



VMware Site Recovery Manager Overview

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Executive Summary

- ▶ **VMware virtual infrastructure transforms organizations' ability to protect their datacenter**
- ▶ **VMware Site Recovery Manager is a new product for disaster recovery that does the following:**
 - > Simplifies and automates key disaster recovery workflows: setup, testing, and failover
 - > Simplifies and centralizes management of recovery plans
 - > Makes it easy for customers to leverage their investment in storage replication technologies with their virtual infrastructure
- ▶ **This combination of disaster recovery automation with the capabilities of VMware Infrastructure **reduces time to recovery, risk, complexity and cost****

These features are representative of feature areas under development. Feature commitments must not be included in contracts, purchase orders, or sales agreements of any kind. Technical feasibility and market demand will affect final delivery.



Agenda

- ▶ **Disaster Recovery Challenges**
- ▶ **VMware Site Recovery Manager**
- ▶ **Summary**

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Requirements for Disaster Recovery

Minimize Downtime

93% of companies that lost their data center for ten days or more due to a disaster filed for bankruptcy within one year of the disaster.

--National Archives and Records Administration

Minimize Risk

92% of users surveyed acknowledged that their companies would face serious consequences if they had to implement their disaster recovery plans.

--Dynamic Markets Ltd.

Control Cost

73% of executives expressed concern with the costs associated with maintaining a secondary data centre

--Beacon Technology Partners

Effective disaster recovery is a business imperative, but is very difficult to achieve

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Challenges of Disaster Recovery

Minimize downtime

- > Many manual processes for recovery
- > Multiple steps to overcome hardware differences
- > Incomplete or out-of-date runbooks

Reduce risk

- > Testing requires additional hardware and infrastructure
- > Usually only data is regularly and cleanly updated
- > Frequent failures during recovery

Control cost

- > Simplest recovery requires identical hardware
- > Idle recovery hardware is impossible to repurpose
- > Multiple third-party products necessary for recovery

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VMware Vision for Disaster Recovery

Rapid

- > Automate recovery process
- > Eliminate failures due to hardware dependencies
- > Integrate different components of recovery

Reliable

- > Enable easier, more frequent testing
- > Turn manual, inconsistent processes into pre-programmed, repeatable processes

