

VIRTUALIZATION **FORUM** 2008

DISCOVER. CONNECT. **VIRTUALIZE.**

Automating the Virtual Datacenter

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VMware

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Agenda

- The New Datacenter Automation Topology
- VMware IT Service Delivery Solutions
- VMware Business Continuity Solutions
- Adoption Paths

Virtual Machines Enable Datacenter Automation

Sprawled



Physical Systems

Consolidated
(Virtualized)



Virtual Machines

Content
Management



IT Services

Virtual Machines are
*Standardized Software
Containers*

The Virtual Infrastructure Stack Today

3

Automation

IT Service
Delivery



Business
Continuity



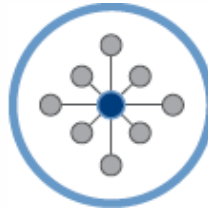
Desktop
Management



2

Virtual
Infrastructure

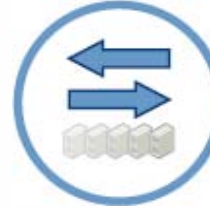
Resource Mgt



Availability



Mobility



Security

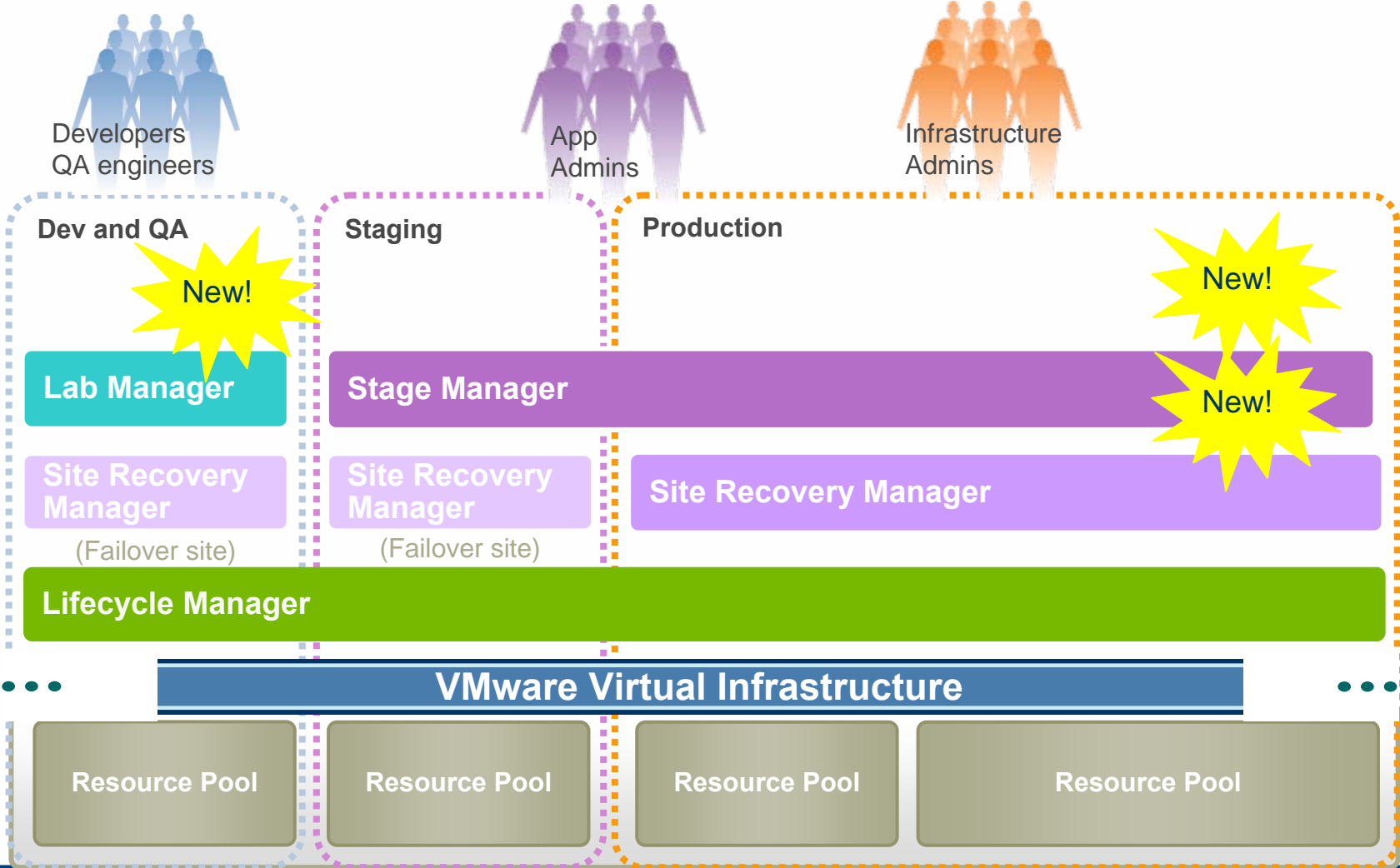


1

