



PCTY2011

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A red silhouette of a world map is located to the right of the "2011" part of the main title.

Optimizing the World's Infrastructure
10th May 2011 London, UK



New Technologies – Life in the Cloud

- Service Request Driven Provisioning
- Securing the Cloud
- Storage Considerations and Backup Capabilities



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Service Request Driven Provisioning

Miles Hamill – Client Technical Professional

Demonstration Objectives

This scenario demonstrates IBM's strategic cloud products as a real live integrated product demo. It highlights the most important aspects of what a cloud is and shows how IBM's products work together.



Backup

Ensure integrity, availability and recoverability of Cloud based data



Self Service

Ease of use and improved responsiveness and efficiency



Orchestration

Manage the process for approval of usage



Security

Secure data transmission into and out of the Cloud



Monitoring

Provide visibility of performance of virtual machines



Provisioning

Automate provisioning of resources



Metering and rating

Track usage of resources

Demonstration Roles and Flow



Cloud User

Show existing
server

Request new
project



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Approve
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Securing the Cloud

Peter Cutler – Client Technical Professional

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

Virtualized

Network IPS

Should protect against threats at perimeter and between VMs

Server Protection

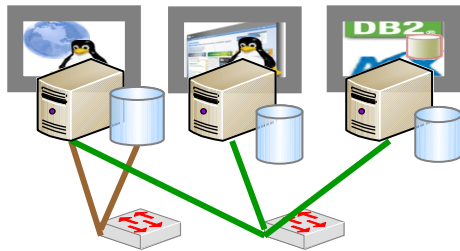
Securing each VM as if it were a physical server adds time, cost and footprint