Manageable

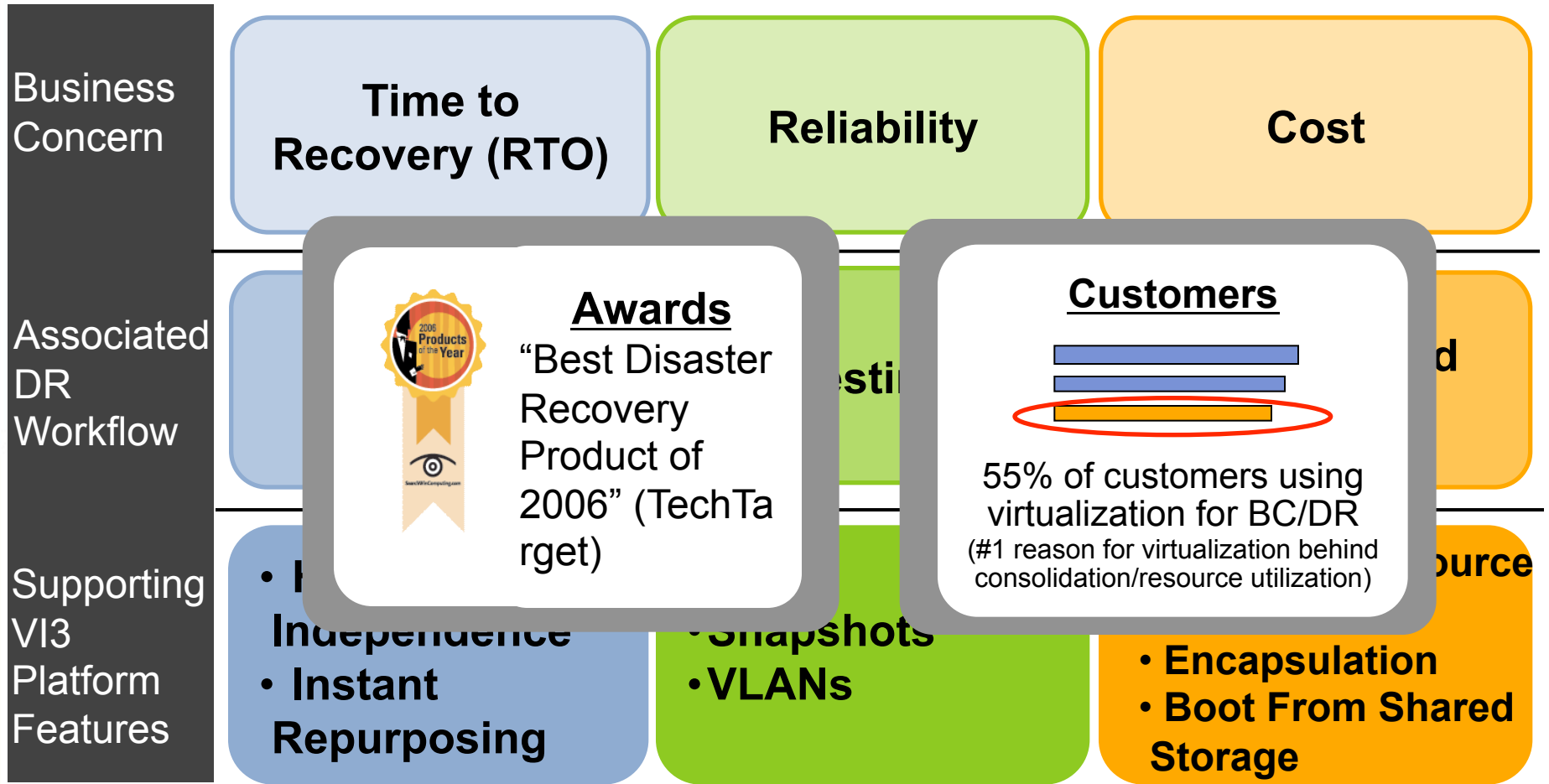
- > Centralize and simplify management of recovery plans
- > Make disaster recovery protection a property of virtual infrastructure

Affordable

- > Eliminate idle recovery hardware
- > Eliminate dependencies on physical infrastructure

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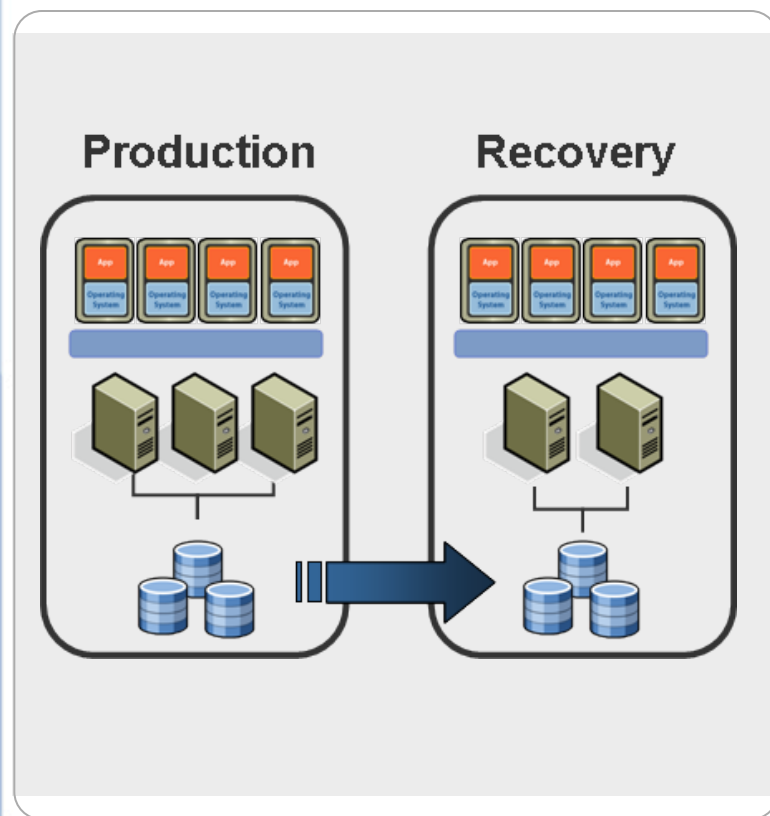
VMware Infrastructure Adds Value To DR Today



