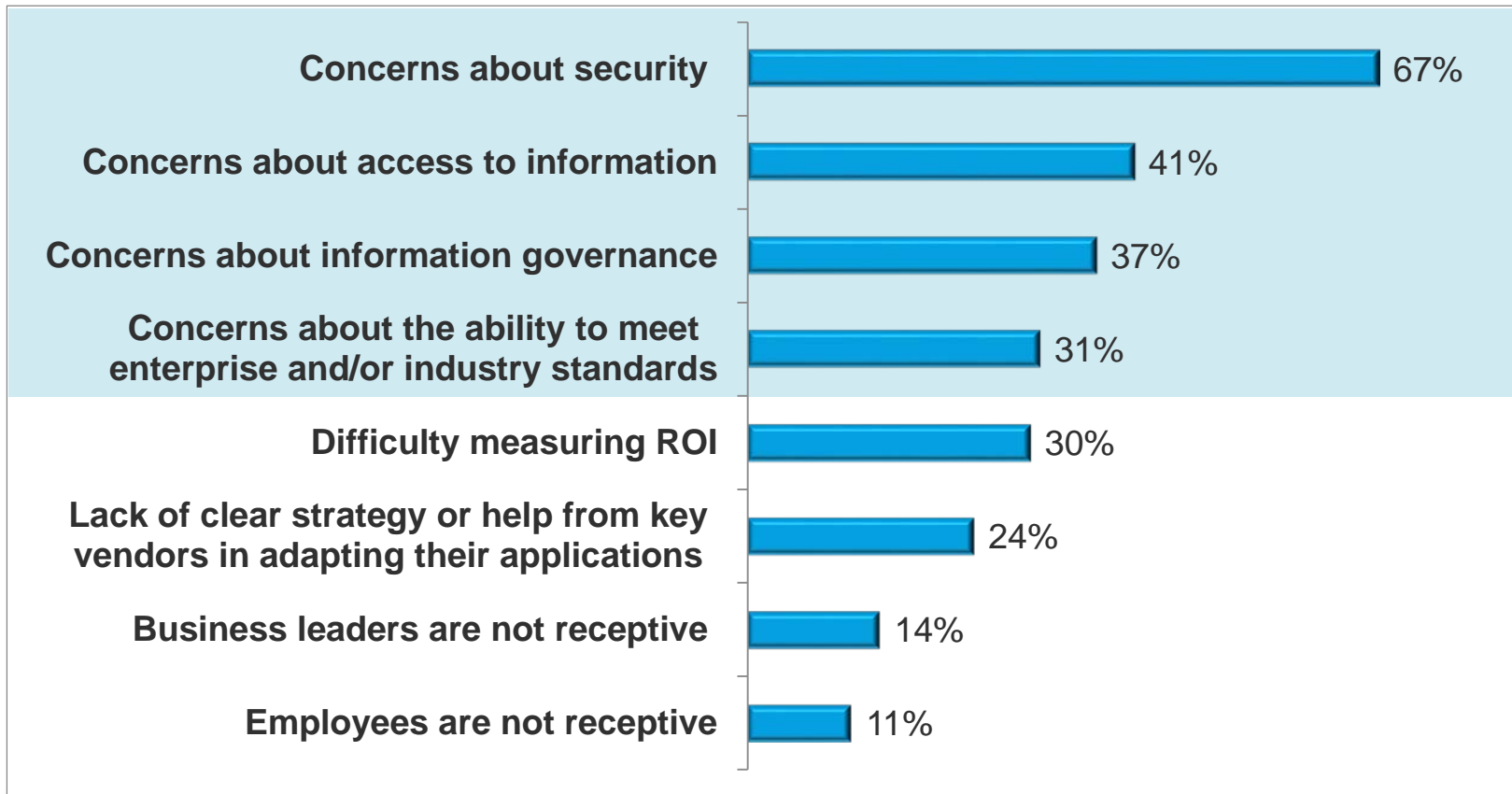
2.7ZB

predicted volume of digital content, up 48% from 2011

Source: IDC, "Predictions 2012: Competing for 2020," December 2011; Forrester, "Sizing the Cloud," April 2011

Security and Compliance are Key Concerns for Organizations Considering Cloud Migrations

Q. What are the top challenges or barriers to implementing a cloud computing strategy?



Top 4 Concerns Relate to Security or Compliance

Source: 2010 IDG Enterprise Cloud-based Computing Research, November 2010

VMware and Security



Virtualization Security

- Secure hypervisor architecture
- Platform hardening features
- Secure Development Lifecycle



Audit and Compliance

- Hardening Guidelines - Prescriptive guidance for deployment and configuration
- Enterprise controls for security and compliance

