

VIRTUALIZATION **FORUM** 2008

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Understanding Business Value of Life Cycle Management

Sumeet Mehra

Application & Management Solution
Specialist

6th November 2008



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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.

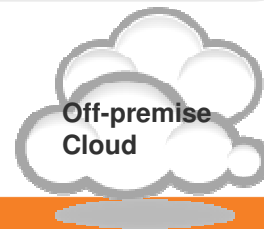
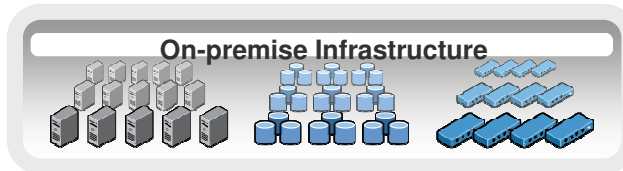
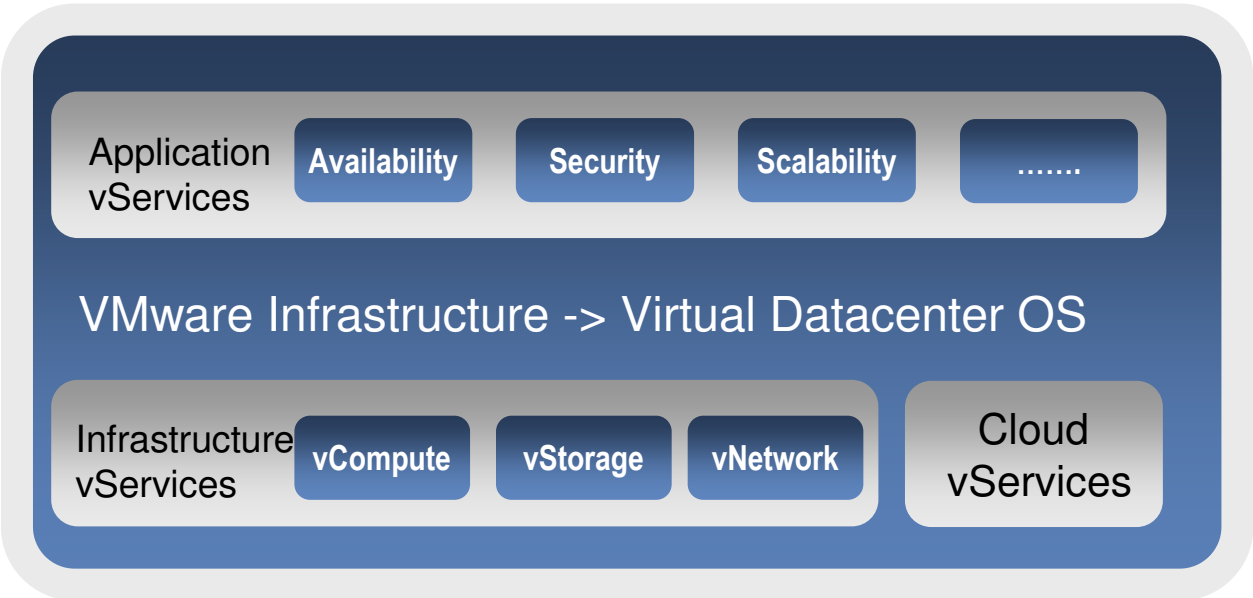
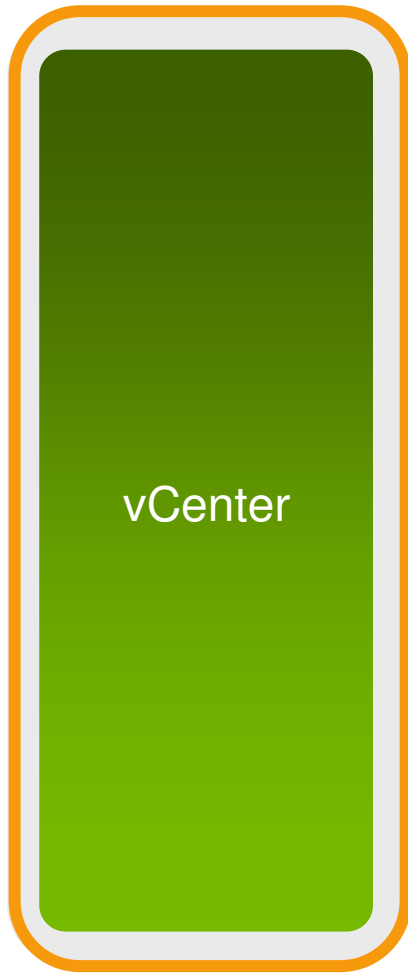
Pricing and packaging for any new technologies or features discussed or presented have not been determined.