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Introducing VMware Site Recovery Manager

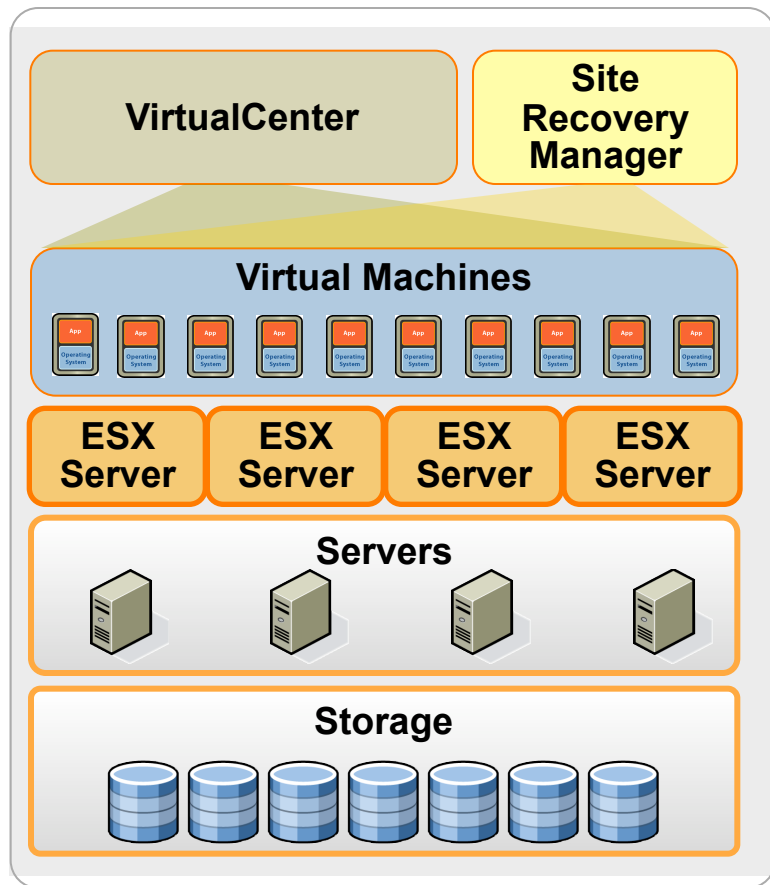
Site Recovery Manager leverages VMware Infrastructure to transform disaster recovery



- > **Simplifies and automates disaster recovery workflows:**
 - Setup, testing, failover
 - > **Turns manual recovery runbooks into automated recovery plans**
 - > **Provides central management of recovery plans from VirtualCenter**
-
- > **Works with VMware Infrastructure to make disaster recovery **rapid, reliable, manageable, affordable****

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Site Recovery Manager Core Capabilities



Centralized management for DR

- Create, test, update and execute recovery plans from a single point of management
- Tight integration with VirtualCenter