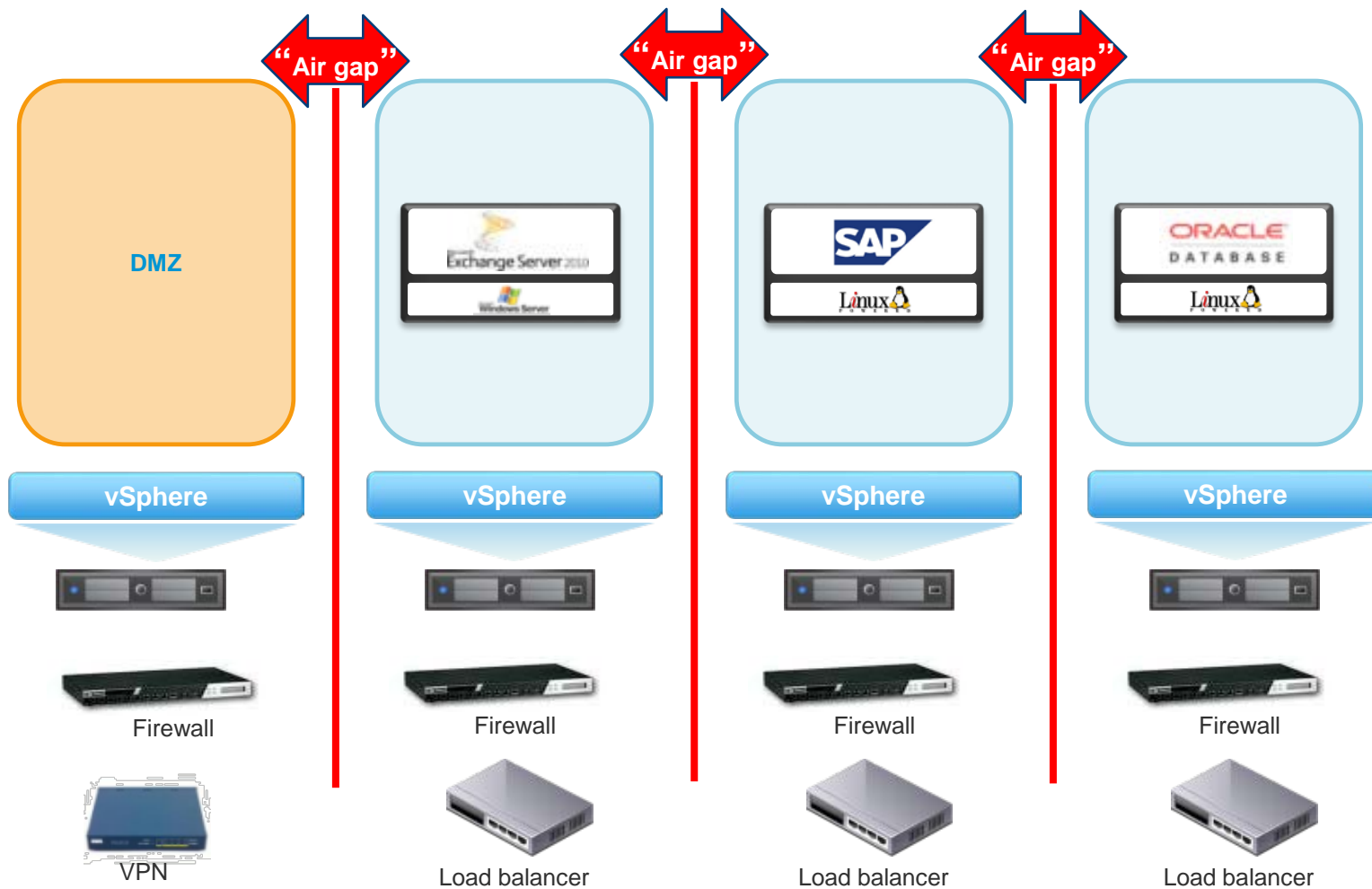


Network Security in the Data Center/ Cloud

- Virtualization-aware security
- Products taking Unique Advantage of virtualization

Traditional Security in Virtual Environments

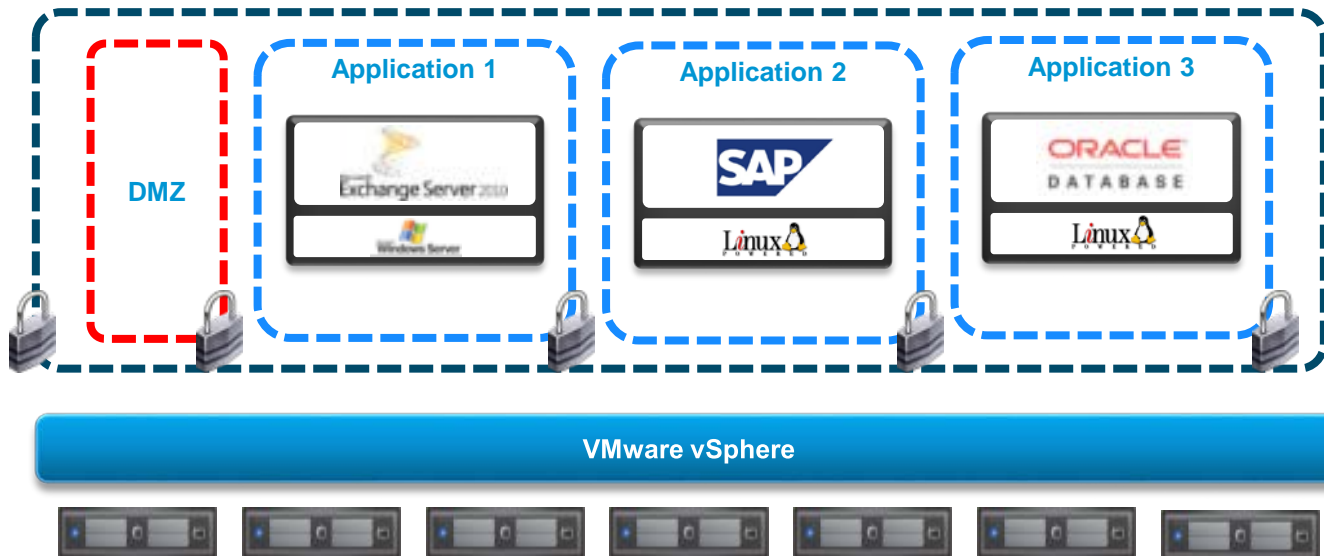
Physical Security Devices and Airgaps



Customers Want to Virtualize More....