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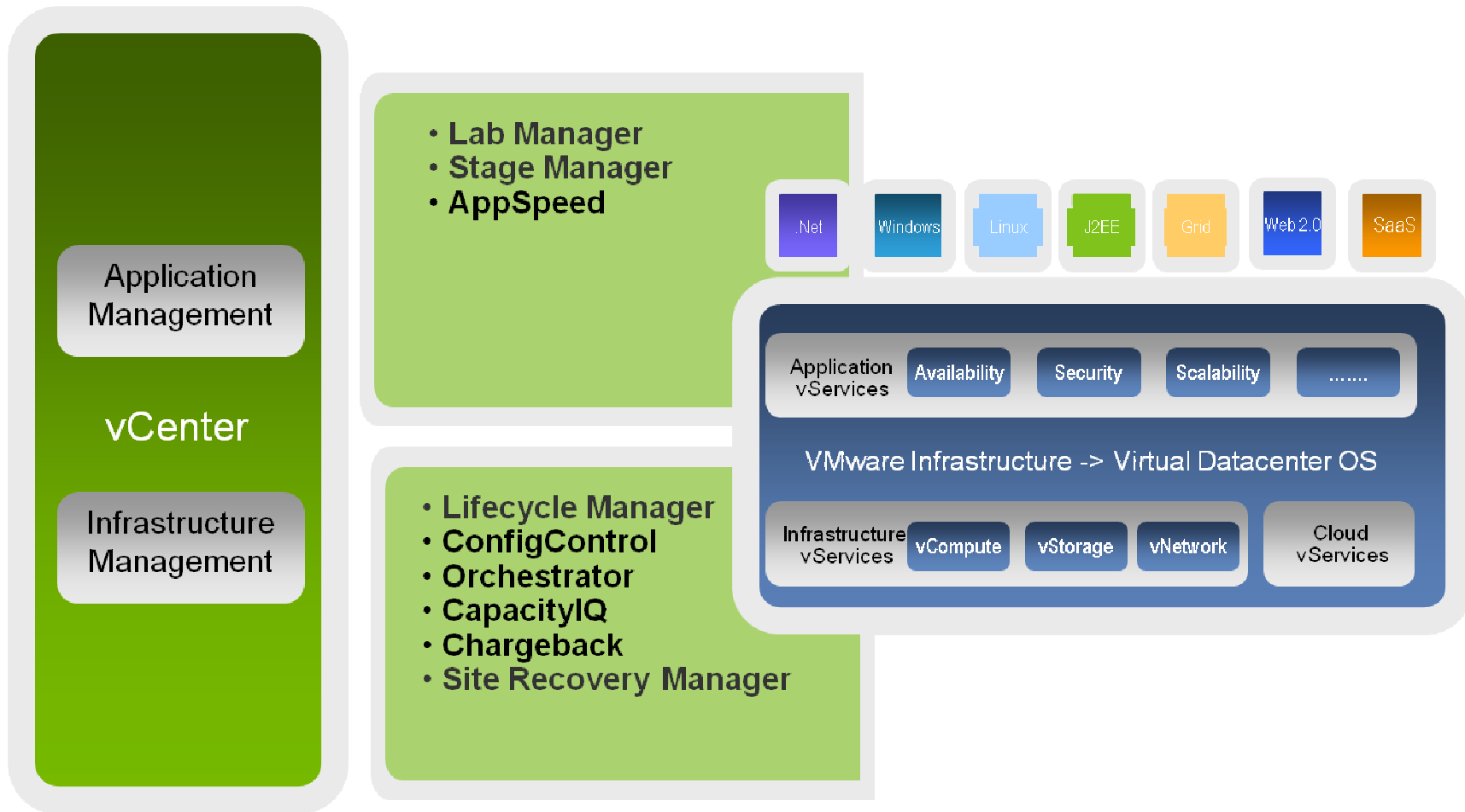
Agenda

- **VMware Management capabilities**
- **Challenges for life cycle management**
- **Life Cycle Manager Overview**
- **Demo**
- **LCM Underlying Platform**

Virtual Datacenter OS from VMware



Management vServices with vCenter



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Challenges for Life Cycle Management

Pain Points for the Administrator



Lack of Visibility and Tracking

- > Who owns what?
- > What virtual machines have been created?
- > What virtual machines have changed; who changed them?
- > How long will virtual machines be in use?

