



vmworld: **Own It.** Your Cloud.

Successful Security in the Virtual Environment

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Disclaimer

- **This session may contain product features that are currently under development.**
- **This session/overview of the new technology represents no commitment from VMware to deliver these features in any generally available product.**
- **Features are subject to change, and must not be included in contracts, purchase orders, or sales agreements of any kind.**
- **Technical feasibility and market demand will affect final delivery.**
- **Pricing and packaging for any new technologies or features discussed or presented have not been determined.**

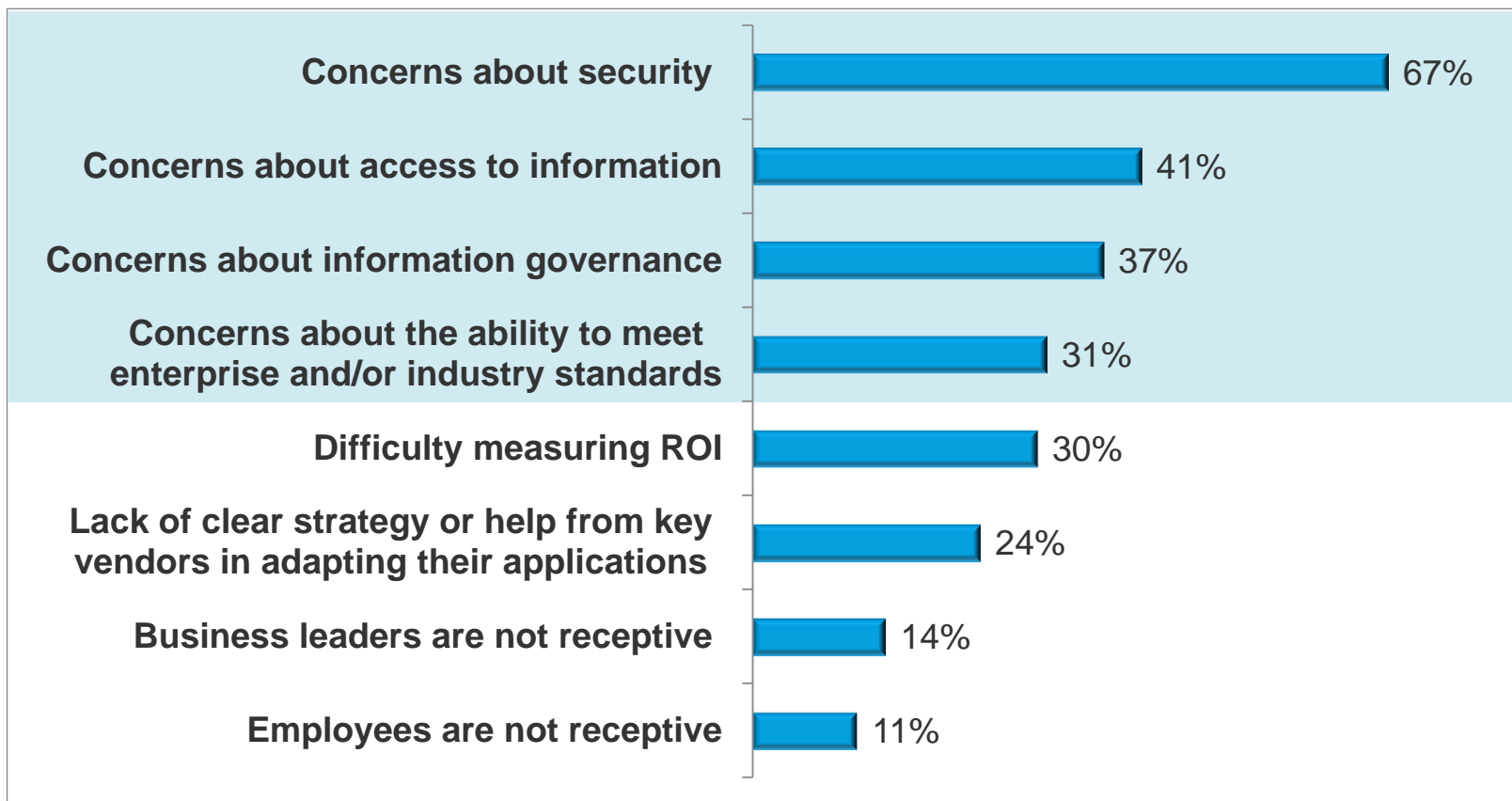
Agenda

- **Primary customer concerns with the cloud**
- **VMware vShield value proposition**
- **Use cases**
- **Customer examples**
- **Summary**

Primary Concerns with the Cloud

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

Key Concerns By Teams

How do I **secure applications and data** in the cloud ?



Security Operations Team

How do I implement **compliance controls** and audits for resources in the cloud?



Compliance Officer

How can I enable security **without affecting applications or limiting cloud flexibility** ?