Disaster recovery automation

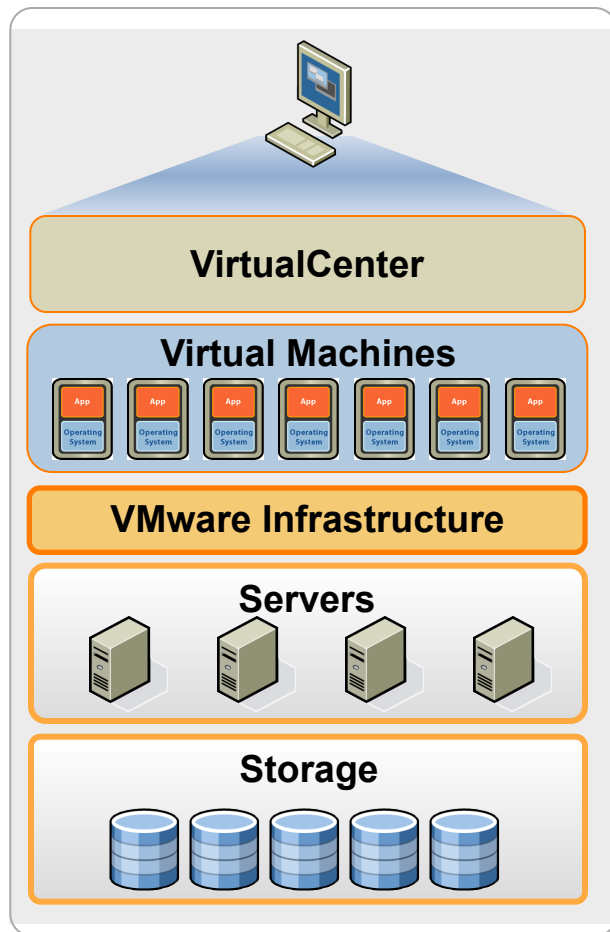
- Build recovery process in advance
- Automate testing of recovery plans
- Automate execution of recovery process

Simplified setup and integration

- Allocate and manage recovery resources
- Easy integration with leading vendors' storage replication systems

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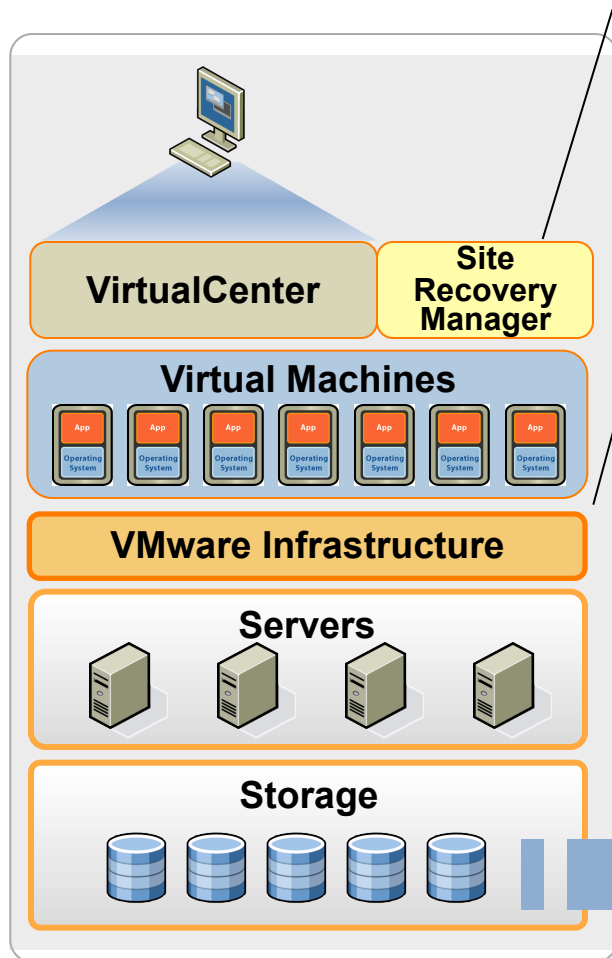
Key Components



VMware Infrastructure 3 deployment

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Key Components



Site Recovery Manager

- > Manages and monitors recovery plans
- > Tightly integrated with VirtualCenter

VMware Infrastructure

- > Requires ESX Server 3.0.2 Patch 1, 3.5 Update 1
- > Requires VirtualCenter 2.5 Update 1