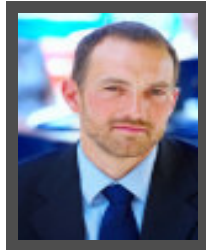
Hard to Maintain Control

- > Who can deploy what into the environment?
- > Are random virtual machines being deployed without approval?
- > Are virtual machines being placed in the appropriate places?
- > Are we removing virtual machines that are no longer needed?

Wasting Time on Manual and Repetitive Tasks

- > Is time spent adding business value?
- > Are lots of manual steps leading to errors?
- > What is your defined process if you have one-off deployments?

Lifecycle Manager Enables the Automated Datacenter



**Faster IT response time for
deploying infrastructure resources**



**Automate repetitive and manual VM build
and provisioning tasks**

**Automatically place and configure VMs for
use in the infrastructure**

**Provides stable infrastructure
environment through
standardization & automation of
best practice procedures**



**Enforce configuration consistency and
standardization for VMs**

**Codify best practices so tasks can be
delegated to more members of the team**

**Ensures Tracking and Control
of Resources**



**Provide accountability of VM usage &
ownership**

Enable proactive decommissioning of VMs

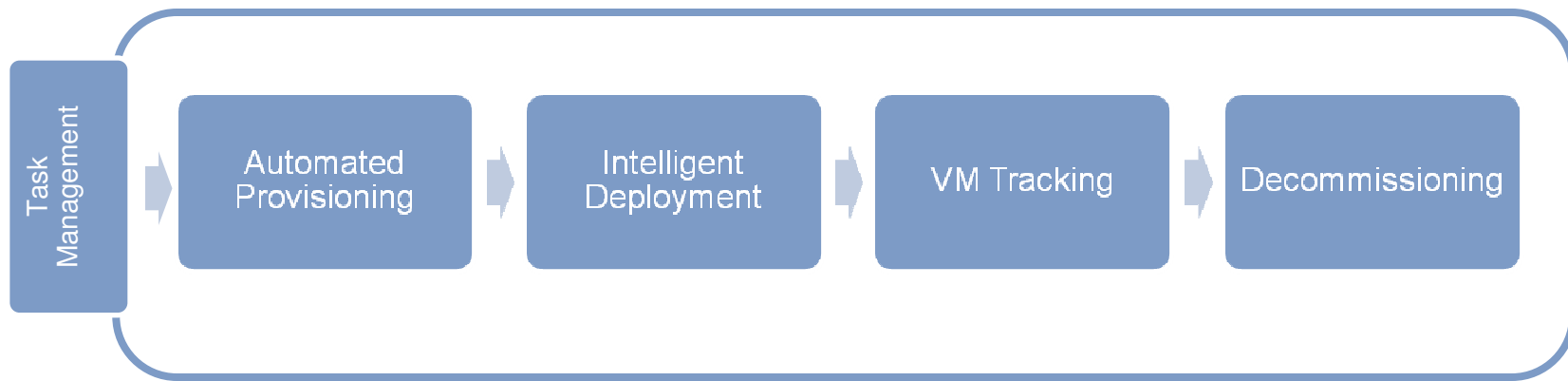


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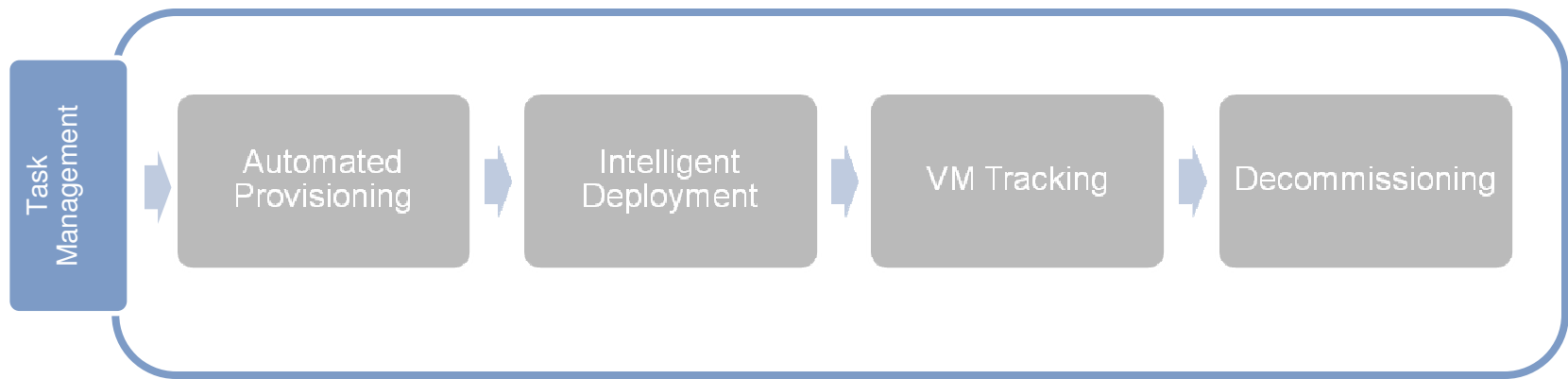
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Lifecycle Manager's Overview