Increased interest in Mixing Trust Zones

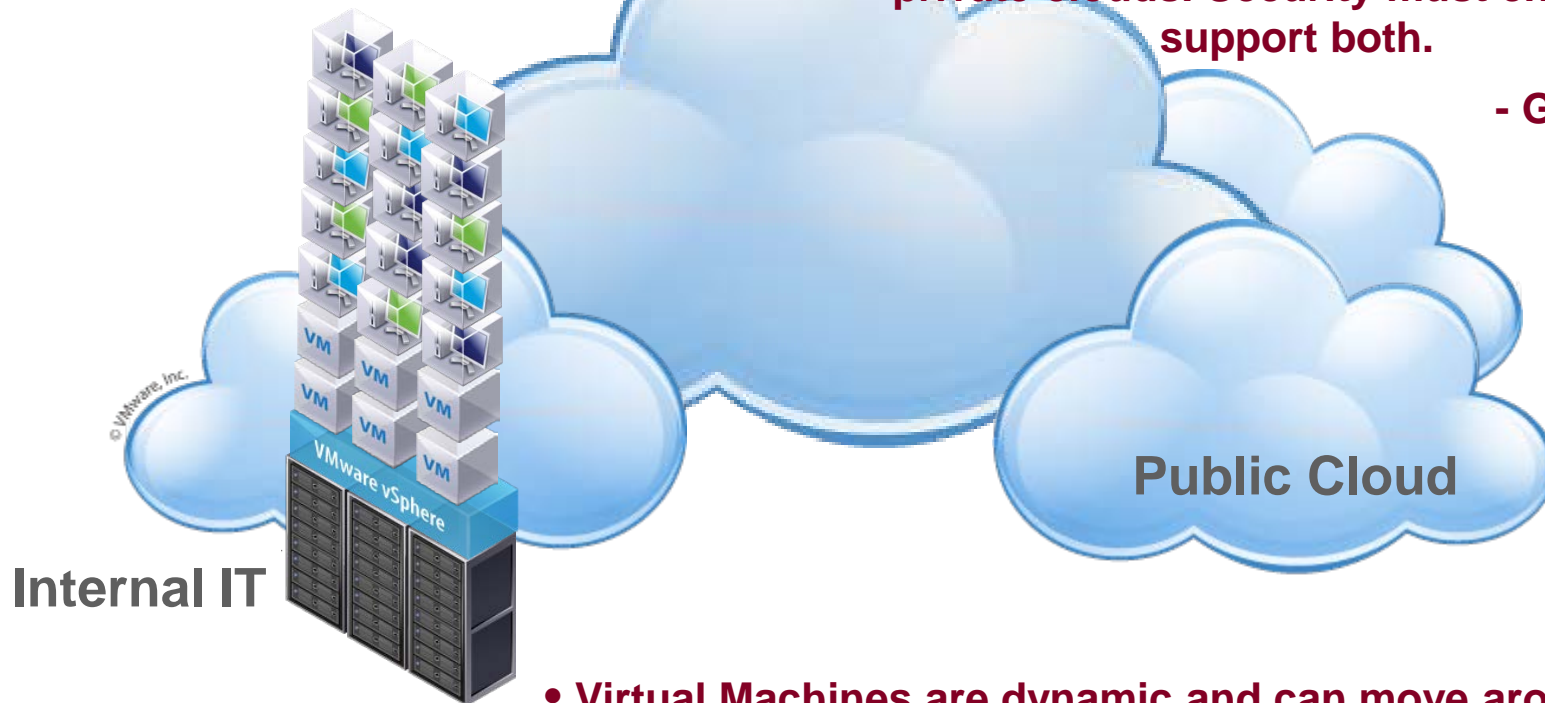
- PCI
- Tier 1 Apps
- DMZ



New Challenges with Cloud Computing

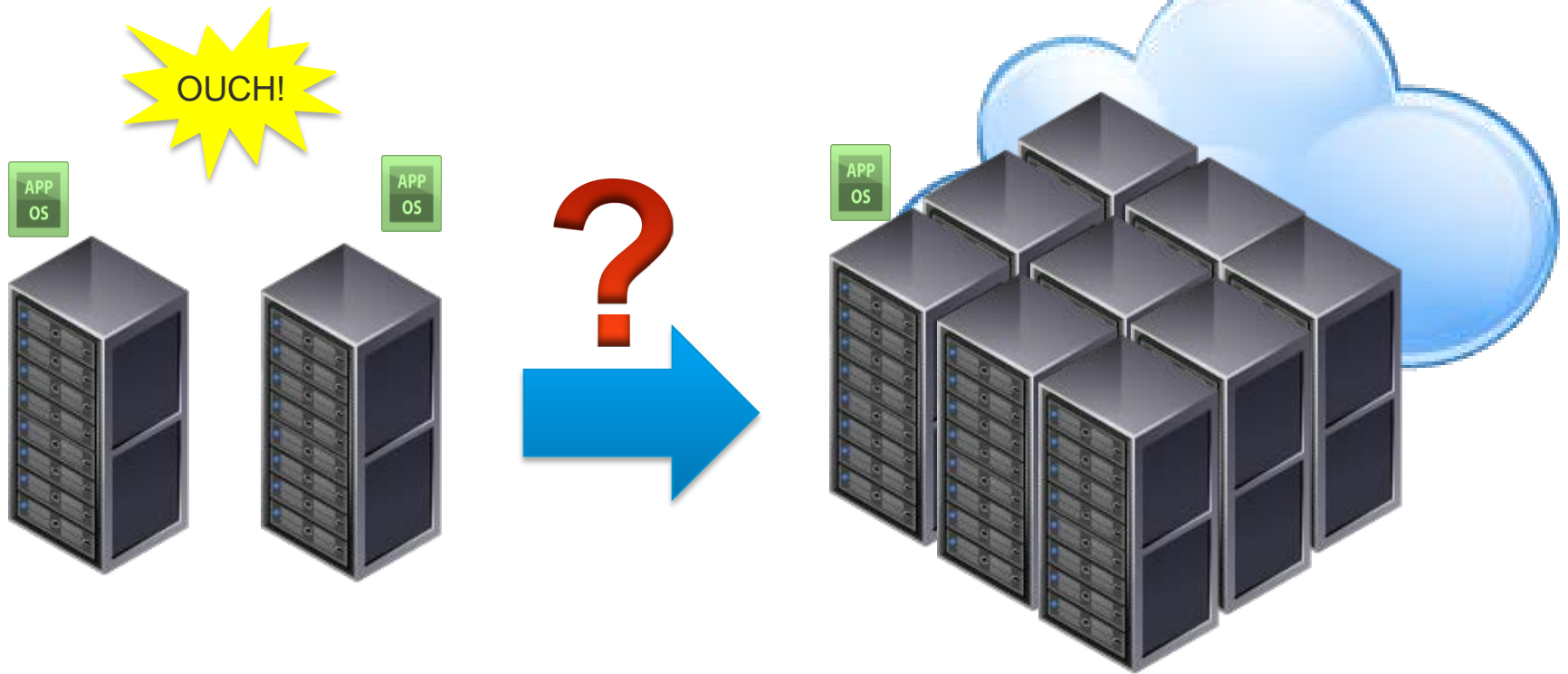
Virtualization forms the foundation for building private clouds. Security must change to support both.

- Gartner 2010