3rd-Party Replication

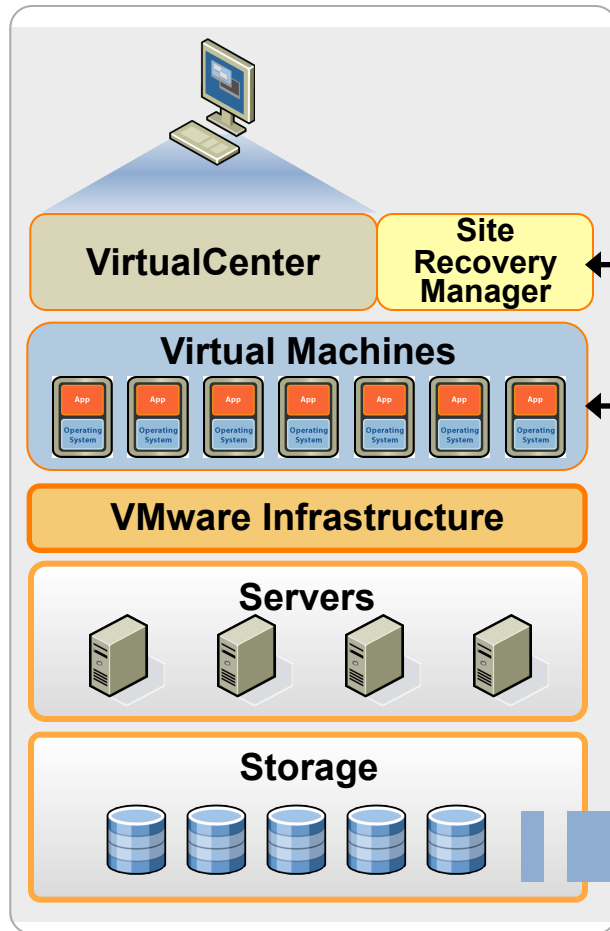
- > Integrated via replication adapters
- > Replication adapters certified and supported by replication vendor

Partner Replication

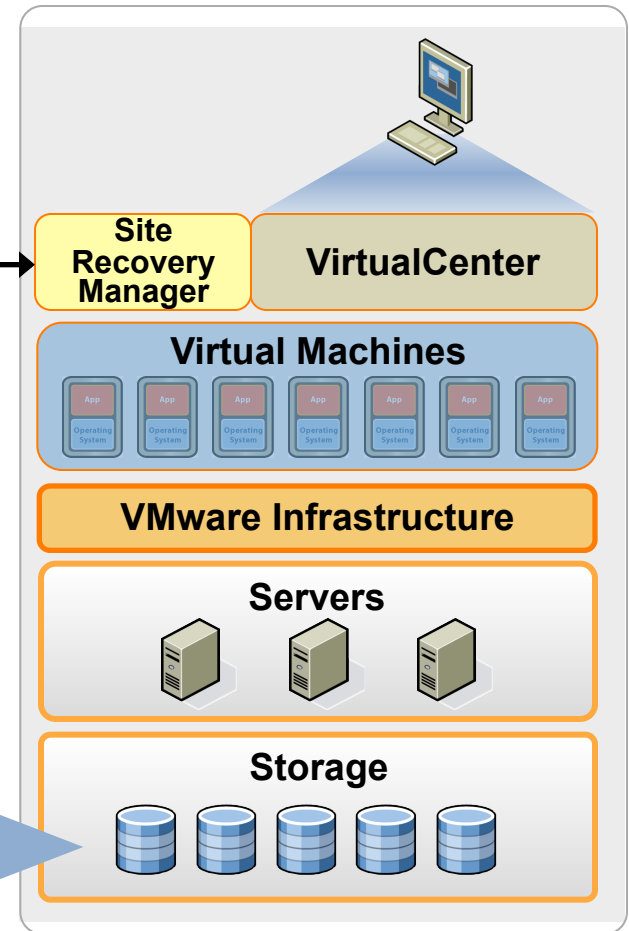
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Key Components

