

# VIRTUALIZATION **FORUM** 2009

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DISCOVER. CONNECT. **VIRTUALIZE.**

## **VMware View – *The Next Generation in Virtual Desktop Infrastructure***

Speaker name

Speaker title

Date



# AGENDA

**Enterprise Desktop Challenges**

**The VMware View 3 Solution**

**Customer Deployments**

**Next Steps**

## AGENDA

### ← Enterprise Desktop Challenges

← The VMware View 3 Solution

← Customer Deployments

← Next Steps

## Desktop Dilemma

### User Requirements

- > Personalized Desktops that follow them
- > Flexible access anywhere using multiple devices
- > Desktop Biz Continuity & Disaster Recovery
- > Legacy, Win32, Web apps work well together
- > Rich Application Interface

### IT Requirements

### IT Requirements

- > Manage disparate desktop images easily
- > Manage explosion in multitude of devices
- > Provide secure, continuous access to desktops, apps
- > Manage Legacy, Win32 and Web apps
- > Low management costs

## Virtualization is the Solution

### Virtualization enables Isolation, Encapsulation & Mobility

- Run different operating systems side-by-side
- Run legacy Win32 apps next to web 2.0 applications
- Move OS, apps, desktop to different devices
- Separate user data and settings into a universally accessible VM



# Meeting the Challenges of the Desktop

## Benefits

- Streamlined and Simplified Desktop Management
- Reduced Desktop Maintenance and Support Costs
- Improved End User SLAs and Desktop Business Continuity
- Improved Security and Compliance

## Security



## AGENDA

← Enterprise Desktop Challenges

← **The VMware View 3 Solution**

← Customer Deployments

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# Simplify by Centralizing Management