Lifecycle Manager Overview



Lifecycle Manager



Catalog **Requests**

Virtual Machine Requests

Virtual Machines

+ REQUEST REFRESH FILTER All Requests

	Name	Request date	Provision date	Decommission date	Step
<input checked="" type="checkbox"/>	cm-003	07/22/08	07/22/08		Waiting For Approval
<input type="checkbox"/>	cm-004	07/22/08	07/22/08		Waiting For Placement
<input checked="" type="checkbox"/>	cm-006	07/22/08	07/22/08	12/22/08	Waiting For Approval
<input checked="" type="checkbox"/>	cm-007	07/22/08	07/22/08	12/22/08	Waiting For Approval
<input checked="" type="checkbox"/>	cm-009	07/22/08	07/22/08		Waiting For Approval

Request Virtual Machine

Request Virtual Machine

Provisioning & Decommissioning **Requester Information** Virtual Machine Parameters Additional Information

(Fields marked with a * are required.)

Requester Information

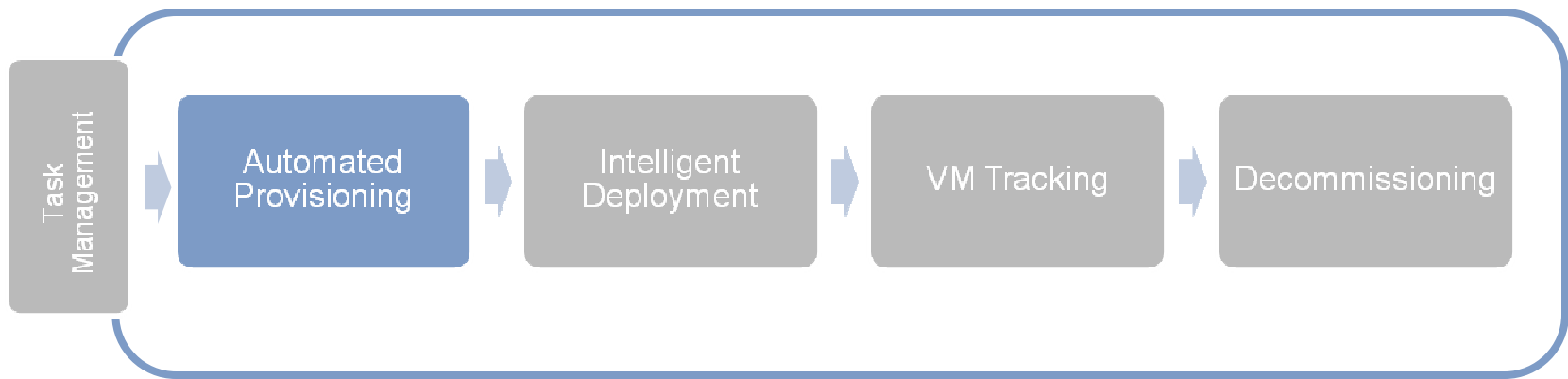
These are the logical criteria that determine the availability of your virtual infrastructure resources

- * **Location** Cambridge
- * **Organization** Development
- * **Server Environment** Production
- * **Service Level** Enhanced
- * **Performance** Standard

Reset Cancel Previous **Next**

- Provide centralized web interface for VM requests
- Drive lifecycle information into the request process

Lifecycle Manager



Criteria

Server Environment **Production**

Development
Pre Production
Production
QA
Test

Production

Details

Description Production Environment

Datastores

Resource Pools

VM Folders

Network Domains

Template Profiles

<input checked="" type="checkbox"/>	Windows 2003
<input checked="" type="checkbox"/>	Windows 2003 - High Performance