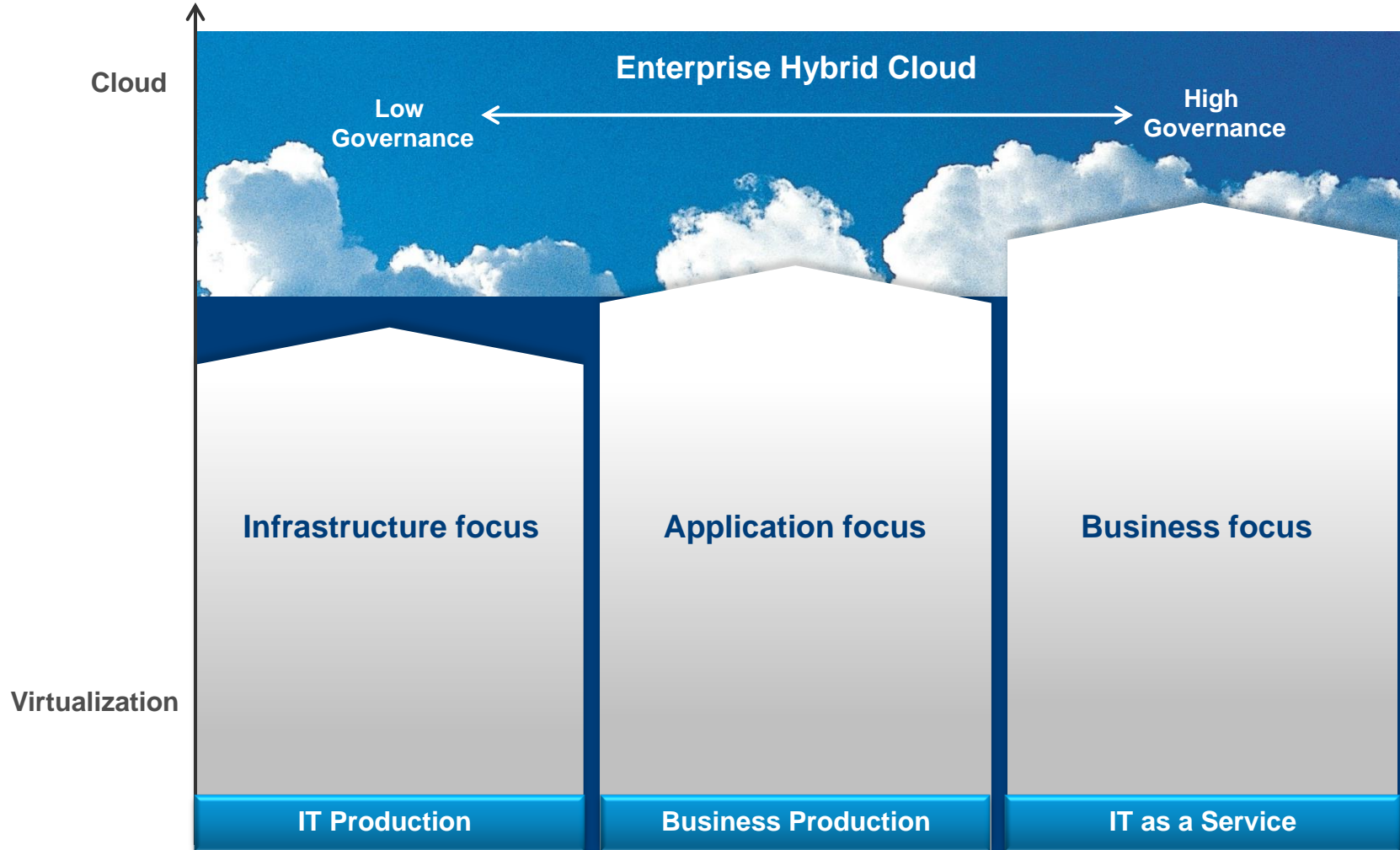


Infrastructure Team

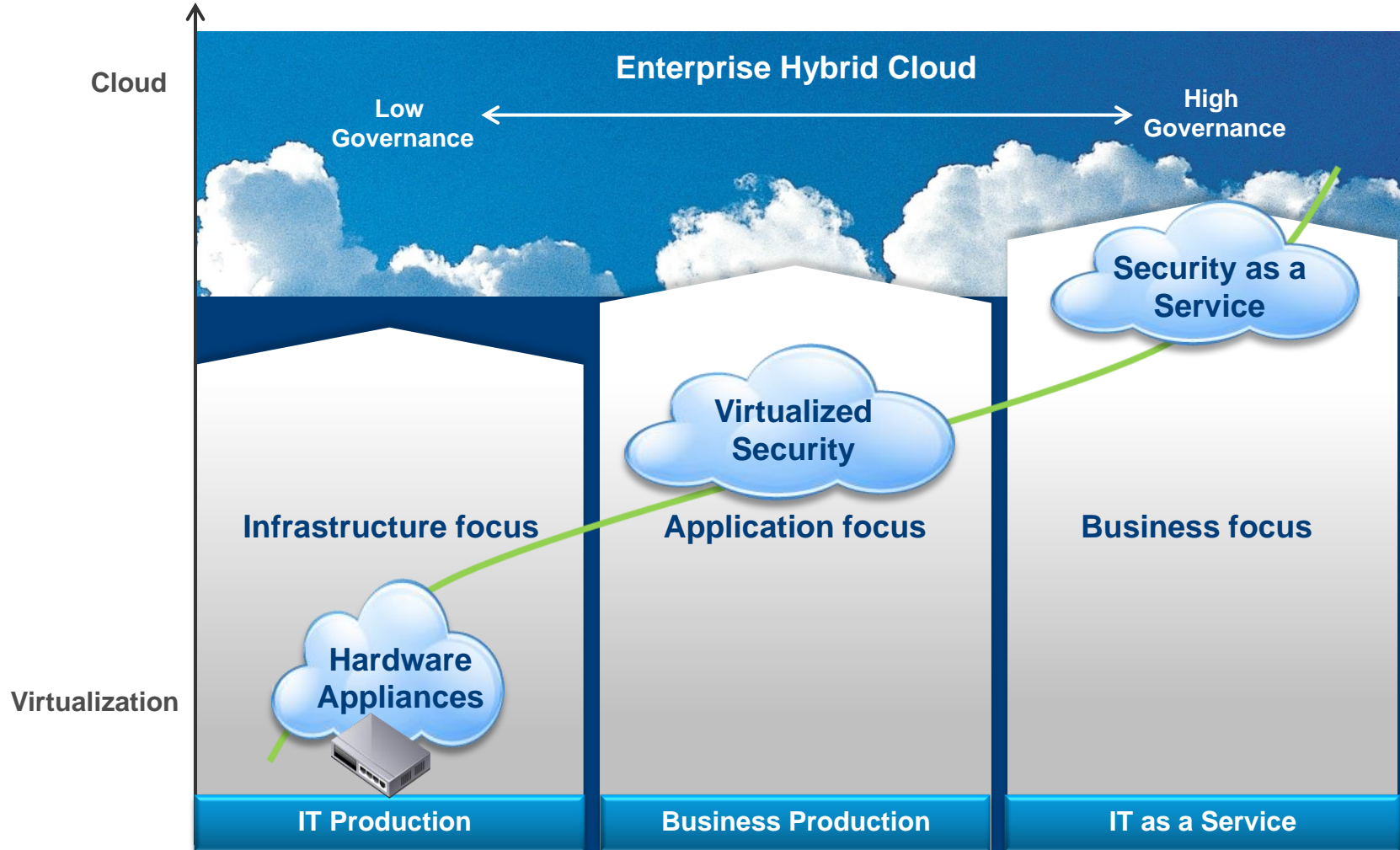
Requirement: Operationally Efficient Security and Compliance