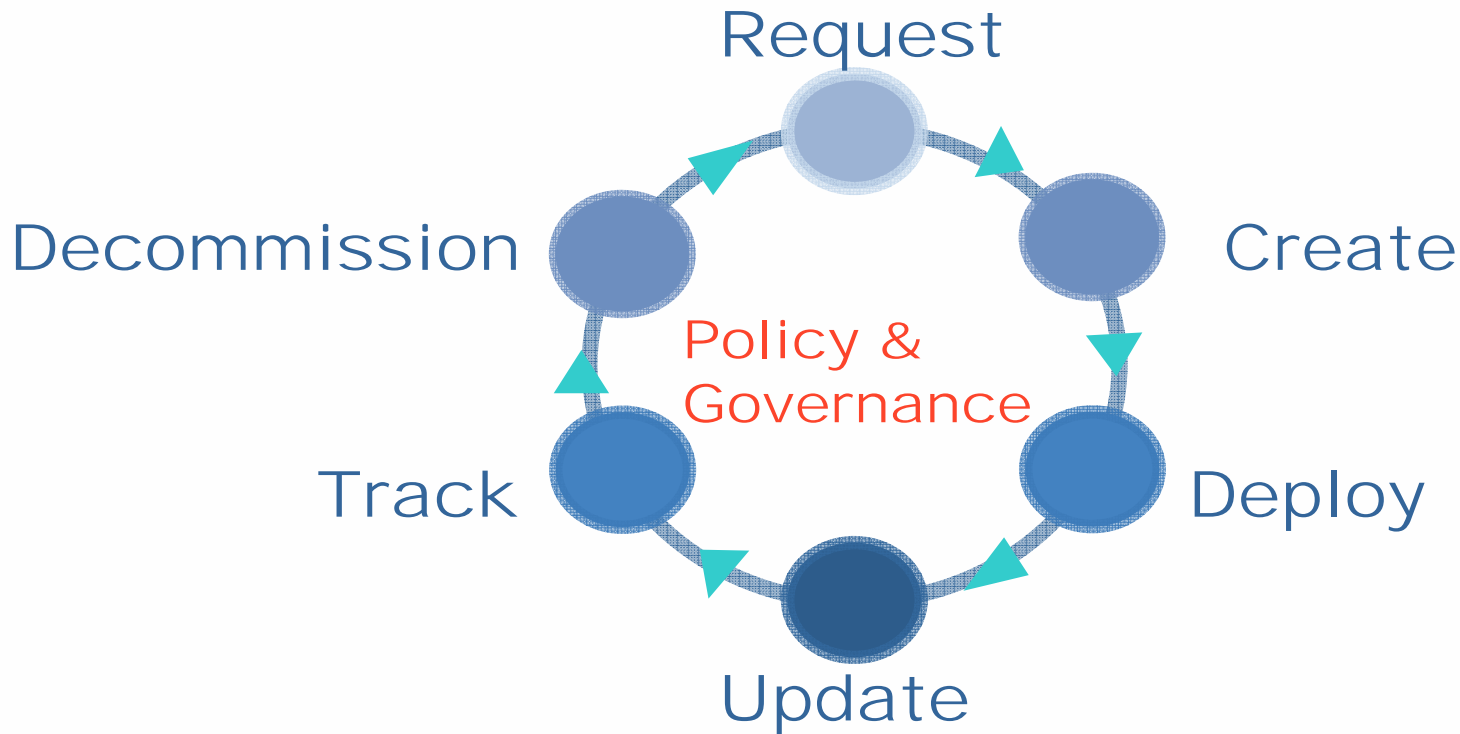
Virtualization
Platform



The New Datacenter Automation Topology



IT Service Delivery automation definition



Lifecycle manager is the solution to customers newly surfaced operationalizing requirements

Introducing VMware Lifecycle Manager

VI Admin templates, VM Placement

Request VM

Provisioning & Decommissioning User Information **VM Parameters** Additional Information

(Fields marked with a * are required.)

Virtual Machine Information

This will define the type of server that will be installed and if it should be started after being provisioned.

* **Server type**

Windows 2003 Standard	Description : 8 GB Memory; 2 2.4 CPU; 400 GB Disk
Windows 2003 Datacenter	Unit Cost : 100
Windows 2000 Standard	Setup Cost : 2000

Start Virtual Machine

Consistent Process for Requesting and Approving VMs

No longer need to rely on e-mail, phone, spreadsheets etc...