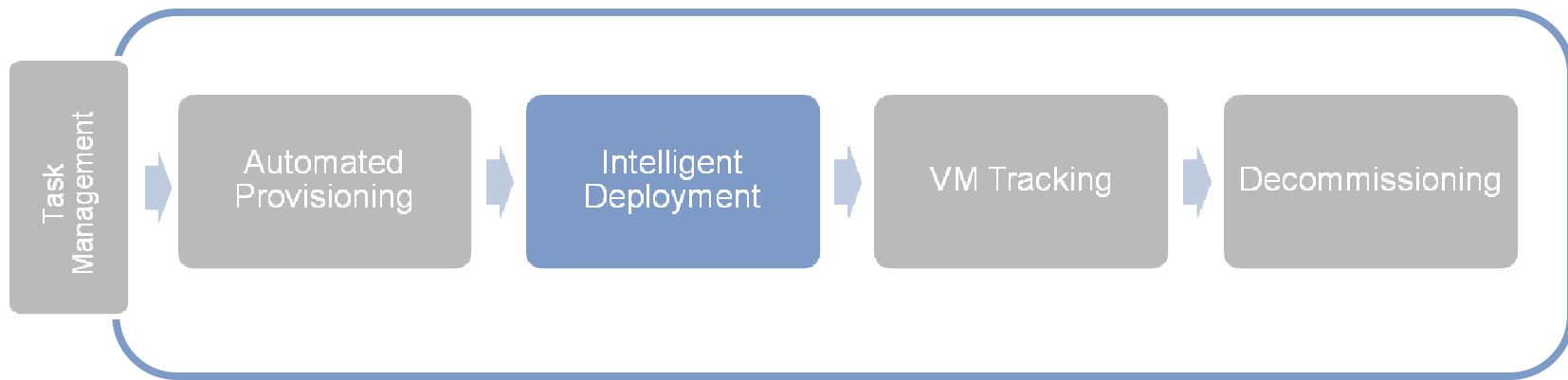
Join Domain Information

Customization Templates

<input checked="" type="checkbox"/>	Standard
<input checked="" type="checkbox"/>	Enhanced

- Pre-determine VM configuration based on request type
- Customize amount of VM resources automatically at time of deployment

Lifecycle Manager



Infrastructure

Resource Pool

+ REGISTER + CREATE REFRESH

Name
Production-Platinum
Production-Standard
Test

Production-Platinum

EDIT CRITERIA UNREGISTER REFRESH

Production-Platinum

▼ Resource Pool Details

Datacenter	Brian
Virtual Infrastructure Host	https://192.168.1.150:443/sdk
Number of Child Resource Pools	0
Number of Virtual Machines	1
Overall CPU Usage	0 MHz
Overall Memory Usage	0 MB

> Location Criteria

> Organization Criteria

▼ Server Environment Criteria

<input checked="" type="checkbox"/>	Pre Production	Preproduction Environment
<input type="checkbox"/>	Development	Development Environment
<input type="checkbox"/>	Test	Test Environment
<input type="checkbox"/>	QA	QA Environment
<input checked="" type="checkbox"/>	Production	Production Environment

▼ Service Level Criteria

<input checked="" type="checkbox"/>	Standard	This service has a maximum downtime of 8 hours and data loss of 24 Hours. It offers the same services as core service plus redundant power supply on the servers and daily backup.
<input checked="" type="checkbox"/>	Enhanced	This service has a maximum downtime of 4 hours and data loss of 24 Hours. It offers the same services as standard service plus redundant clustered servers, networks, storage paths, disaster recovery on a replicated site (daily).

> Performance Criteria

- Map infrastructure elements to request parameters
- System automatically knows appropriate resources to use

Virtual Machine Set up

Virtual Machines

	Name ^	Request date	Provision date	Decommission date	Step
	lcm-004	07/22/08	07/22/08		Waiting For Placement
	lcm-014	07/22/08	07/22/08		Waiting For Placement
	lcm-015	07/22/08	07/22/08		Waiting For Placement
	lcm-017	07/22/08	07/22/08		Waiting For Placement
	lcm-018	07/22/08	07/22/08		Waiting For Placement
	lcm-019	07/22/08	07/22/08		Waiting For Placement
	lcm-020	07/22/08	07/22/08		Waiting For Placement
	lcm-021	07/22/08	07/22/08		Waiting For Placement
	lcm-024	07/22/08	07/22/08		Waiting For Placement

lcm-018

SETUP

RETRY

VALIDATION

REFRESH

lcm-018

Lifecycle Information

Request Date	07/22/08
Provision Date	07/22/08
Decommission Date	-
Extension Date	-
Time Left	-
Archive	No
State	Provision • Provision IT Placement • Waiting For Placement
Requester	techrequester
Viewer Group	-
Operators Group	-