System Patching

Needs to protect against vulnerabilities that result from VM state changes

Security Policies

Policies must be able to move with the VMs



Static



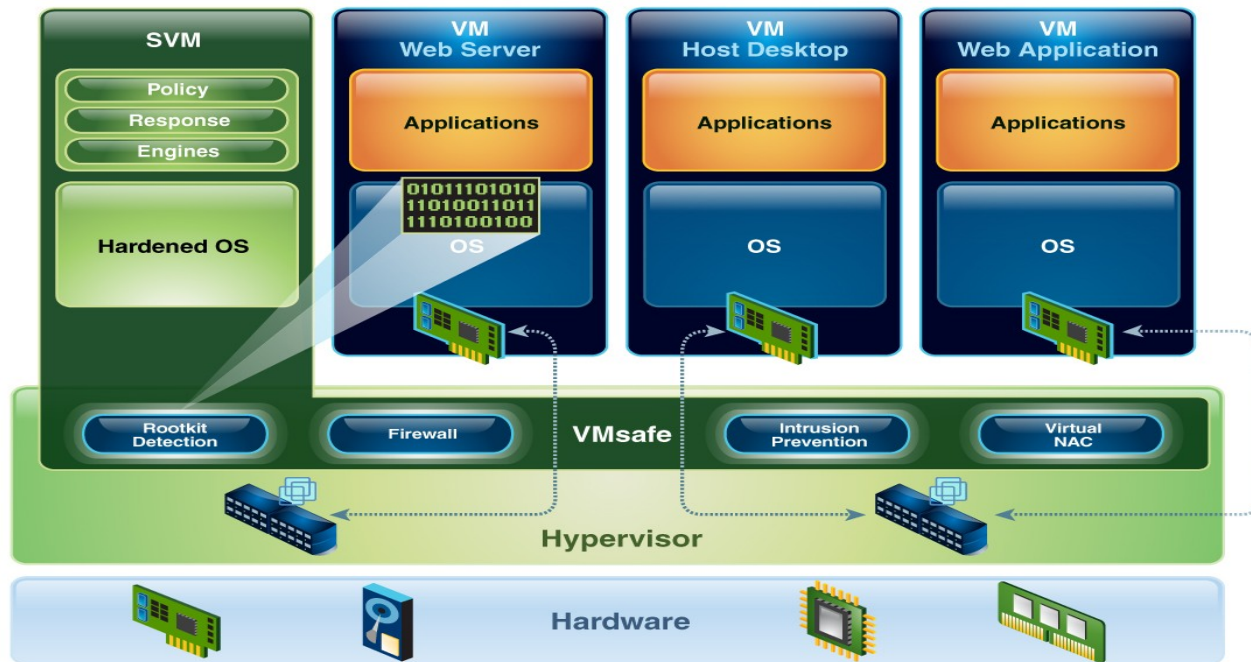
SECURITY



Dynamic

IBM Virtual Server Protection for VMWare

Integrated threat protection for VMWare vSphere 4





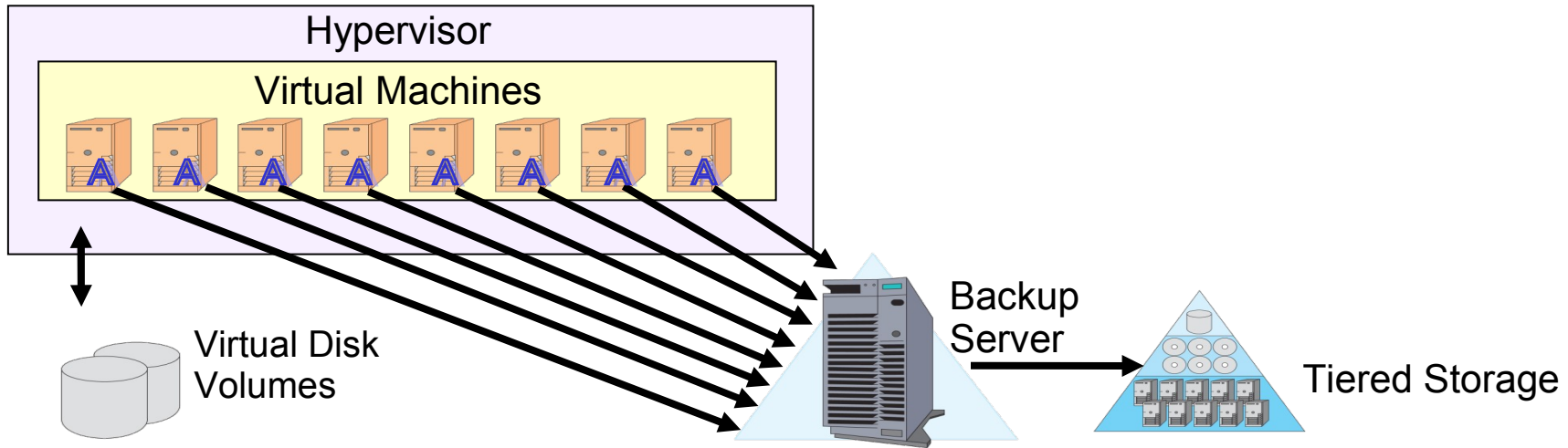
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Storage Considerations and Backup Capabilities
Paul Hunt – Client Technical Professional

Traditional protection model has “Cloud Issues”

- Install a backup agent in the guest OS, just like a physical server
- Run and manage backups just like in a physical server environment
- **Downside:** deploying, managing, maintaining ‘backup agent sprawl’
- **Downside:** can put a serious drain on processor, memory, I/O resources
 - Running multiple backups at once; file system scans during incremental backups; etc.





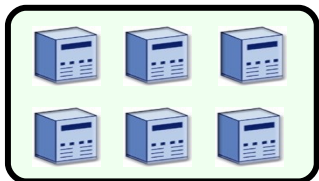
Tivoli Storage Manager for Virtual Environments

- Initial focus on VMWare (80+ percent of cloud implementations)

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Vmware Server(s)



- Busy saving cost by sweating assets
- VMs typically created by a “VMWare Team”
- or maybe dynamically (in a cloud, by TSAM, TPM?)