Catalog **Requests**

Virtual Machine Requests

Virtual Machines

+ REQUEST ↻ REFRESH

State	Name	Request Date	Provision Date	Decommission Date	Substate
<input checked="" type="checkbox"/>	lcm-003	02/04/2008	02/04/2008		Waiting For Approval
<input type="checkbox"/>	lcm-004	02/04/2008	02/04/2008		Check Auto Mapping
<input type="checkbox"/>	lcm-007	02/11/2008	02/11/2008	03/20/2008	Waiting For Placement
<input checked="" type="checkbox"/>	lcm-010	02/12/2008	02/12/2008	03/29/2008	Waiting For Approval



Catalog Requests **Approvals** Reports

Requests to approve

Virtual Machines

↻ REFRESH

State	Name	Request Date	Provision Date	Decommission Date	Substate	Details	
<input checked="" type="checkbox"/>	lcm-003	02/04/2008	02/04/2008		Waiting For Approval	<input checked="" type="checkbox"/> APPROVE REQUEST	<input type="checkbox"/> REJECT REQUEST
<input checked="" type="checkbox"/>	lcm-010	02/12/2008	02/12/2008	03/29/2008	Waiting For Approval	Lifecycle Information Request Date 02/19/2008 Provision Date 02/19/2008 Decommission Date 03/19/2008 Extension Date -	
<input checked="" type="checkbox"/>	lcm-012	02/12/2008	02/12/2008	03/12/2008	Waiting For Approval		
<input checked="" type="checkbox"/>	lcm-013	02/12/2008	02/12/2008	03/12/2008	Waiting For Approval		

“System of Record” for Virtual Infrastructure

BEFORE Lifecycle Manager

AFTER Lifecycle Manager

To: bhemerson@vmware.com
 Cc:
 Bcc:
 Subject: Virtual Machine Needed

Normal Arial 24

I asked for a single machine for firewall testing over 2 weeks ago. Did you lose my request?

-Mike

To: bhemerson@vmware.com
 Cc:
 Bcc:
 Subject: Virtual Machine Needed

Normal Arial 24

I need a production web server.

-Larry

To: bhemerson@vmware.com
 Cc:
 Bcc:
 Subject: Location of VM?

Normal Arial 24

Where is my virtual machine located? I need to access it immediately

-Joe

vmware lifecycle manager

admin (admin) - Administrator | About | Logout

Catalog Requests Approvals Placement **Reports** Status Infrastructure Criteria Configuration Troubleshooting