Virtual Machine Information

Requester Criteria

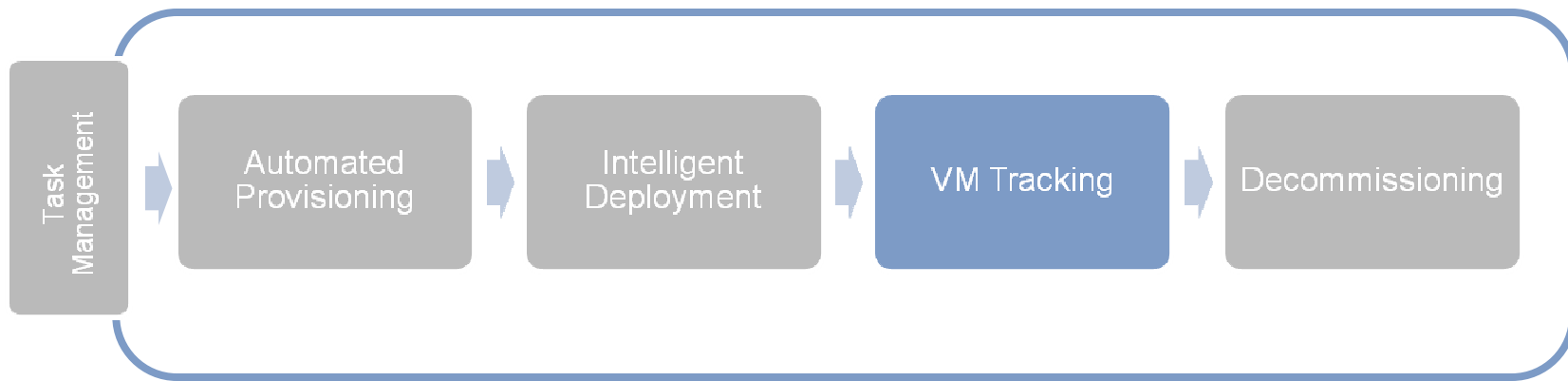
Infrastructure Elements for Criteria

Customization Information

Memory Reservation (Guaranty)	256 MB
Memory Limit/Size (Desired)	1024 MB
Memory Shares Level	normal
CPU Reservation (Guaranty)	200 Mhz
CPU Limit (Desired)	2000 Mhz
CPU Count	1.0
CPU Shares Level	normal

- Administrator assisted placement of VM's
- Allows admin to manual determine VM placement

Lifecycle Manager Overview





Lifecycle Manager Reports

Report Type

REFRESH

- All events
- Approved Requests
- Costs by Organization
- Decommissioned Virtual Machines
- Error events
- Rejected Requests
- Requests for Virtual Machines**
- Virtual Machines set to be decommissioned
- Virtual Machines that have been extended
- Virtual Machines waiting for Placement