Value Proposition

Journey to IT Transformation – Accelerate and Amplify



The Security Evolution - From Appliances to Security as a Service



The vShield Advantage: Operational Efficiency

Traditional Security

Complex

- Multiple provisioning interfaces
- Overlapping administration roles
- Multiple points for policy administration



vShield

Simple

- Single interface for provisioning
- Separation of duties
- VM-based policy templates

Rigid

- Appliance based
- Policies tied to topology
- Agents in each VM



Adaptive

- Virtual appliances
- Policies based on logical trust zones
- Agentless

Labor Intensive Compliance

- Manual controls
- Tedious, complex reporting
- Data leak concerns



Accelerates Compliance

- Continuous assessment
- Automated reporting
- Manage sensitive data

Deployments on VMware are More Secure than Physical

Use Cases

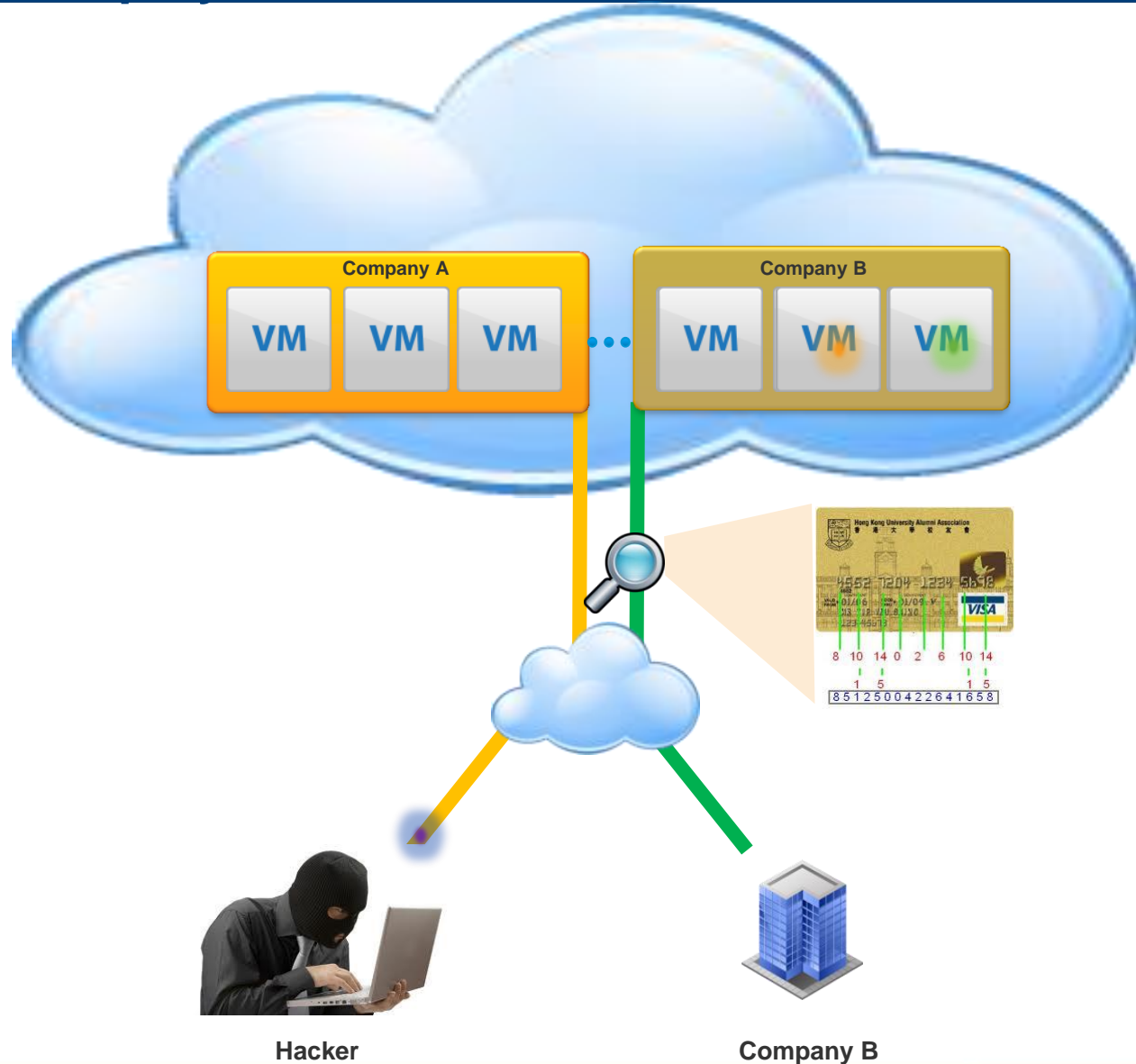
Most Common Use Cases for Security and Compliance