VMware decouples Desktop image from the PC

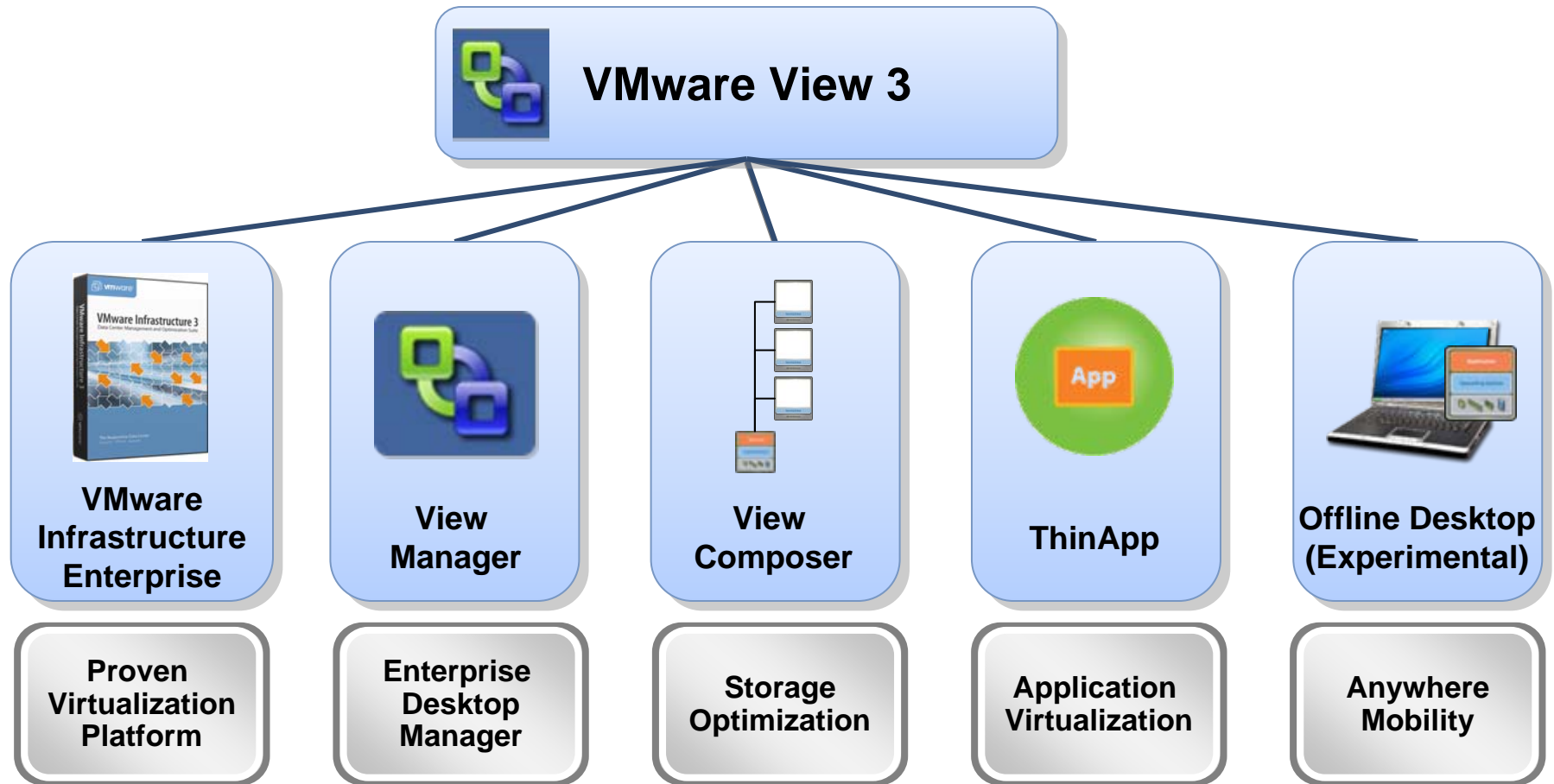
Desktops run in secure datacenter

Present Desktop into clients over Network





# Components of VMware View



# VMware View is built on VI3: A Proven Platform

## Powerful Mature and Proven

- Deployed in 100% of the Fortune 100
- Over 120,000 customers worldwide
- Complete solution from one vendor
- Extend powerful data center capabilities to the desktop:
  - Business Continuity/DR (HA, DRS, VMotion, Storage VMotion)
  - Simplify backups & disaster recovery
  - Scalable
  - Security and Reliability



# Accessing VMware View Desktops

## Native Windows Client

- Provides extended capabilities to access local printers and storage
- USB device support on Windows XP and Vista

## Thin- Client Support

- Broad industry support – over 45 devices
  - Linux, Win XPe, Win CE, and Proprietary
- VMware Thin Client Compatibility List
  - <http://www.vmware.com/resources/techresources/1053>

## Browser Access

- Windows, Linux and Mac



## View Manager: Enterprise Desktop Manager

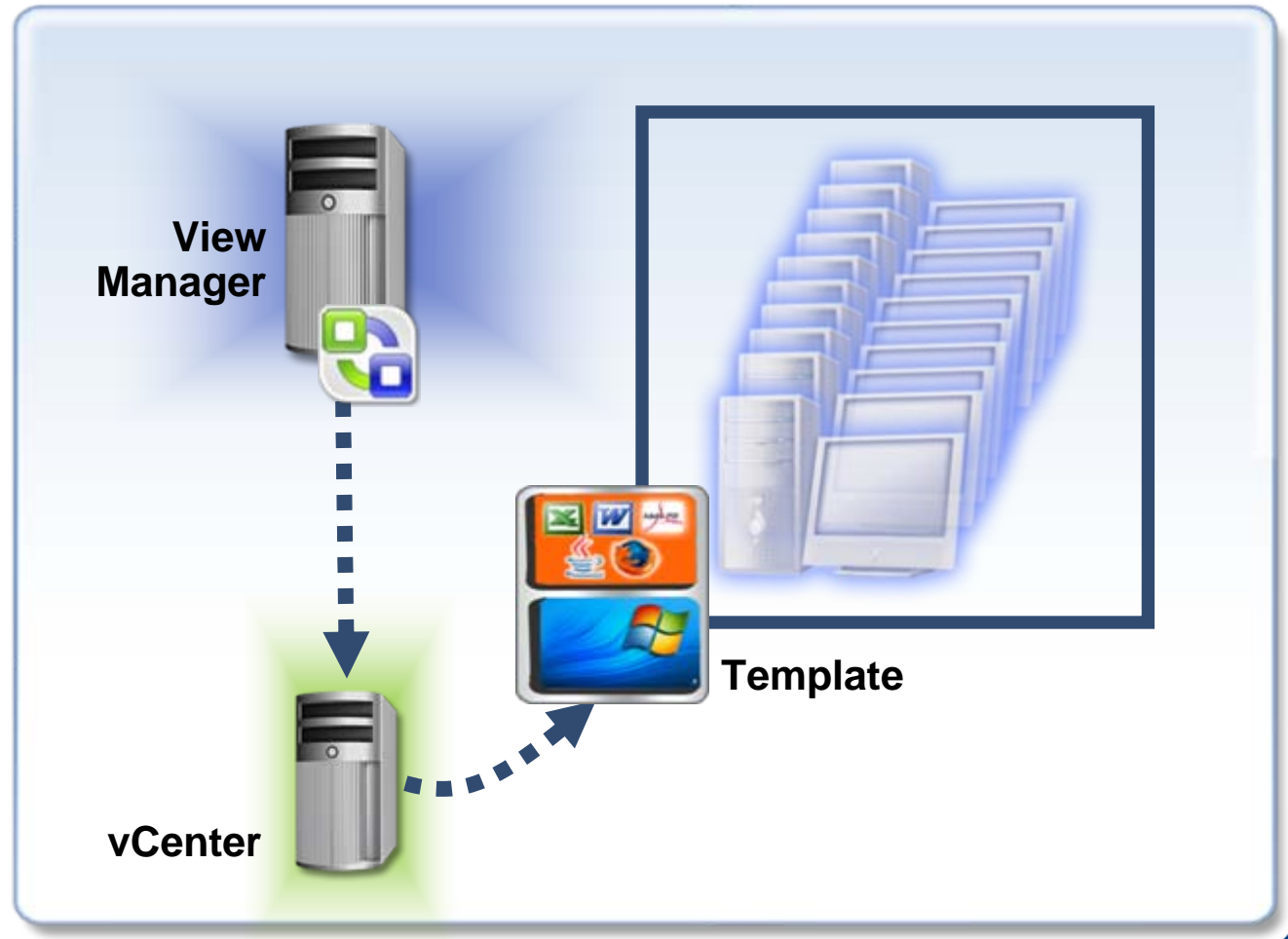
- Seamlessly integrated with VI3
- Automated desktop provisioning
- Centralized management of desktops
- Scalable for any size organization
- Flexible, secure access to end user desktops