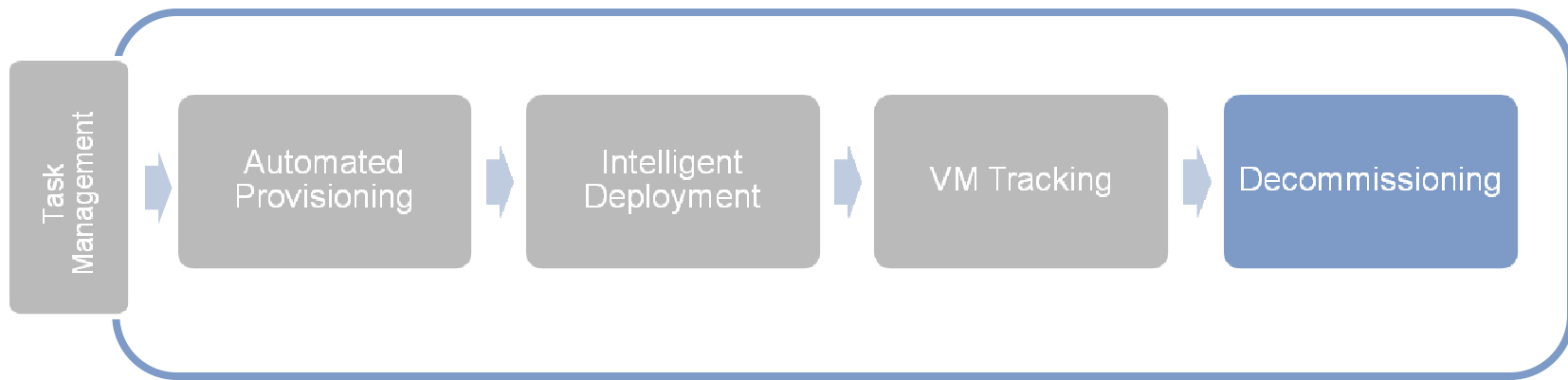
Requests for Virtual Machines

DOWNLOAD

Requester Name	Performance	Comment	Request Status	Organization	Request ID	Service Level	Request Date	Server Environment	Server Type
requester	Standard	Machine for Patch Testing	Operate - Available	Development	lcm-002	Standard	07/15/08 07:09:18	Test	Windows 2003
requester	Standard	Machine for Developer Testing	Provision - Approval - Waiting For Approval	Development	lcm-003	Standard	07/22/08 07:01:09	QA	Windows 2003
requester	Standard	New Development Machine	Provision - Provision IT Placement - Waiting For Placement	Development	lcm-004	Standard	07/22/08 07:01:57	QA	Windows 2003
requester	High	Machine for Sharepoint site for Sales	Provision - Approval - Waiting For Approval	Sales	lcm-006	Enhanced	07/22/08 07:06:37	Production	Windows 2003 - High Performance
requester	Standard	Test Machine for sales software	Provision - Provision - Approval - Waiting For	Finance	lcm-007	Standard	07/22/08 07:07:58	Test	Windows 2003

- Out-of-the-box reports for tracking requests, decommissioning, approvals, etc
- Track VM's across multiple VC instances

Lifecycle Manager



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Request Virtual Machine

Request Virtual Machine

Provisioning & Decommissioning | Requester Information | Virtual Machine Parameters | Additional Information

(Fields marked with a * are required.)

Planning

This defines when the VM will be provisioned and decommissioned

Set commissioning date? Yes No

Set decommissioning date? Yes No

Decommission date

Group Authorizations

These groups define who can control or who can connect to the Virtual Machine

Virtual machine control by

Control group

Virtual machine view by

View group

Reset Cancel Previous **Next**

- Set decommissioning date as part of every VM request
- System tracks to this date, notifies owner, and gives ability to extend date

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Demo

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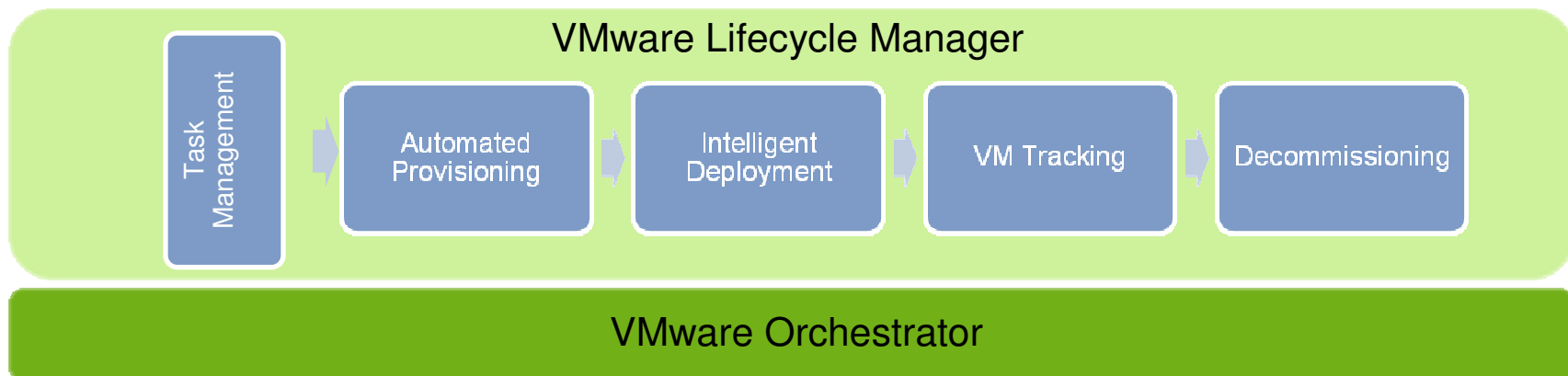
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Lifecycle Manager's Underlying Platform

Lifecycle Manager – Orchestration Platform

Lifecycle Manager is built on top of a powerful Orchestration Platform that enables:

- > **Flexibility** – ability to enhance Lifecycle Manager to fit with unique deployment procedures
- > **Integration** – tie into existing management tools to align processes or drive further automation
- > **Process Improvement** – move from manual/script-based processes to drag-n-drop workflow automation
- > **Event Driven Infrastructure** – advanced automation to enable predictive infrastructure