Protect virtual data centers from external threats

Protect applications and data from internal threats

Prevent malware spread in View VDI deployments

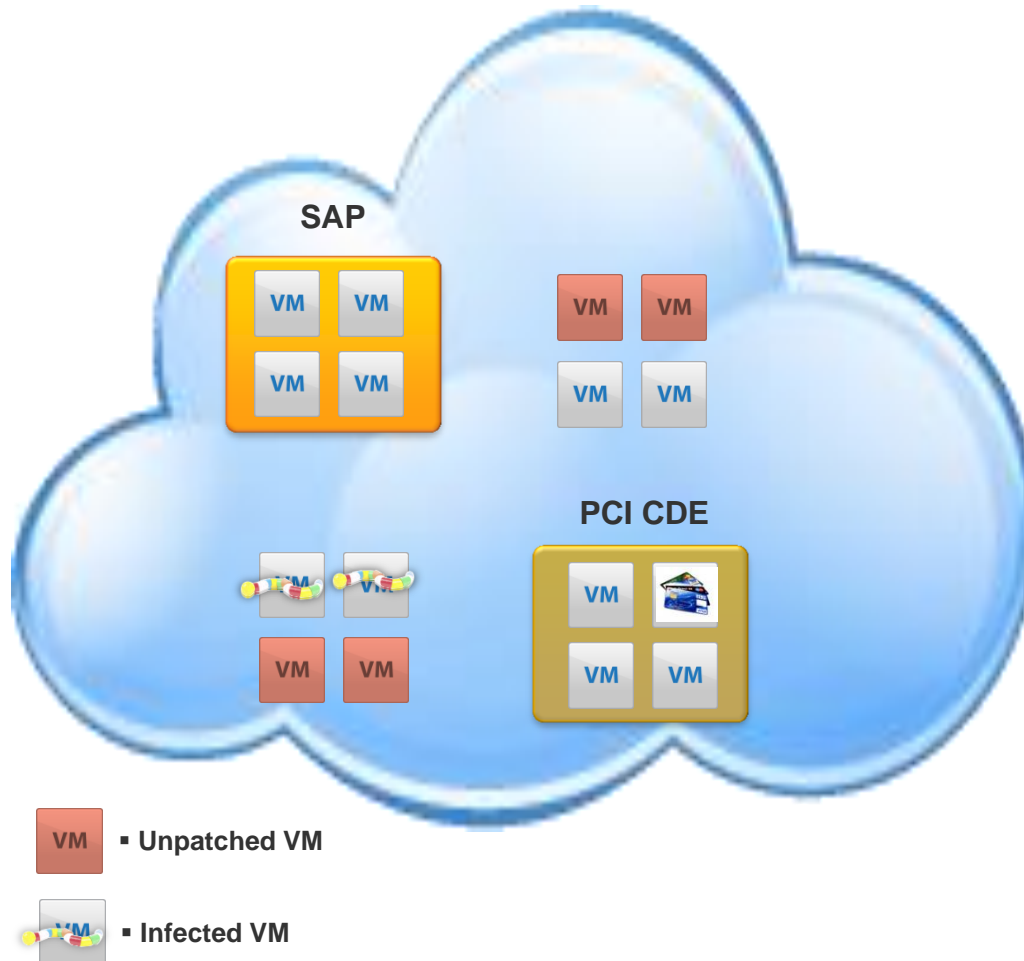
Use Case 1 : Customers wants to Protect Virtual Data Centers and Cloud Deployments From External Threats