# View Manager: Automated Provisioning

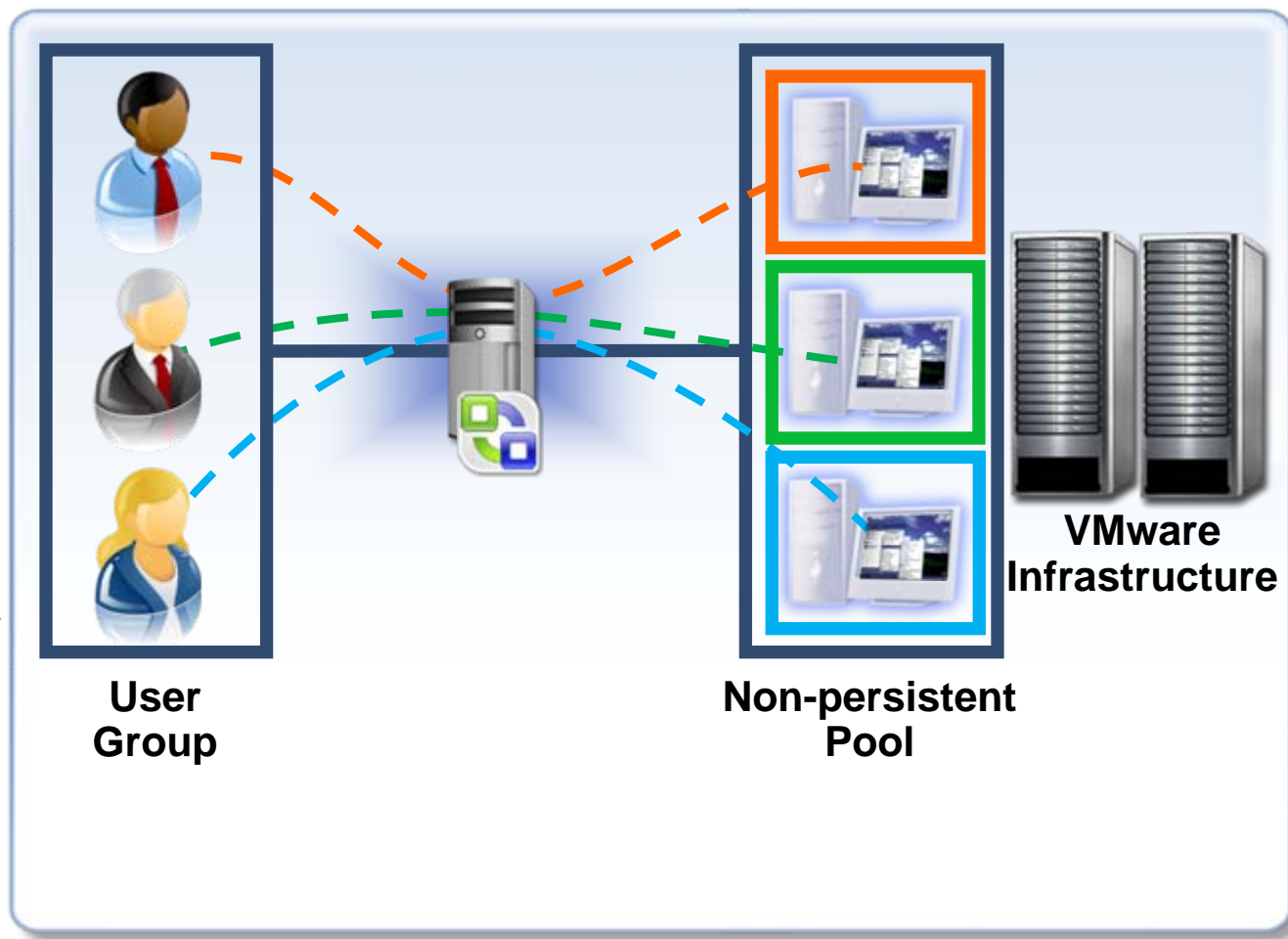
## Pooled Desktops

- > Automated provisioning from template
- > On-demand provisioning
- > A Desktop is always available
- > Identical desktops in a pool