Production



Disaster Recovery



Site Recovery Manager

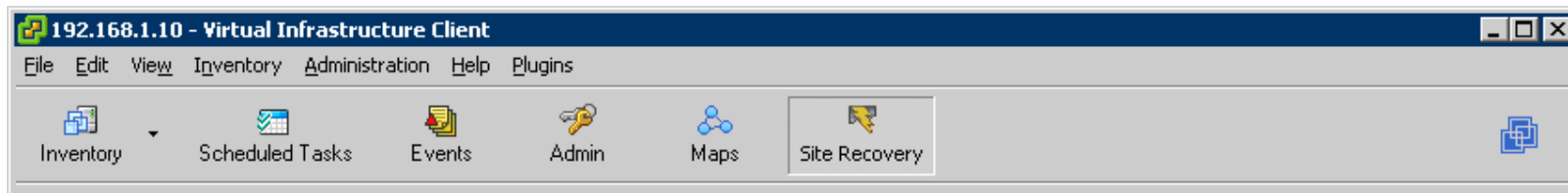
Protected virtual machines

Partner Replication

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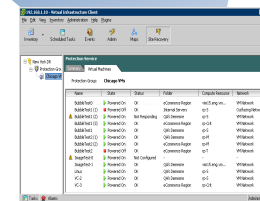


Site Recovery Manager Management Interface



Disaster recovery management is another view of your environment

- > Viewed from VirtualCenter management client
- > Central point of management for virtual infrastructure and disaster recovery



VirtualCenter client



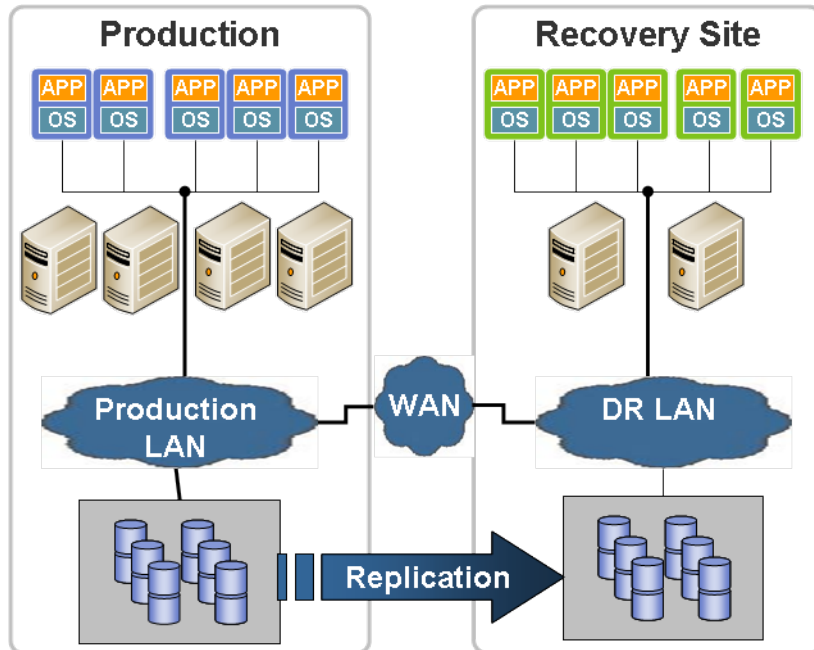
VirtualCenter

Site Recovery Manager

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Disaster Recovery Setup



Create recovery plans

- For virtual machines, applications, business units

Integrate with replication

- Identify which virtual machines are protected by replication configuration

Map recovery resources

- Server resources, network resources, management objects

Specify recovery process

- Convert manual runbook to pre-programmed response
- Customizable with scripting and callouts

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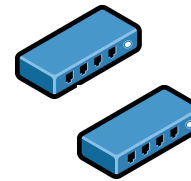
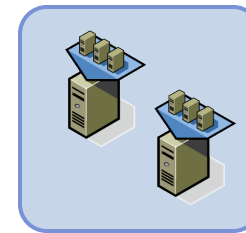
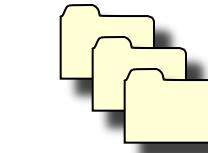
Setup: Mapping Recovery Resources