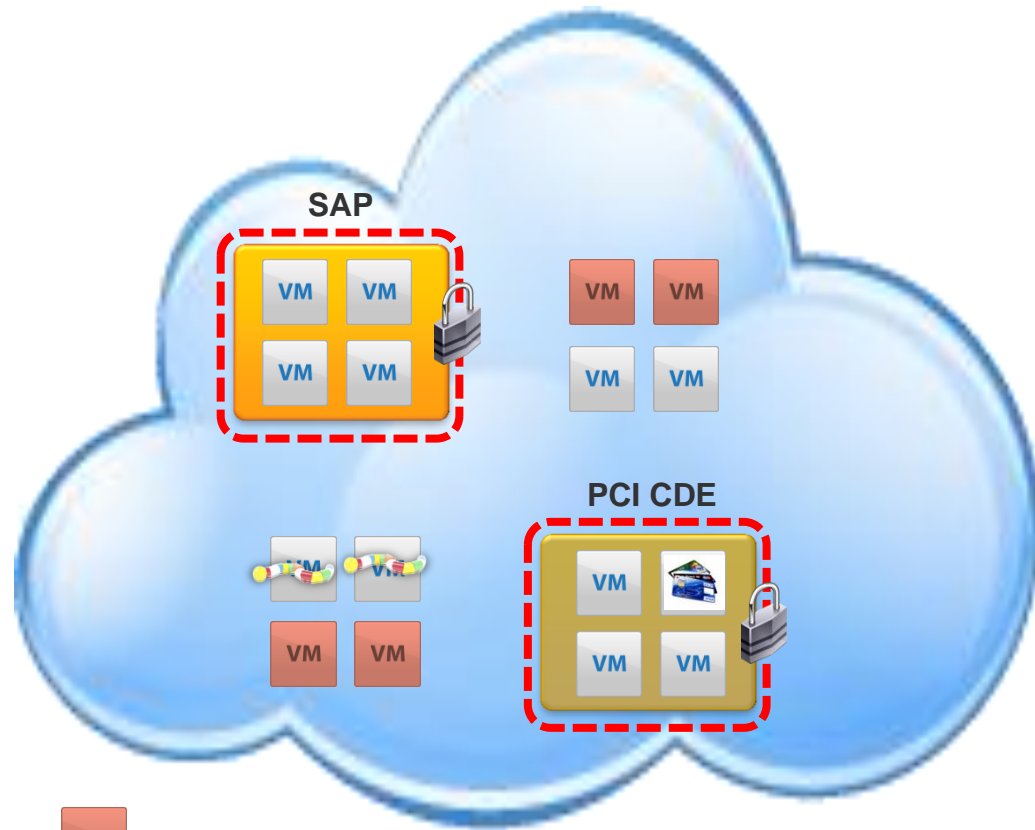
Hacker


Company B

Use Case 2: Customer wants to Protect Virtualized Business Critical Applications from Internal Threats



Solution : vShield App Protects Application from Internal Threats



-  VM ▪ Unpatched VM
-  VM ▪ Infected VM

Overview

- Segments critical applications and databases from the rest of the environment.
- Hypervisor-level firewall provides protection immediately in front of critical workloads.
- Adaptive security templates - “stretch” dynamically as servers are added.
- Robust flow monitoring for application visibility
- Programmable interface(API) for high scale deployments, ecosystem integration

Business Benefits

- Isolate critical applications
- Eliminates cost and operational overhead of hardware firewalls.
- Improves business flexibility

vShield App with Data Security Protects Against Data Leaks

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

Solutions Healthcare + Cloud Proven

Jeff Bills, VP of Information Technology,
Solutions Healthcare and Cloud Proven

About Solutions Healthcare and CloudProven

SOLUTIONS HEALTHCARE MANAGEMENT

People. Technology. Solutions.

- Application Service Provider
- Information Technology Consulting
- Revenue Cycle Management
 - Billing & Accounts Receivable
 - Claims Submission
 - Payment Posting & Collections
- Regulatory Compliance Consulting
- Management Consulting

CLOUDPROVEN NETWORKS

- Hosted Private Cloud Environments
- Security and Compliance Management
- Virtualization & Infrastructure Consulting
- Disaster Recovery & Business Continuity

Size and Scope

- Network currently supports over 3000 users and 3500+ network devices
- Wide Area Network (WAN) spans over 120 locations
- Geography spans locations throughout the US with offices in Indianapolis, Portland, Dallas, and Detroit
- Complete infrastructure hosting for over 600 physicians
- Security and compliance management services for over 100 customers
- Provide hosting of over 100 applications

Presented by: Jeff Bills

- Vice-President of Information Technology
- 12 Years of Experience as a Service Provider
- 8 Years of Experience in the Healthcare Sector
- Skills: CCNP, CCSP, CCDP, JNCIP-SP, MSCE, VCP & VTSP, RHCT, ATSP, ShoreT-VoIP

Why Virtualization and the Cloud?

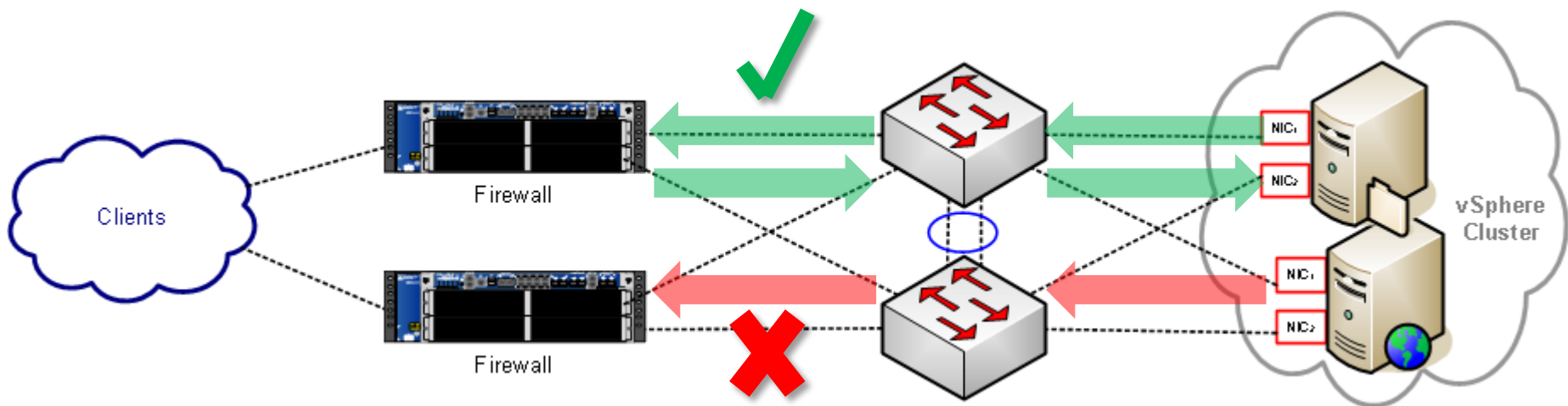
- Organizations are under increased pressure to provide more technology services at a reduced price point year after year.
- Continued technology dependence requires that organizations provide services in a highly available fashion.
- Increasing standards and regulations dictate the importance of data requiring organizations to develop disaster recovery plans.
- Increased demand for services puts pressure on IT to provide for the continued expansion of information systems.
- IT Departments are looking for ways to more efficiently manage systems and their professional resources.