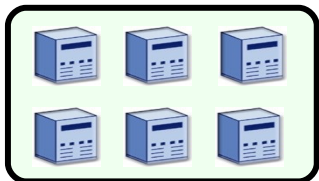


Production
Storage
(SAN, NAS, etc..)

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Each VM has many needs:

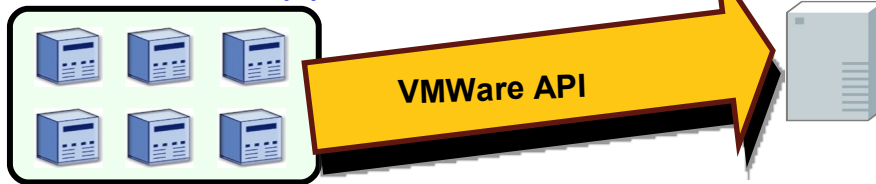
- Storage Provisioning
- Networking
- **Data Protection**
- Access Control
- Probably managed by multiple teams

Tivoli Storage Manager for Virtual Environments

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Vmware Server(s)

TSM for Vmware proxy



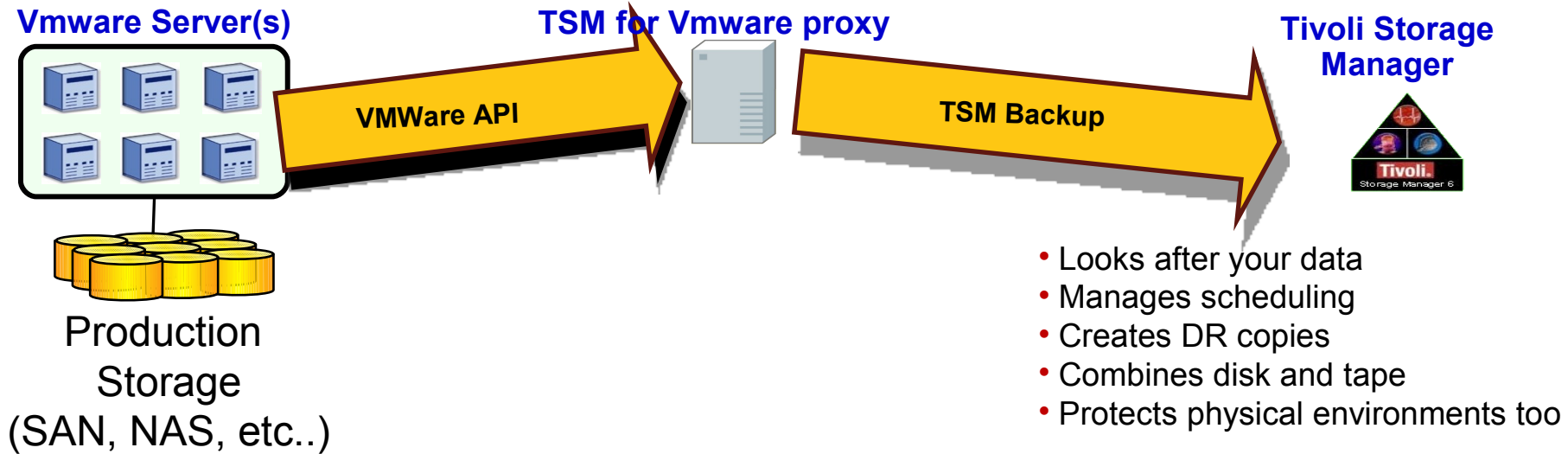
- A physical or virtual machine that protects your VM's
- Uses standard VMWare API's
- Can identify new VMs before each backup run
- Can be configured to automatically protect them
- Works for any guest VM Operating System
- No software needed within VM
- Flexible restore options from "image backups"