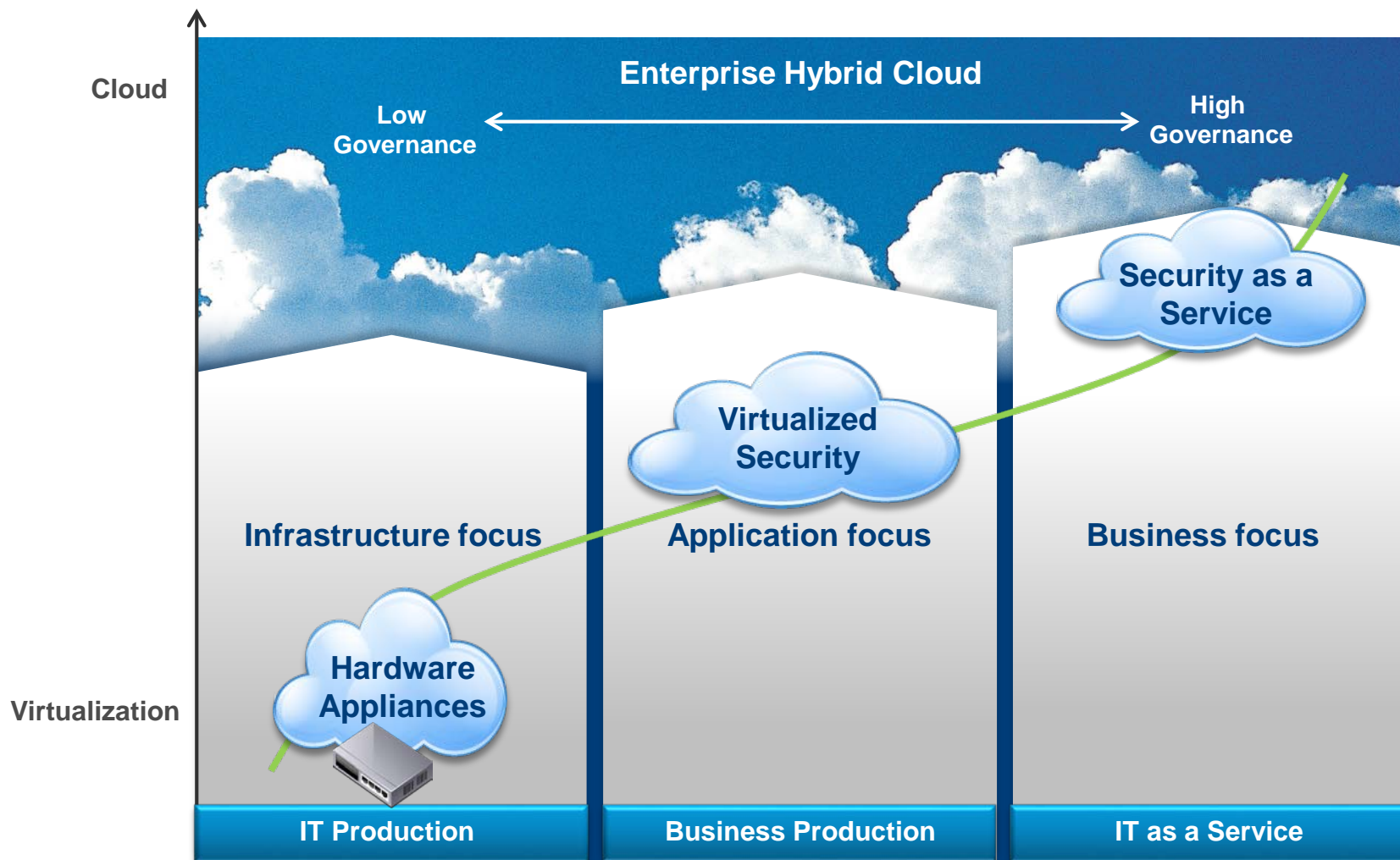


- Virtual Machines are dynamic and can move around
- Virtual Machines are easily created and can be self provisioned by non IT staff
- Increased workloads with large amount of virtual desktops in datacenter

How Do We Transform Rigid Silos Into Secure Elastic Clouds?