How we Sell the Secure the Cloud

- **Compliance**
 - vShield Data Protection – Mitigate risk by locating where sensitive data is stored.
 - View VDI – Provides data encryption and forces compliance with organizational policies by ensuring the data stays within the confines of the Data Center.
- **Performance and Elasticity**
 - Pool together hardware resources
 - Expand by adding physical cluster resources anytime
- **High Availability for Mission Critical Applications**
 - VMware HA
 - VMware FT
- **Disaster Recovery** – VMware SRM and Data Recovery
- **Enhanced Security** – vShield Edge, Zones, App
- **Reduce or eliminate Capital Expenditures (CapEx)**
- **Lower Total Cost of Ownership (TCO)**

Virtualized Security for Virtualized Resources

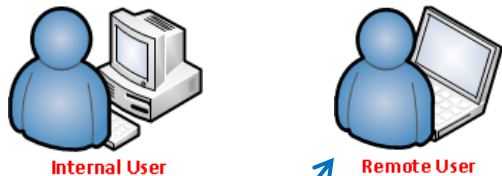
- Moving to the Cloud requires protection within the Hypervisor inside of multi-tenant environments or when segmenting servers by role within an organization.
- **Traditional Physical Security Appliances**
 - Lack visibility within the Virtual environment
 - Inability to expand on demand
 - Policy enforcement does not reach across different systems and locations
 - Inspection and enforcement requires traffic to leave the Virtual environment (Upstream)



Virtualized Security inside the Cloud

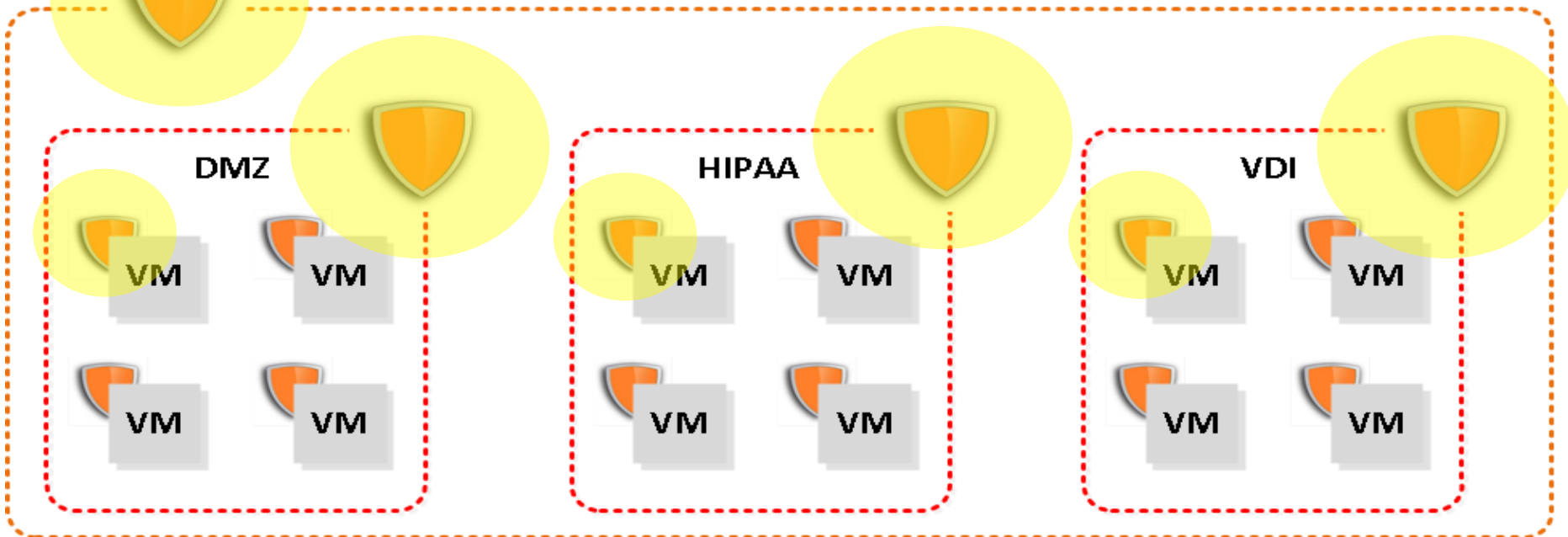
- Threats come from within the organization not just from outside it.
 - vShield Edge – Perimeter Protection (Stateful Firewall / NAT)
 - vShield App – Virtualized Network Based Threat Protection (IPS/UTM)
- Ongoing compliance checks with Compliance Checker
 - HIPAA and Meaningful Use
 - PCI
- Data Loss Prevention with vShield App Data Security
 - Report on the location of sensitive data within the virtual environment.
 - Monitor risk of exposure and properly secure servers inside zones.
- True role based user access control with vShield
 - Individual user identification
 - Individual user based policy and access control