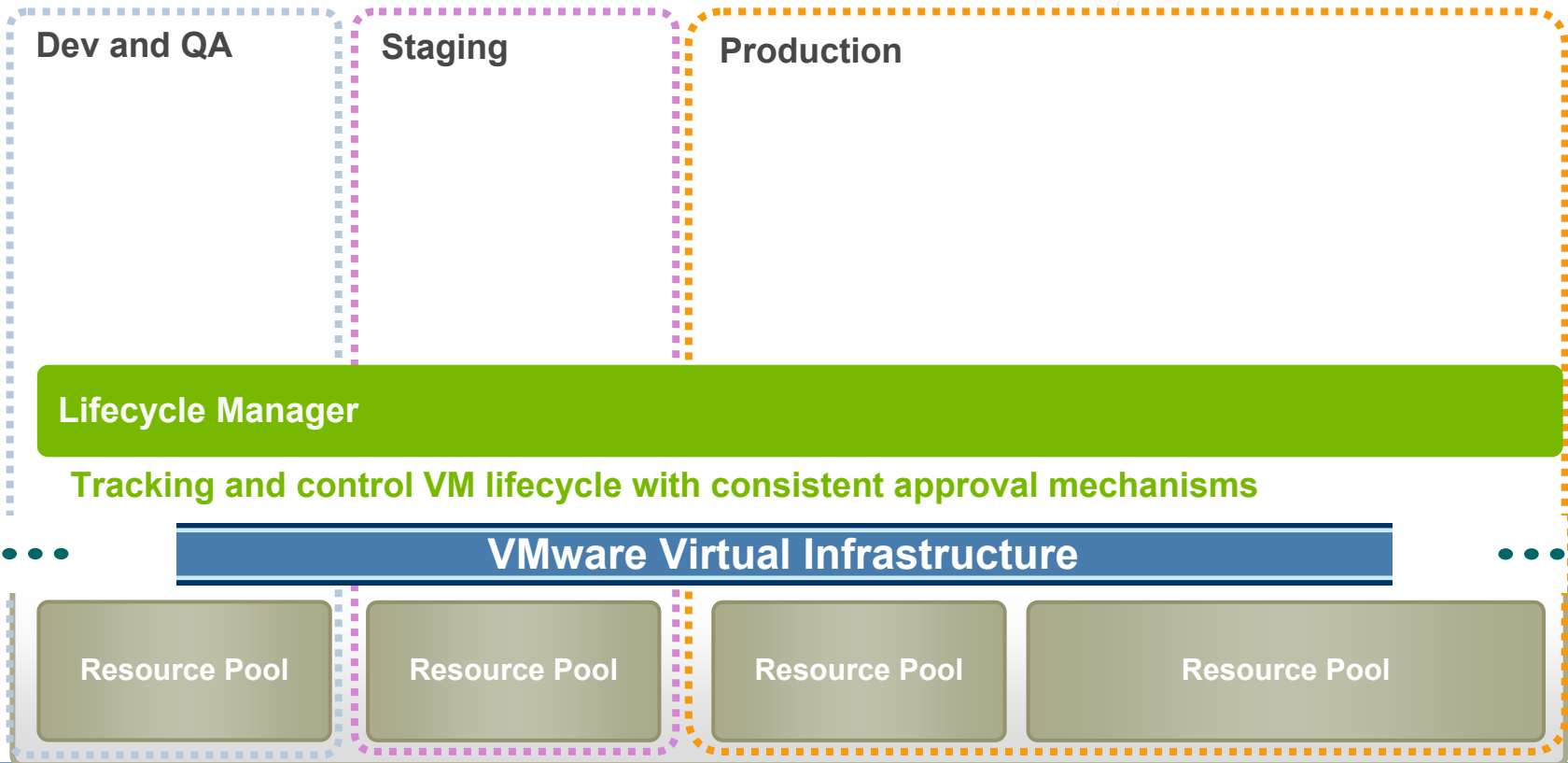
Lifecycle Manager Reports

Report Type: Requests for Virtual Machines

REFRESH DOWNLOAD

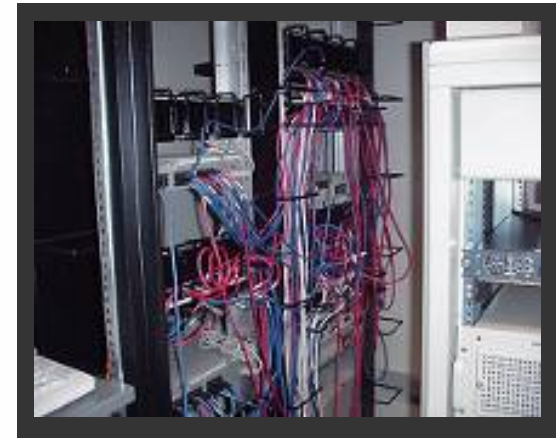
Requests for Virtual Machines									
Requester Name	Performance	Request Status	Organization	Request ID	Service Level	Request Date	Server Environment	Server Type	
requester	Standard Performance	Create - Error Creating	Development	lcm-001	Basic	03/18/2008	Dev	Windows 2003 - Dev	
requester	Standard Performance	Provision - Provision Approval - Waiting For Approval	Finance	lcm-002	Basic	03/18/2008	Test	Windows 2003 - Test	
requester	Standard Performance	Provision - Provision IT - Waiting For Placement	Finance	lcm-003	Basic	03/18/2008	Test	Windows 2003 - Test	
requester	High Performance	Provision - Provision Approval - Waiting For Approval	Information Technology	lcm-004	Comprehensive	03/18/2008	Preprod	Windows 2000 - Prod Enhanced	
techrequester	Standard Performance	Provision - Provision Approval - Waiting For Approval	Development	lcm-005	Basic	03/18/2008	Test	Windows 2003 - Test	
techrequester	Standard Performance	Provision - Provision Approval - Waiting For Approval	Development	lcm-006	Basic	03/18/2008	Test	Windows 2003 - Test	
techrequester	Standard Performance	Provision - Provision IT - Waiting For Placement	Development	lcm-007	Basic	03/18/2008	Test	Windows 2003 - Test	