The Security Evolution - From Appliances to Security as a Service



VMware vShield – Foundation for Trusted Cloud

Securing the Cloud From Edge to Endpoint

vShield Edge

Secure the edge of the virtual datacenter

vShield App

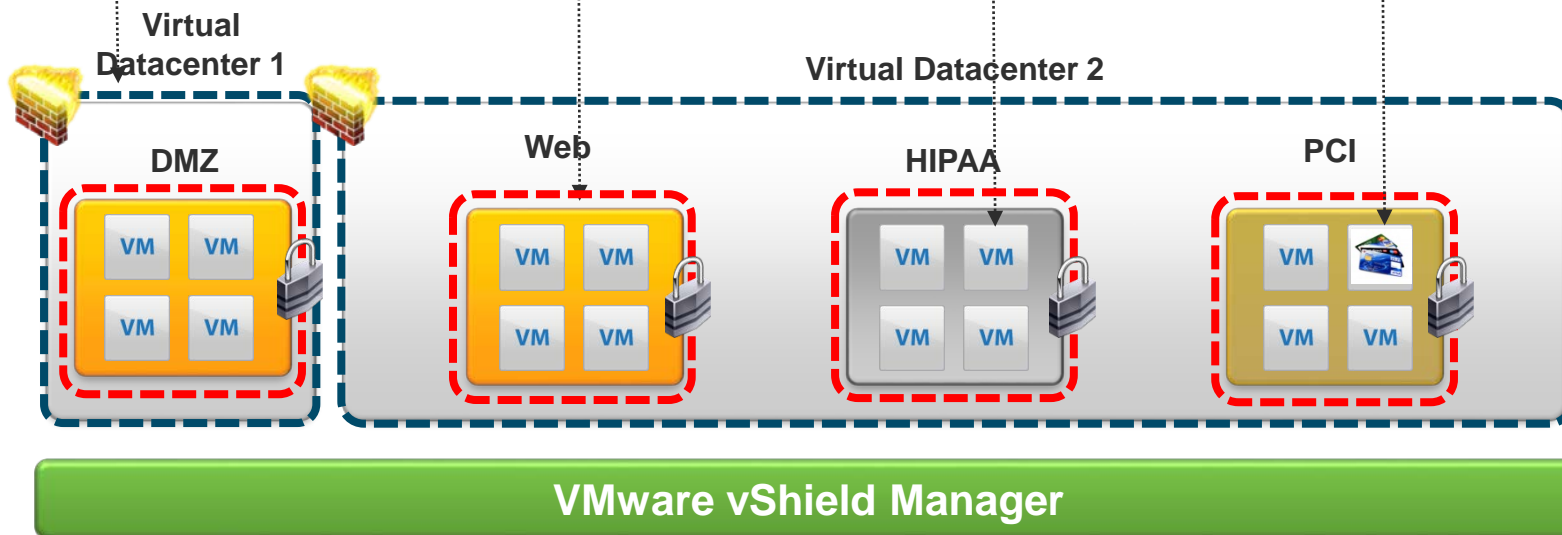
Protect applications from threats with trust zones