Design Methodology



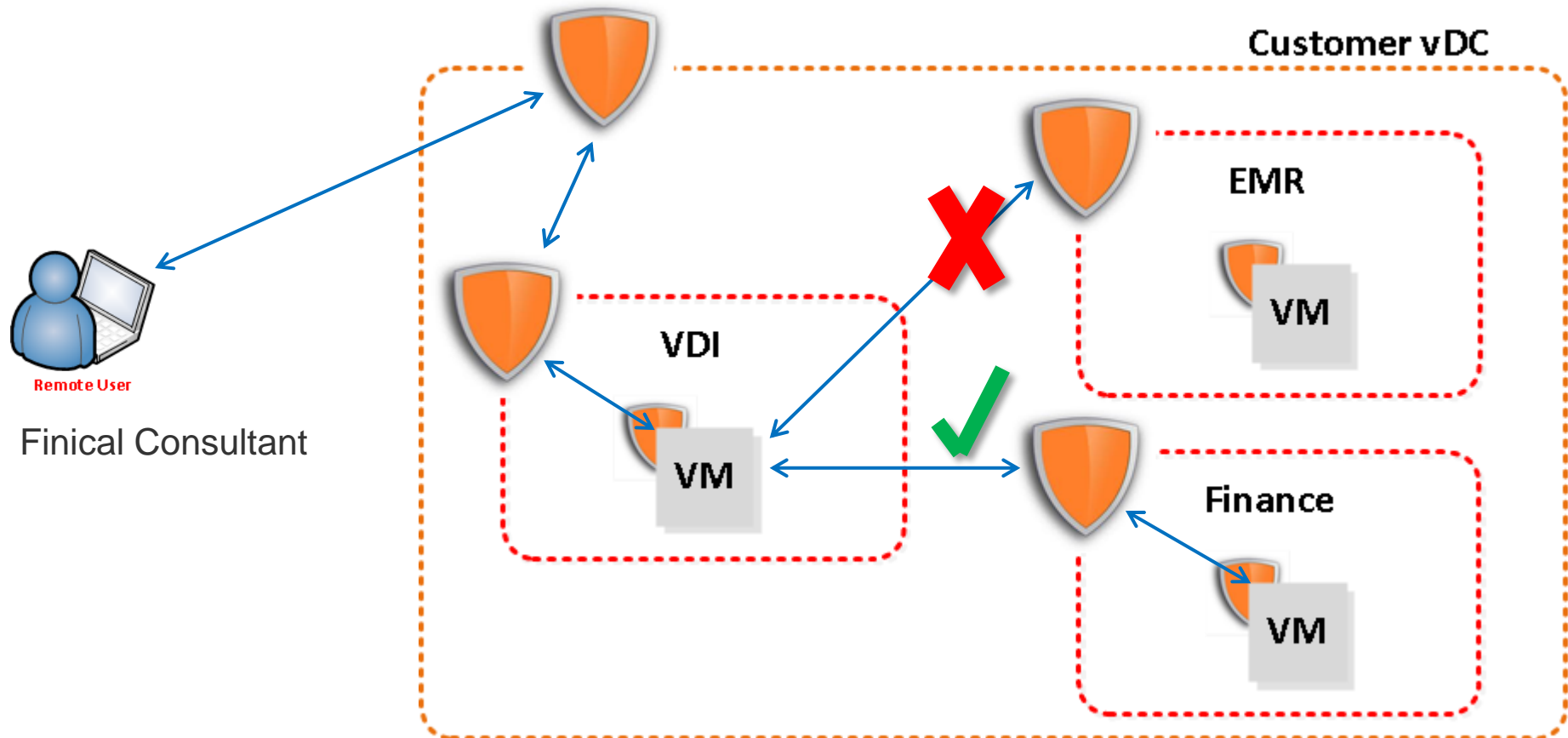
- | vShield App | vShield Edge Instance |
|---------------------------|---|
| ➤ Anti-Virus | ➤ Inspect Server Environment |
| ➤ Anti-Malware | ➤ NAT |
| ➤ Threat/Vulnerability | ➤ Server Role Isolation (a IPS) |
| ➤ Use Data sensitive data | ➤ VPN Remote Access |
| ➤ Offloads | ➤ Restrict VM to VM server communication |
| ➤ Agentless | ➤ Load Balancing |
| | ➤ Stateful Inspection |
| | ➤ User ID |
| | ➤ User ID / Role Based Access (Guest OS all processing) |
| | ➤ User ID / Role Based Access (Hypervisor level) |