Lifecycle Manager is Deployed Across the Datacenter



Issue - Typical Lab Infrastructure

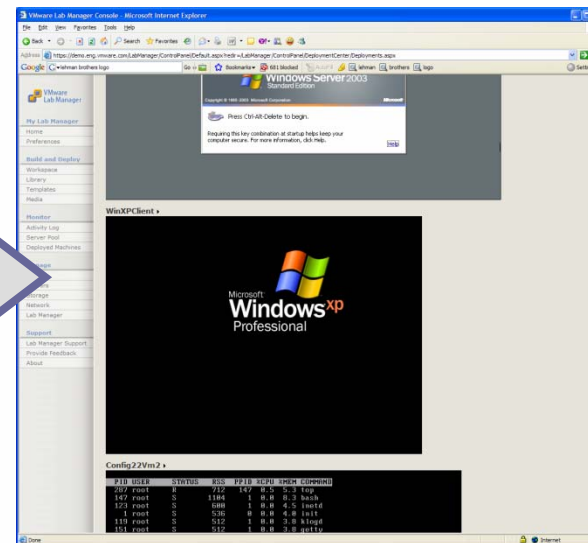
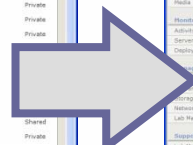
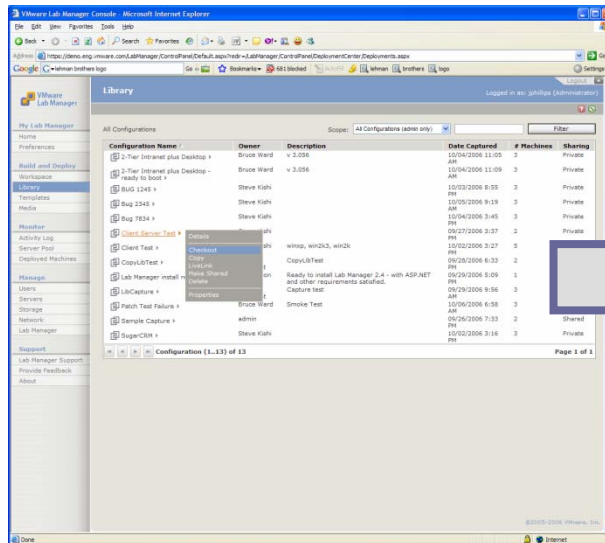
'Inconsistent State' Server Sprawl



*Actual customer photos

Introducing VMware Lab Manager

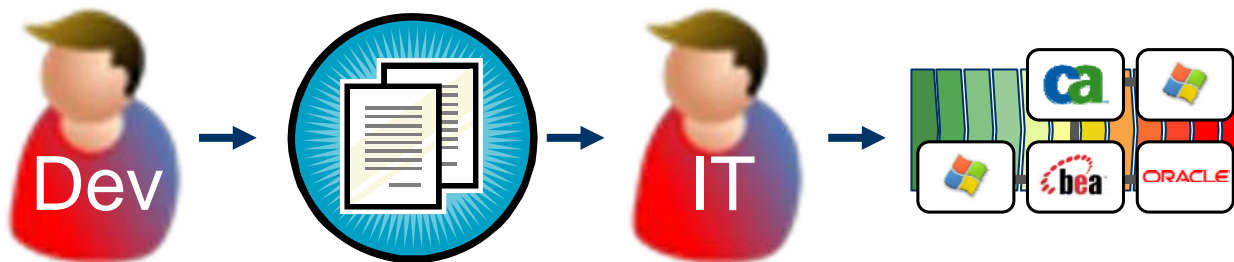
The perfect solution, with 4 key characteristics...



Self-Setup, capture, storage and sharing of multi-VM configurations using shared pool of resources

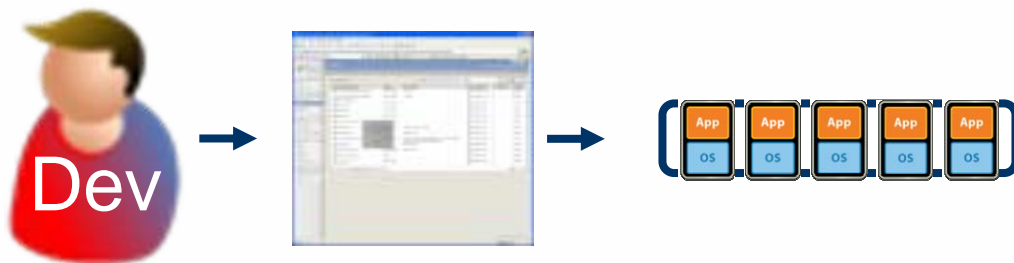
Lab Users and IT Boggled Down In Provisioning Requests

BEFORE Lab Manager



3
days

AFTER Lab Manager



1
min

Lab Manager is Deployed in the Lab



Dev and QA

Staging

Production

Lab Manager

Rapid provisioning
of multi-tier
transient lab
environments

Lifecycle Manager

Tracking and control VM lifecycle with consistent approval mechanisms

VMware Virtual Infrastructure

Resource Pool

Resource Pool

Resource Pool

Resource Pool

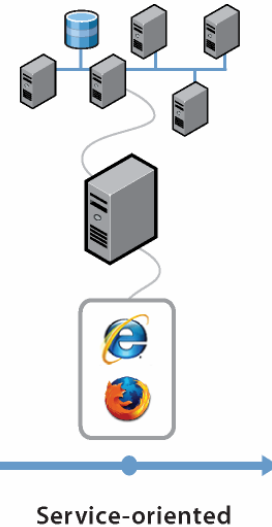
Infrastructure Management Challenges

Pre-production server sprawl

- Provisioning is tedious and time consuming, done one system at a time
- Shadow systems are often left on – even when they're not being used
- No way to make copies of Production Services

Shadow instances “drift” from production configurations

- Changes made to production aren't synched with shadow instances
- Shadow instances aren't “true” copies of production systems (or each other); introduces risk
- Ensuring the same changes are applied to each shadow instance is error prone and a primary source of production downtime



No way to systematically and accurately move complex system changes through “Stages” before bringing into production

Introducing VMware Stage Manager

When rolling out a service, configuration can remain unchanged and be audited...