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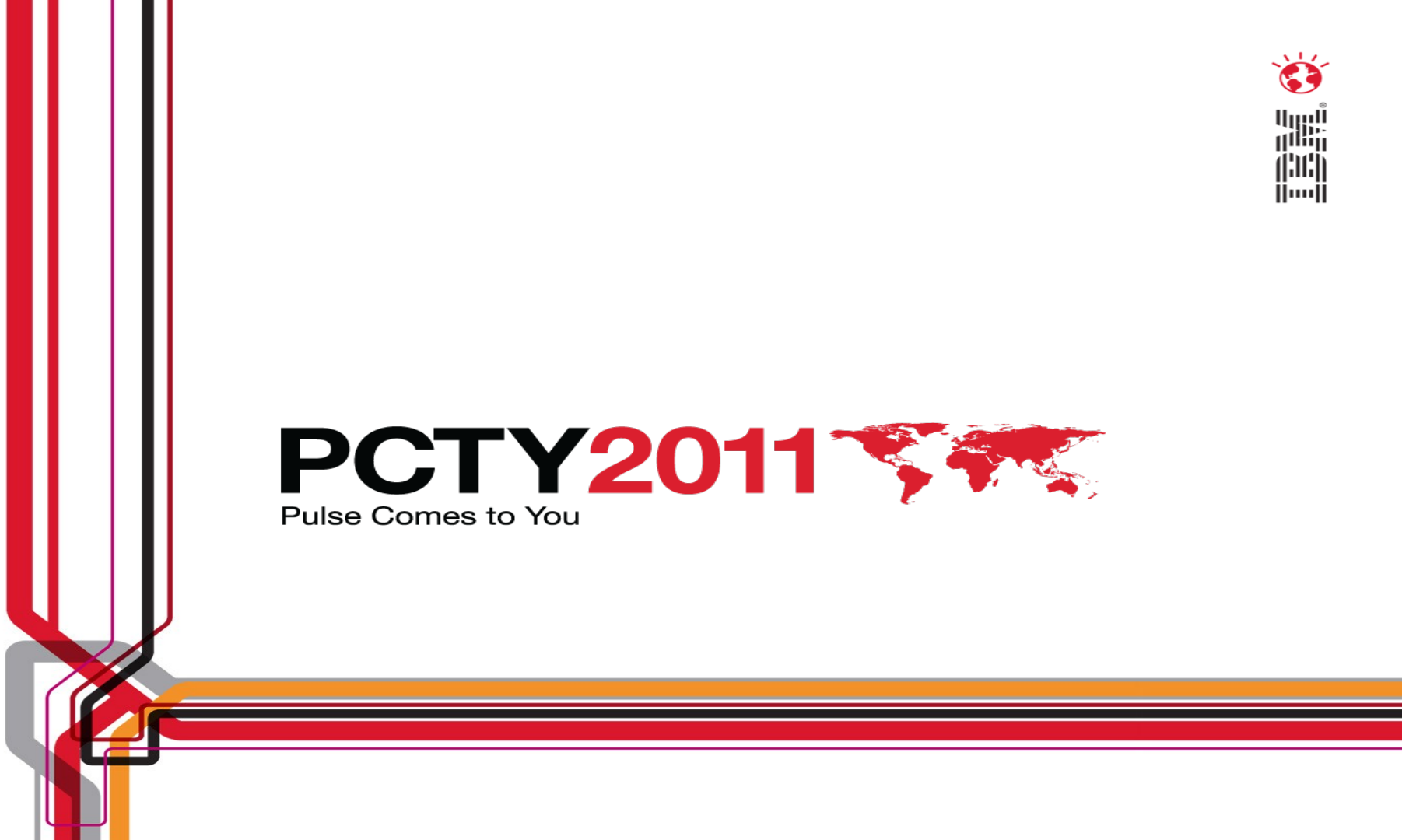
TSM for Virtual Environments

- Block Level Backup
- Auto-Discovery of new VM's
- Support for LAN-Free data transfer
- Scalability
- Inbuilt data deduplication
- Integrates with Physical Machine Protection
- File, volume or full VM restore options
- Near Instant Restore from disk or tape



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