vShield Endpoint

Streamline and accelerate anti-virus solutions

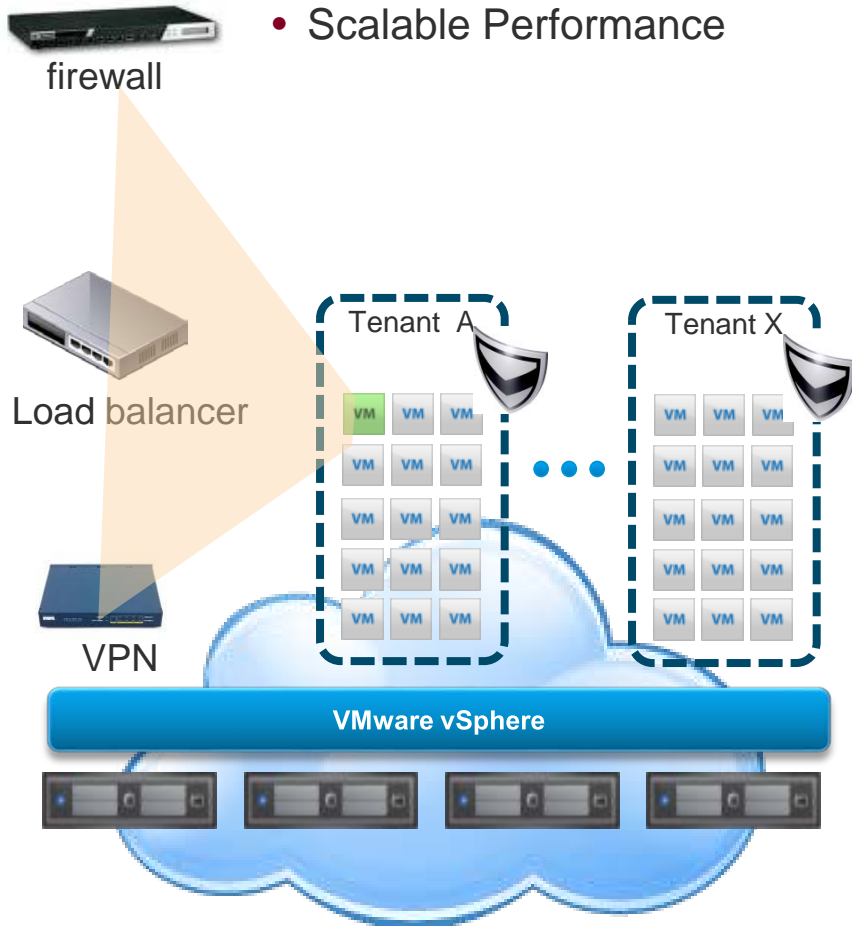
vShield Data Security

Protect against data leaks



Secure the Edge of the Virtual Data Center

- 'Auto-wired' Security for VDCs – VPN, Load Balancer, DHCP, NAT, Firewall
- Eliminate 'Air-Gapped' sprawl
- Scalable Performance

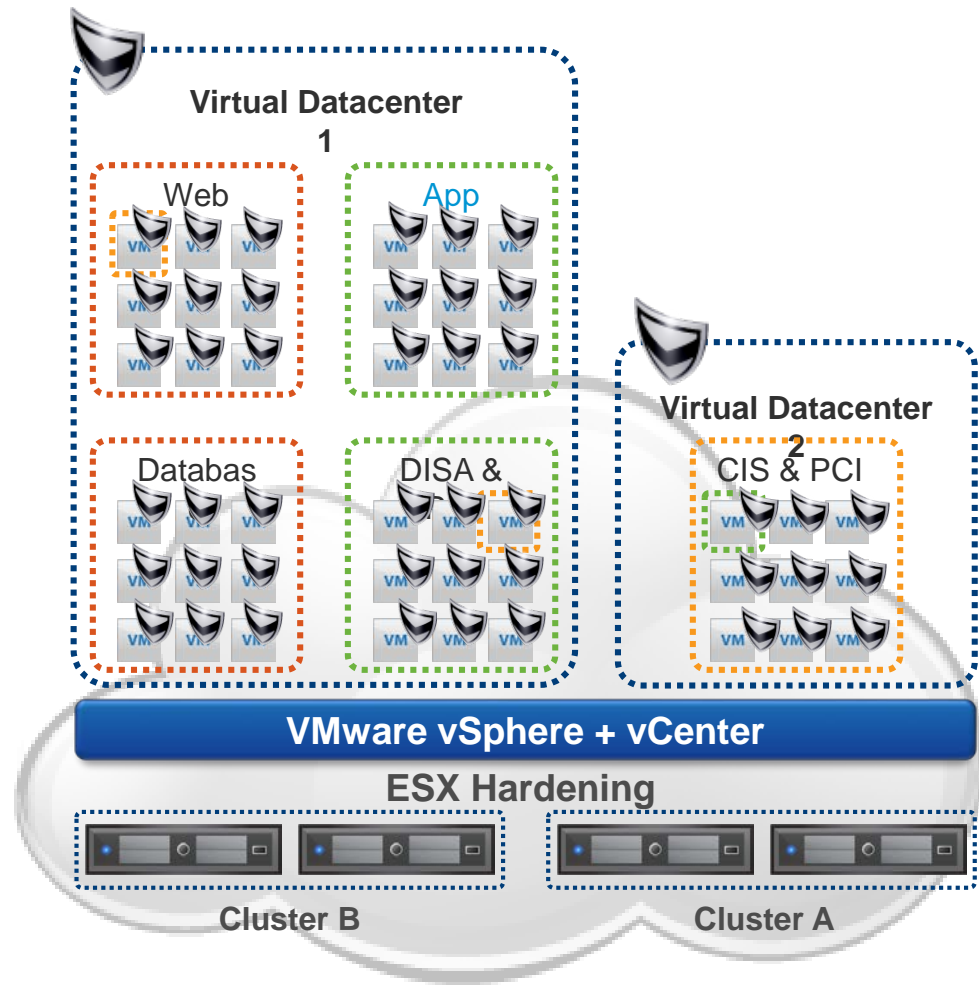


Features

- Multiple edge security services in one appliance
 - Stateful inspection firewall
 - Network Address Translation (NAT)
 - Dynamic Host Configuration Protocol (DHCP)
 - Site to site VPN (IPsec)
 - Web Load Balancer
- Policy management through UI or REST APIs
- Logging and auditing based on industry standard syslog format

Enforce Micro-segmentation Inside the vDC

- **Protect applications against Network Based Threats**
 - **Full Stateful Packet Inspection** firewall
 - Control on **per-VM/per vNIC** level
 - See **VM-VM traffic** within the same host with **Robust Flow Monitoring**
 - Security groups **enforced with VM movement**
 - **Logging and auditing via Syslog**
 - **REST APIs for automation**