Homegrown
or packaged
application
software

Integration

Assemble
application
components
Or apply patch

Testing

Verify
successful
assembly

Staging

Perf. tuning
and
testing

UAT

User
acceptance
testing

Production

Global View of services, stages and their resources

The screenshot shows the VMware Stage Manager Console interface. On the left is a navigation menu with categories like Service Management, Monitoring, Administration, Resources, and Help. The main area displays a table of services and their stages.

Name	Stages	Lifecycle Configurations (Deployed/Total)	Archived Configurations	Service Administ
Order Management >	4	18/18	9	Wilson Hu
Equity trade automation >	7	18/20	19	Gaurav L
Customer relationship >	3	22/30	26	Melinda W
ourcompany.com >	4	5/6	6	Jessica T
Order execution >	4	44/60	33	Mike Brov
Personnel management >	6	3/14	33	Betsy Sut
Fixed assets management >	6	55/62	45	Andrew L
Intranet >	2	12/12	19	Len Ceru
Accounts payable >	5	22/25	45	Tina Squ
Accounts receivable >	4	19/24	77	Tina Squ
Self service benefits >	3	8/13	65	Jenni Ngo
Travel approval >	2	5/12	23	Adam Zin
Budget workflow system >	4			Diane Tul
Service help desk >	5			Sean Mur
Exchange 1 >	4			Sumeet P
Exchange 2 >	4			Sumeet P
Peoplesoft >	7			Tij
Check issuance >	4			

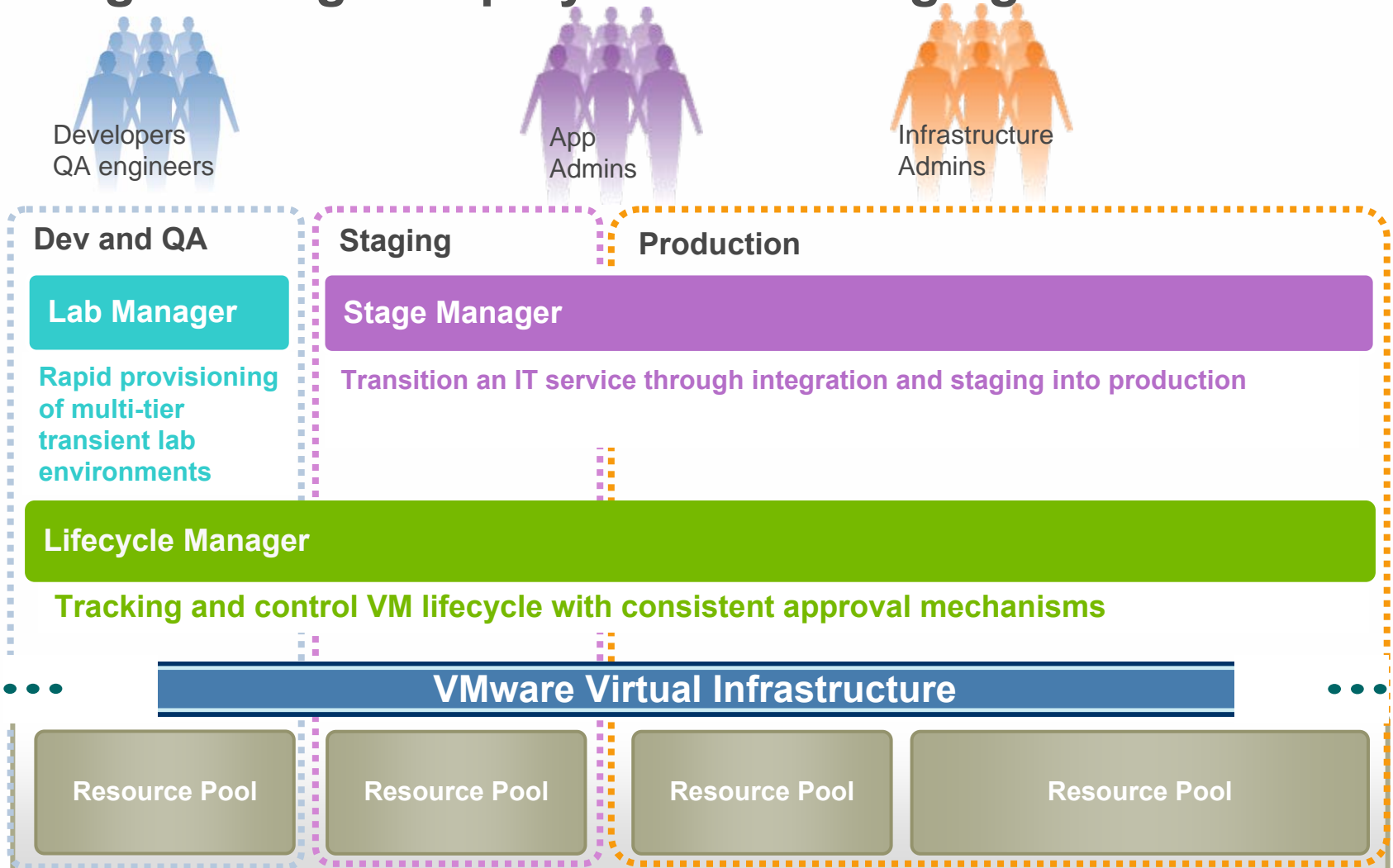
A callout box highlights a selection of services: Email, ERP, HR System (Peoplesoft), Intranet, and Order Management. An arrow points from this box to a detailed view of the 'Order Management' service stages.