Customer vDC



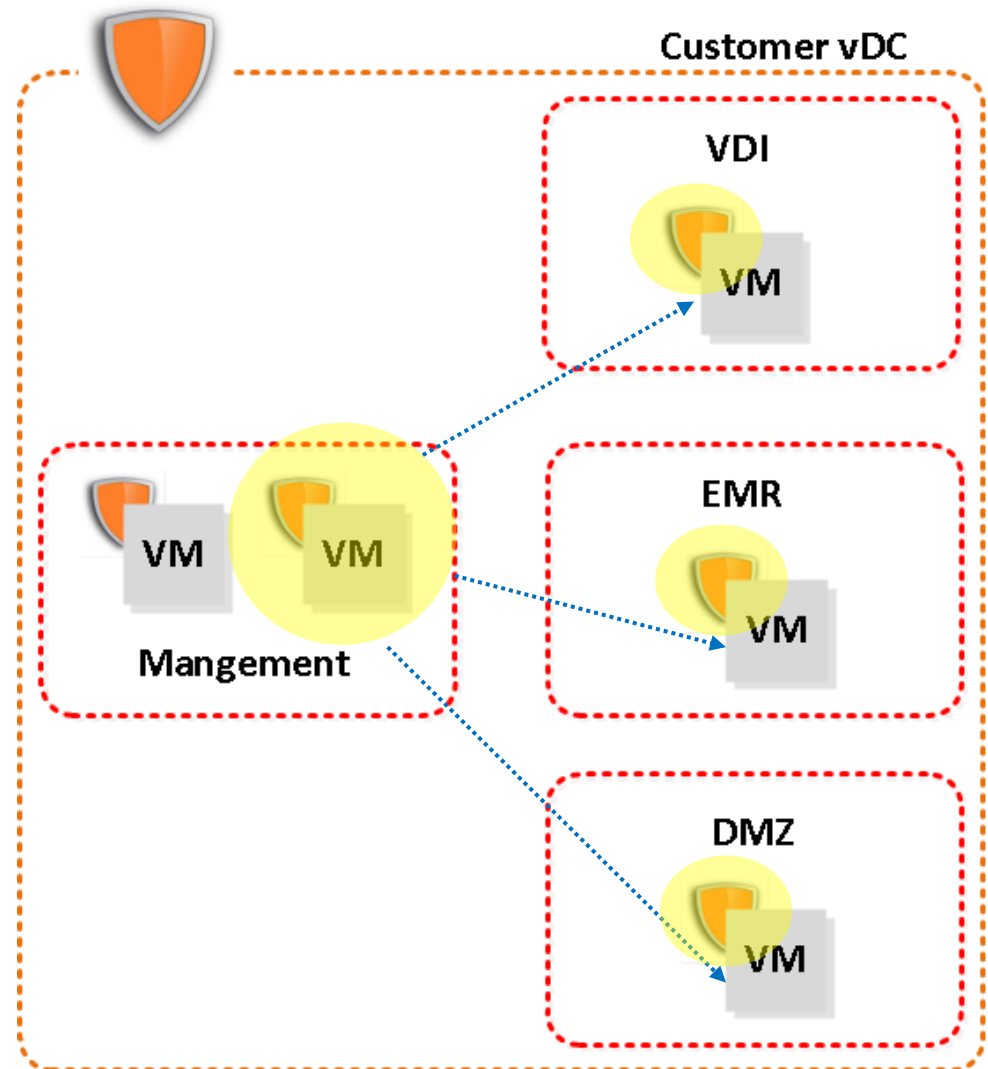
Security - vShield with View VDI

- Prevent unauthorized access from the outside.
- Ensure data encryption between end user and application.
- Restrict user access to resources once inside the environment.
- Protect data using View policies by preventing users from copying data to devices.



Virtualized Data Loss Prevention and Compliance

- Perform continued compliance checks to ensure ongoing compliance. (HIPAA, PCI)
Compliance Checker
- Help prevent the loss of sensitive data by discovering where it resides.
- Reduce exposure by ensuring proper zone protection based on data within the guest VM.
vShield App Data Security
- Utilize View to encrypt data and communication.
 - Offline desktops can provide remote users the ability to work with synchronized encrypted OS images.



Solution Brief: Hospital Surgery Center

Customer Need



St. Francis Mooresville Surgery Center decided to bring its billing in-house, but to maximize the value of that strategy it needed to deploy the billing software on a cost-effective highly available platform. The solution had to provide a high level of data security in compliance with HIPAA.

“A VMware virtual cloud with Solutions was an easy decision. Not only did it eliminate any up-front hardware capital costs, it also gave us more horsepower, redundancy and data security.”

— Keith Jewell, Senior Vice President and Chief Operating Officer for St. Francis Health

Solution with vShield App + Zones

- Create zones on shared infrastructure to control access to Electronic Health Information.
- Restrict user access to applications based on their job responsibilities.
- Protect against the spread and infection. (Malware/Spyware/Vulnerabilities)
- Provide enhanced visibility into guest VMs to determine the level or risk by looking at the type of data stored on each VM. (Compliance)
- Ability to not only expand system resources for the application but also for security to reduce potential slow downs with security inspection.

Business Benefits

- Zero CapEx costs
- Reduced TCO - 35% lower
- Expand on Demand with Security (No Capital)
- Ability to visualize compliance with HIPAA

Solution Brief: Private Medical Practice

Customer Need



Reduce cost and system failure due to increasingly emerging threats. Ensure data security and integrity across multiple offices and with Internet based user access.

"We wanted to reduce our IT costs and use the resources to better our practice. We need resilient, high performance systems that maintain security but I don't want to have to worry about building and managing them. I'd rather spend my time doctoring."

- MPI physician William L. Hall.

Solution with View and vShield App

- Utilize View VDI to provide encrypted access from remote locations.
- Protect against today's emerging threats without having to manage individual computers by way of costly and performance robbing individual agents running on each computer.
- Ensure the integrity and compliance of data by keeping it inside the Data Center.
- Expand the system as the practice continues to grow without concern for performance degradation due to physical security appliances.

Business Benefits

- Improved security of patient data
- Reduced infrastructure costs by 40 percent
- Cost effective ability to securely expand and integrate remote offices on demand

Questions???



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Jeff Bills – Vice President of Information Technology

Thank You!
Questions?

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