Maps production resources to resources available at recovery site

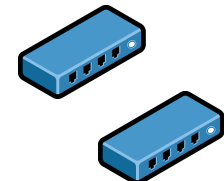
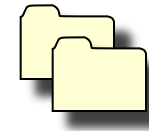
- Virtual machine hierarchy
- Resource pools
- Network connections

Eliminates complexity of managing recovery site resources

Production



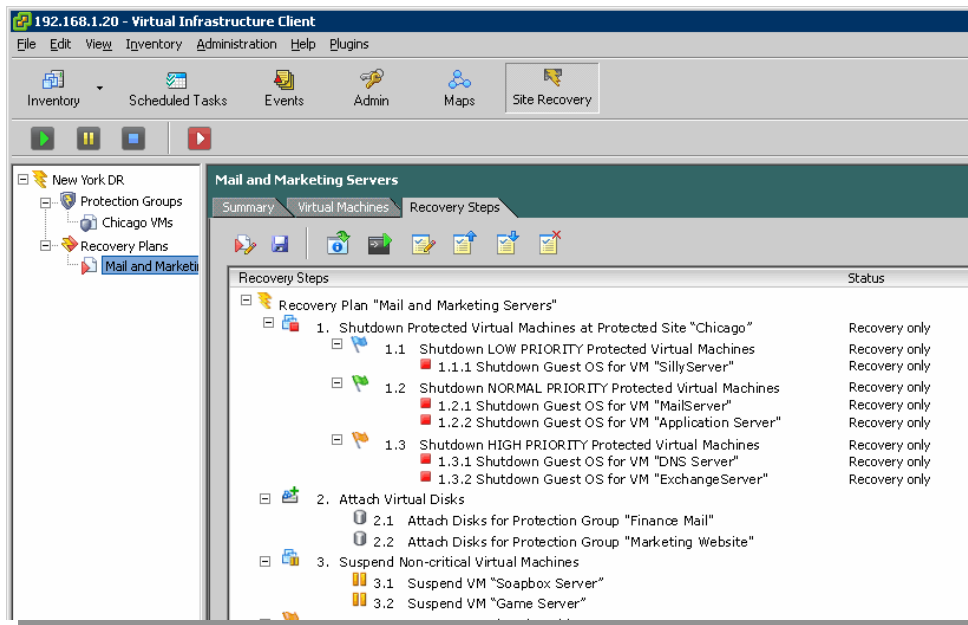
Disaster Recovery



Primary Site Resources	Secondary Site Resources	Secondary Site Path
Networks		
vim22dc	---	
VM Network	VM Network	/Networks/vim23dc/
Compute Resources		
vim22dc	---	
vim22.eng.vmware.com	None Selected	
shared	None Selected	
local services	None Selected	
protected services	recovery	/Hosts & Clusters/vim23dc/vim23.eng.vmware.com/shared/
Virtual Machine Folders		
vim22dc	None Selected	
shared	recovery	/Hosts & Clusters/vim23dc/shared/

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Setup: Building Recovery Plans