This view shows the configuration and status of different stages for the 'Order Management' service. The stages are: Stage 4: Production (1), Stage 3: User Acceptance (2), Stage 2: QA Testing (2), and Stage 1: Integration (0). Each stage has associated configurations and a status (e.g., Deployed, Archiving, Undeployed). A context menu is open over the 'Order Mgmt - test ED' configuration, showing options like Promote, Demote, Clone, and Deploy.

Stage	Configuration	Status
Stage 4: Production (1)	OM Production - Tulsa >	Deployed
Stage 3: User Acceptance (2)	OM Production - Tulsa >	Archiving...
	James Integration Test >	Deployed
Stage 2: QA Testing (2)	OM Integration - Wilson >	Undeployed
	Order Mgmt - test ED >	Undeployed
	OM Integration - Eddie >	Undeployed
Stage 1: Integration (0)		

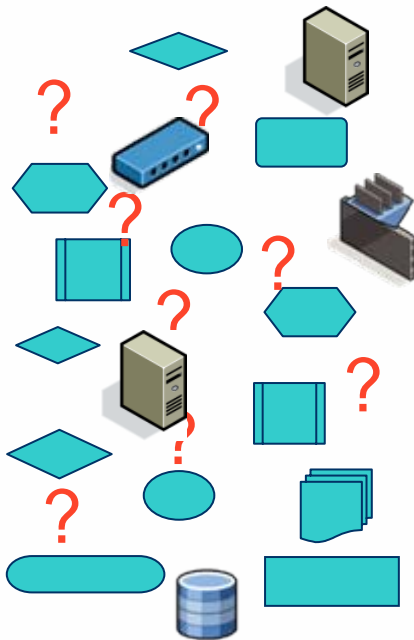
Visualize service operations and release management.

Stage Manager Deploys Across Staging and Production

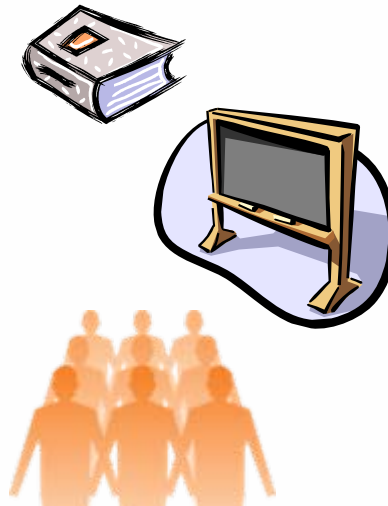


Issue - Traditional Disaster Recovery is complex

Complex recovery processes and infrastructure



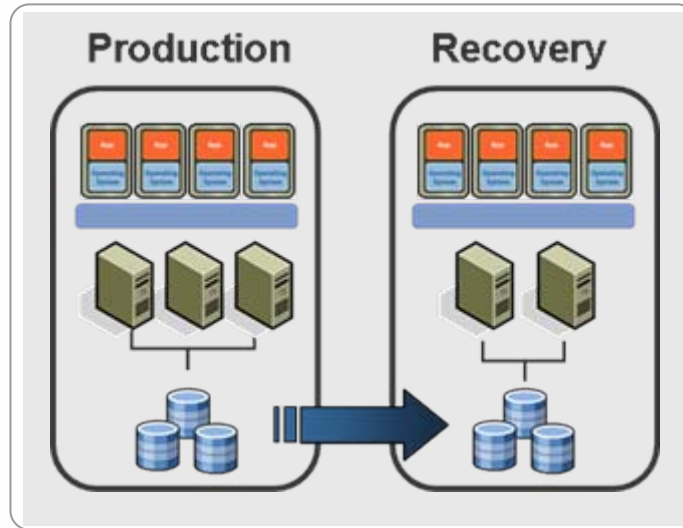
Dependent on perfect training, documentation, and execution