Visibility into Sensitive Data to Address Regulatory Compliance

vShield Data Security

Select Regulations

Selected | All

| Regulations | Category | Region | |
|---|-------------|--------|---------|
| <input type="checkbox"/> ABA Routing Numbers | PCI,PII | ALL | Details |
| <input type="checkbox"/> Arizona SB-1338 | PHI,PCI,PII | NA | Details |
| <input type="checkbox"/> Australia Bank Account Numbers | PII | APAC | Details |
| <input type="checkbox"/> Australia Business and Company Numbers | PII | APAC | Details |
| <input type="checkbox"/> Australia Medicare Card Numbers | PHI,PII | APAC | Details |
| <input type="checkbox"/> Australia Tax File Numbers | PII | APAC | Details |
| <input type="checkbox"/> California AB-1298 | PHI,PCI,PII | NA | Details |
| <input checked="" type="checkbox"/> California SB-1386 | PHI,PCI,PII | NA | Details |
| <input type="checkbox"/> Canada Drivers Licence Numbers | PII | NA | Details |
| <input type="checkbox"/> Canada Social Insurance Numbers | PHI,PII | NA | Details |
| <input checked="" type="checkbox"/> Colorado HB-1119 | PHI,PCI,PII | NA | Details |
| <input checked="" type="checkbox"/> Connecticut SB-650 | PHI,PCI,PII | NA | Details |

Cloud Infrastructure
(vSphere, vCenter, vShield, vCloud Director)

Overview

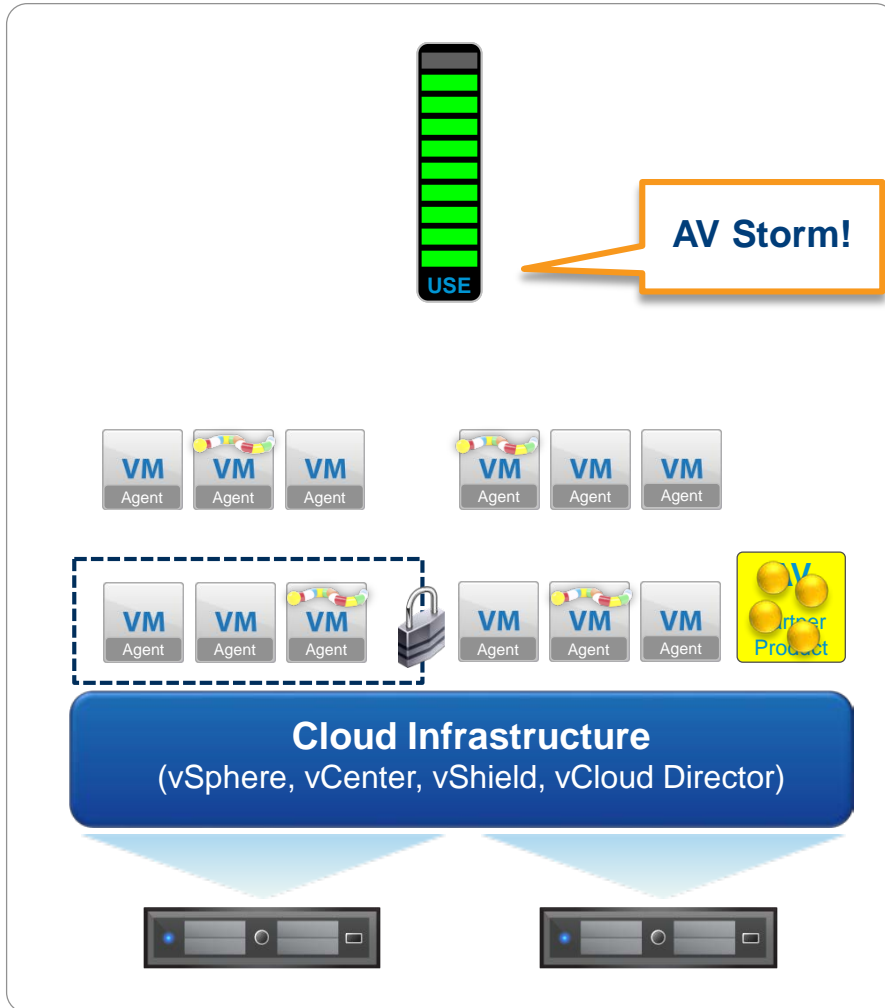
- More than 80 pre-defined templates for country/industry specific regulations
- Accurately discover and report sensitive data in unstructured files with analysis engine
- Segment off VMs with sensitive data in separate trust zones

Benefits

- Quickly identify sensitive data exposures
- Reduce risk of non-compliance and reputation damage
- Improve performance by offloading data discovery functions to a virtual appliance