Turn manual runbook into automated process

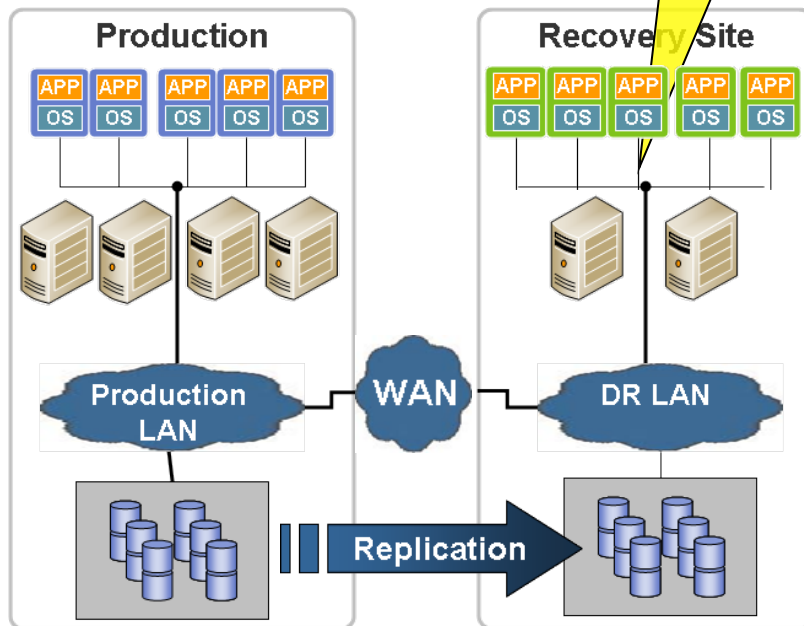
- Specify steps of recovery process in VirtualCenter

Extensible framework

- Scripts for specialized tasks
- Checkpoints for manual steps
- Enables integration with physical recovery

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Failover



Detect site failures

- Raise alert when heartbeat lost

Initiate failover

- User confirmation of outage
- Granular failover initiation

Manage replication failover

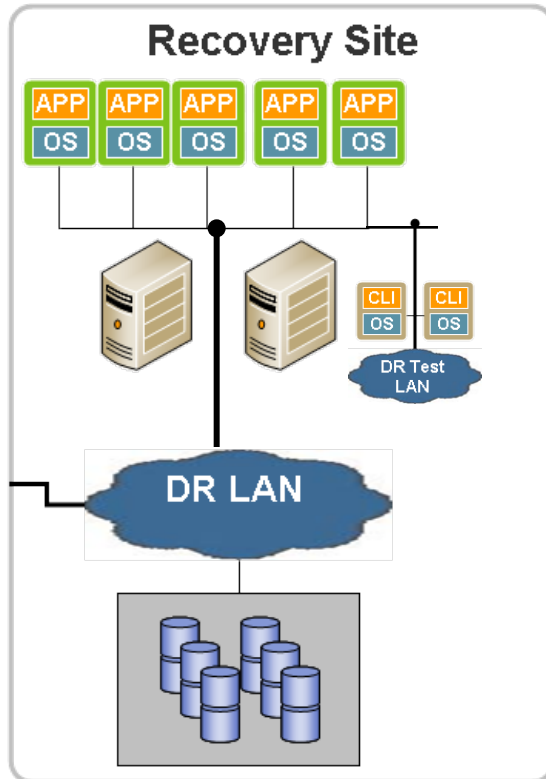
- Break replication
- Make replica visible to recovery hosts

Execute recovery process

- Use pre-programmed plan
- Provide visibility into progress

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Testing



Replication Management

- Snapshot replicated LUNs before test
- Delete snapshots of replicated LUNs after test

Network Management

- Change all virtual machines to a test port group before powering them on

Customization/extensibility

- Same breakpoints and callouts as failover sequence
- Extra breakpoints and callouts around the test bubble

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Site Recovery Manager Core Benefits

Expand disaster recovery protection

- > Now any workload in a VM can be protected with minimal incremental effort and cost

Reduce time to recovery

- > As soon as disaster is declared, a single button kicks off recovery sequence for hundreds of VMs

Increase reliability of recovery

- > Replication of system state ensures a VM has all it needs to startup
- > Hardware independence eliminates failures due to different hardware
- > Easier testing based off of actual failover sequence allows more frequent and more realistic tests

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Summary



Site Recovery Manager Leverages VMware Infrastructure to Make Disaster Recovery

- > **Rapid**
 - Automate disaster recovery process
 - Eliminate complexities of traditional recovery
- > **Reliable**
 - Ensure proper execution of recovery plan
 - Enable easier, more frequent tests
- > **Manageable**
 - Centrally manage recovery plans
 - Make plans dynamic to match environment
- > **Affordable**
 - Utilize recovery site infrastructure
 - Reduce management costs

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Questions?