Failure to meet continuity requirements

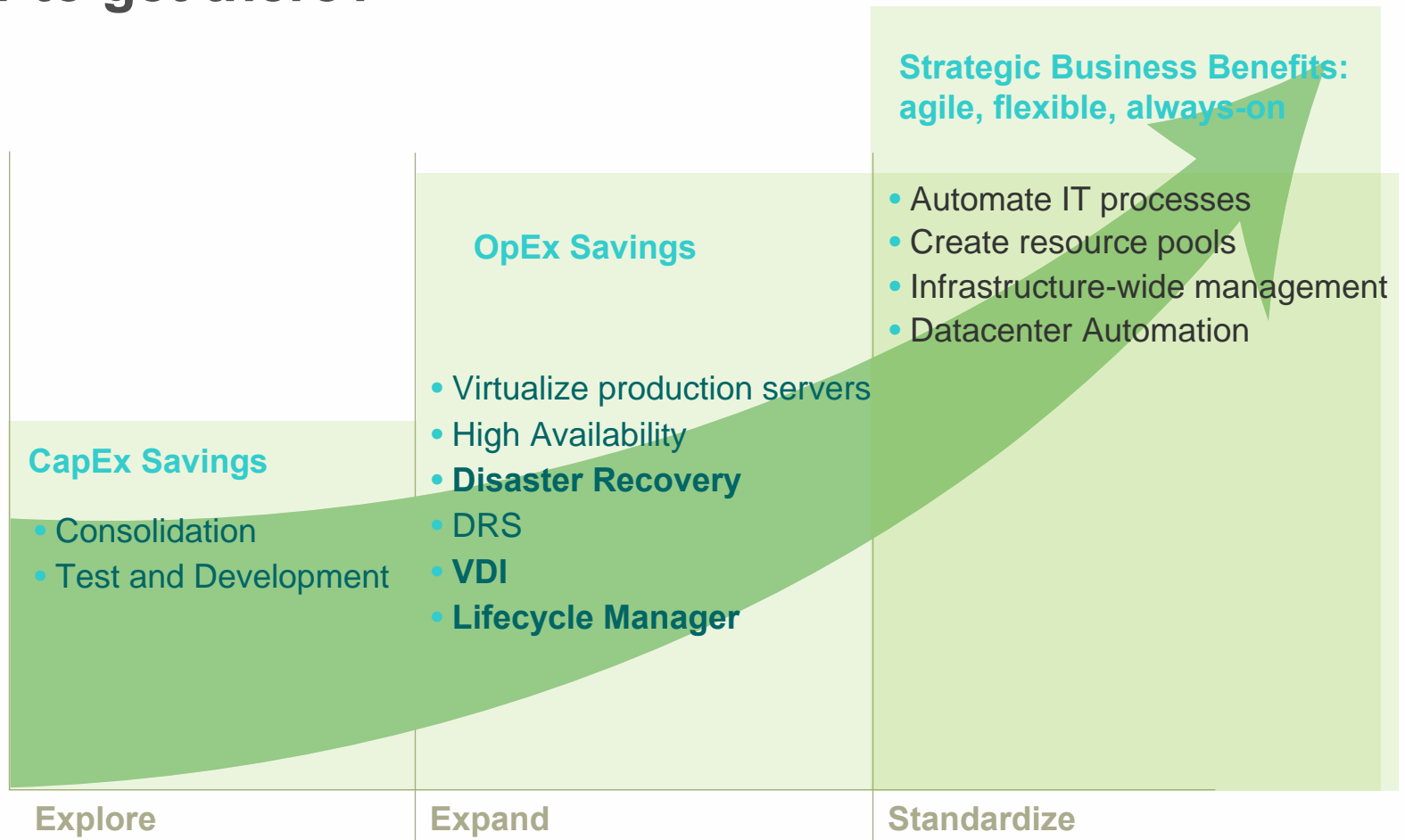
- ❑ Recovery takes days to weeks
- ❑ Select Apps Only
- ❑ Recovery tests often fail
- ❑ Significant IT time and resources consumed

Introducing VMware Site Recovery Manager



Eliminates failure, simplify, test & automate disaster recovery...

How to get there?



Source: IDC, *Virtualization 2.0: The Next Phase in Customer Adoption*, Nov 2006

Thank You