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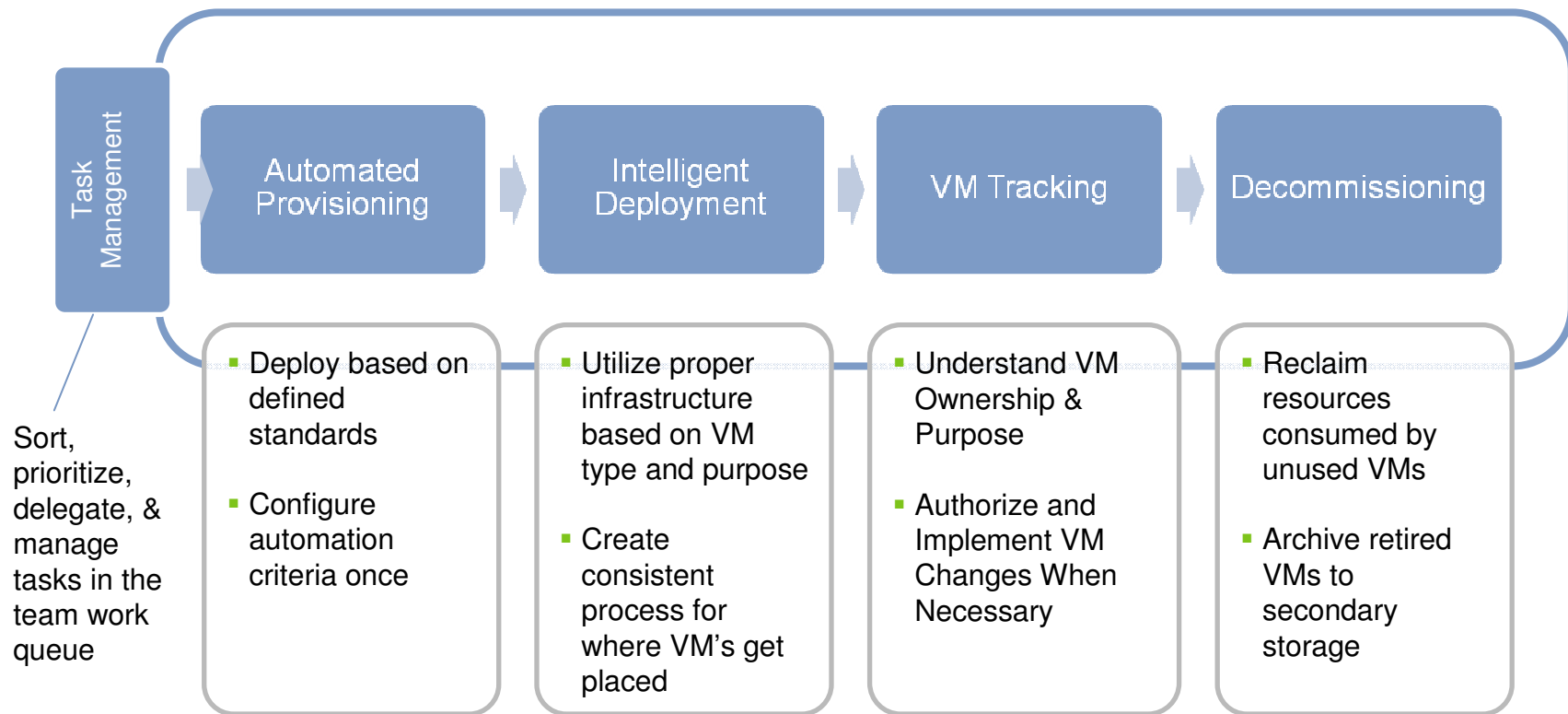
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Summary

What drives Lifecycle Manager ROI?

Source of ROI	Lifecycle Manager Capabilities	Typical Results
Reduce capital expenses	<p>Track and implement decommissioning of virtual machines based on estimated lifespan</p> <p>Requests for VMs always use the correct resources (datastores, networks, templates, etc.)</p>	<p>Cost savings from decommissioning over 1 year pays for initial LCM investment</p> <p>Optimize use of existing compute, storage, network, and OS resources</p>
Reduce operational expenses	<p>Remove manual and repetitive administrative tasks</p> <p>Setup end to end provisioning once and manage by exception</p> <p>Users or administrators only select VMs from existing and known template configurations established by IT</p>	<p>Provisioning time per VM is cut by 80% (source - Qualcomm case study)</p> <p>Reduce admin time spent on provisioning tasks by 90%</p> <p>Eliminate rogues configurations that lead to wasting or limiting available resources</p>

Lifecycle Manager – Key Benefits



Q&A

Understanding Business Value of Life Cycle Management

Sumeet Mehra

Application & Management Solution Specialist,
VMware, Inc.

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