Efficient Protection Against Malware

vShield Endpoint



Overview

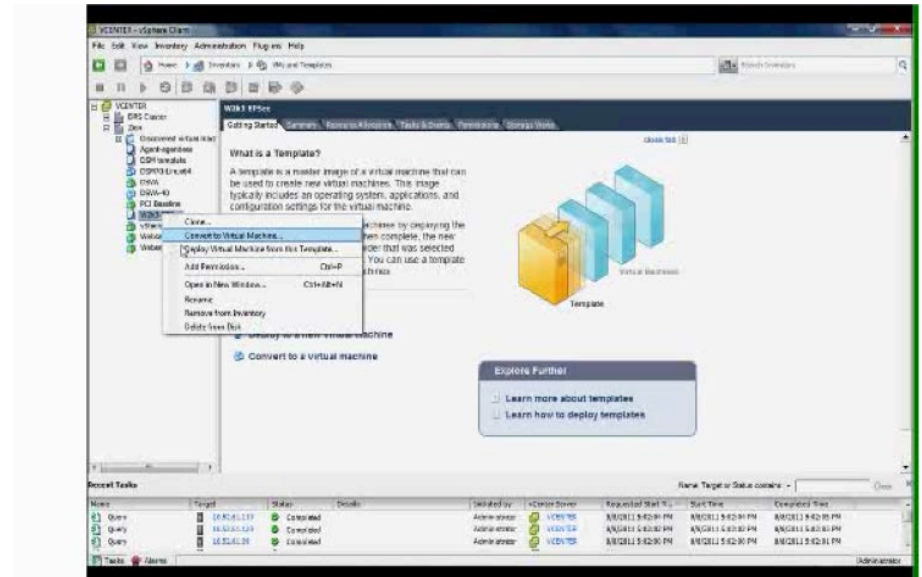
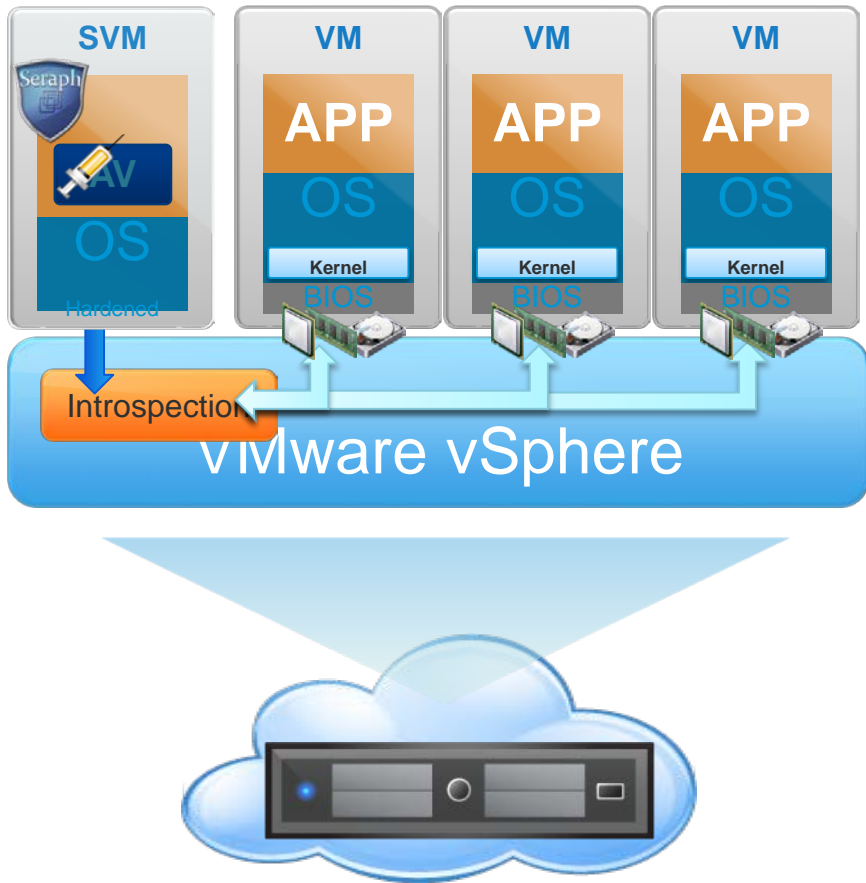
- Offloaded anti-virus protection
- Leverage 3rd party anti-virus solutions
- Eliminate security agent from guest VM
- Partner provides security virtual appliance for endpoint security such as anti-virus, file integrity monitoring, OS event logging

Benefits

- **Efficiency** - Improve performance and consolidation ratios from 30-100%*. Eliminate anti-virus 'storms'
- **Manageability** - Streamline deployment and monitoring of endpoint security
- **"Better than physical"** – VM protected the moment it comes online, no agent susceptible to attack

* Depending on whether workload stresses the AV solution – Source: Tolly Group 2010

vShield Endpoint



Where to learn more...

Security Specialist Team's Everything security.....

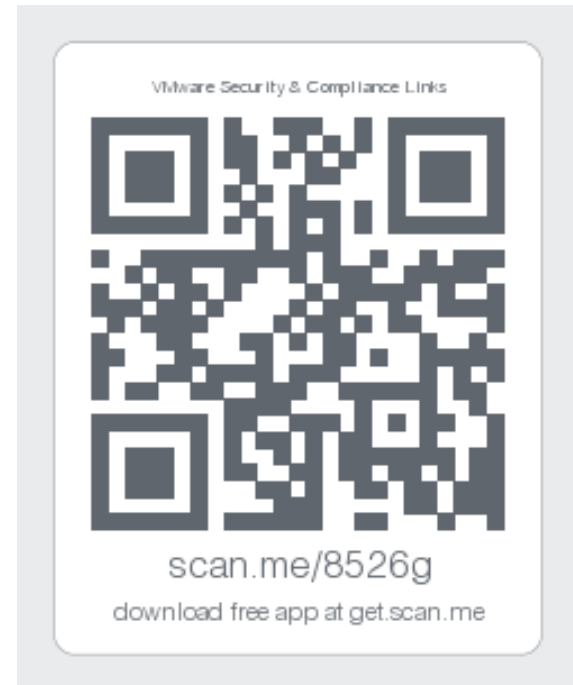
http://portal.sliderocket.com/ATOHL/VMware-Security-Links_v2

Or

<http://tinyurl.com/VMwareSecurityLinks>



Use it as a reference – visit often.....



A road with a colorful geometric pattern overlaying a landscape of rolling hills under a sunset sky. The pattern consists of various shades of blue, green, and yellow triangles and polygons. The road has a yellow double line in the center. The background shows a field with a fence, rolling hills, and a sky with clouds and a setting or rising sun.

Thank you

Question & Answer Session

vmware