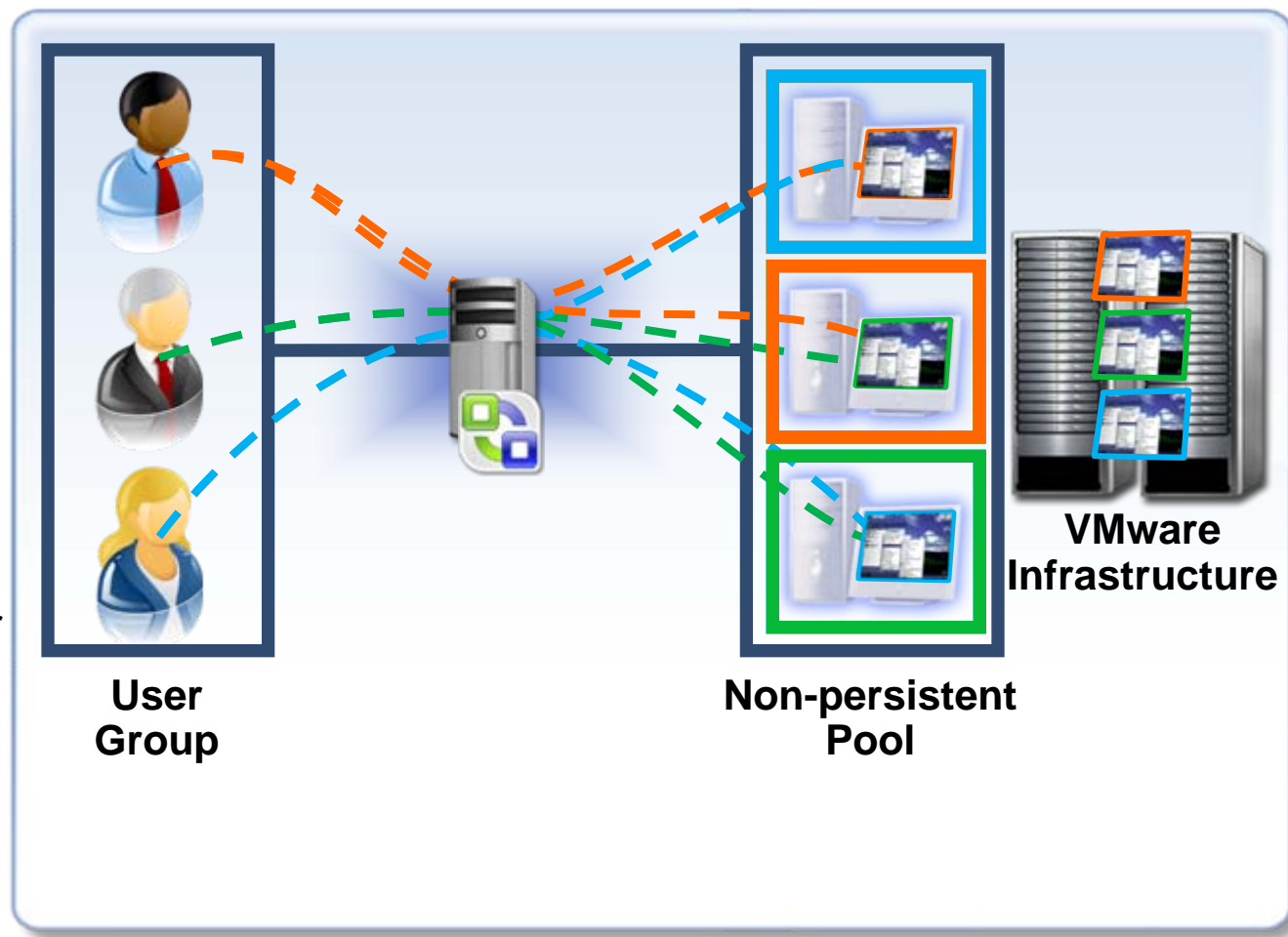
## View Manager: Provisioning Non-Persistent Pools

- Provisioning from template
- Automated connection
- Desktop returned to pool after each use
- Reverts to pre-determined state for future use
- For factory workers, kiosks, transaction workers



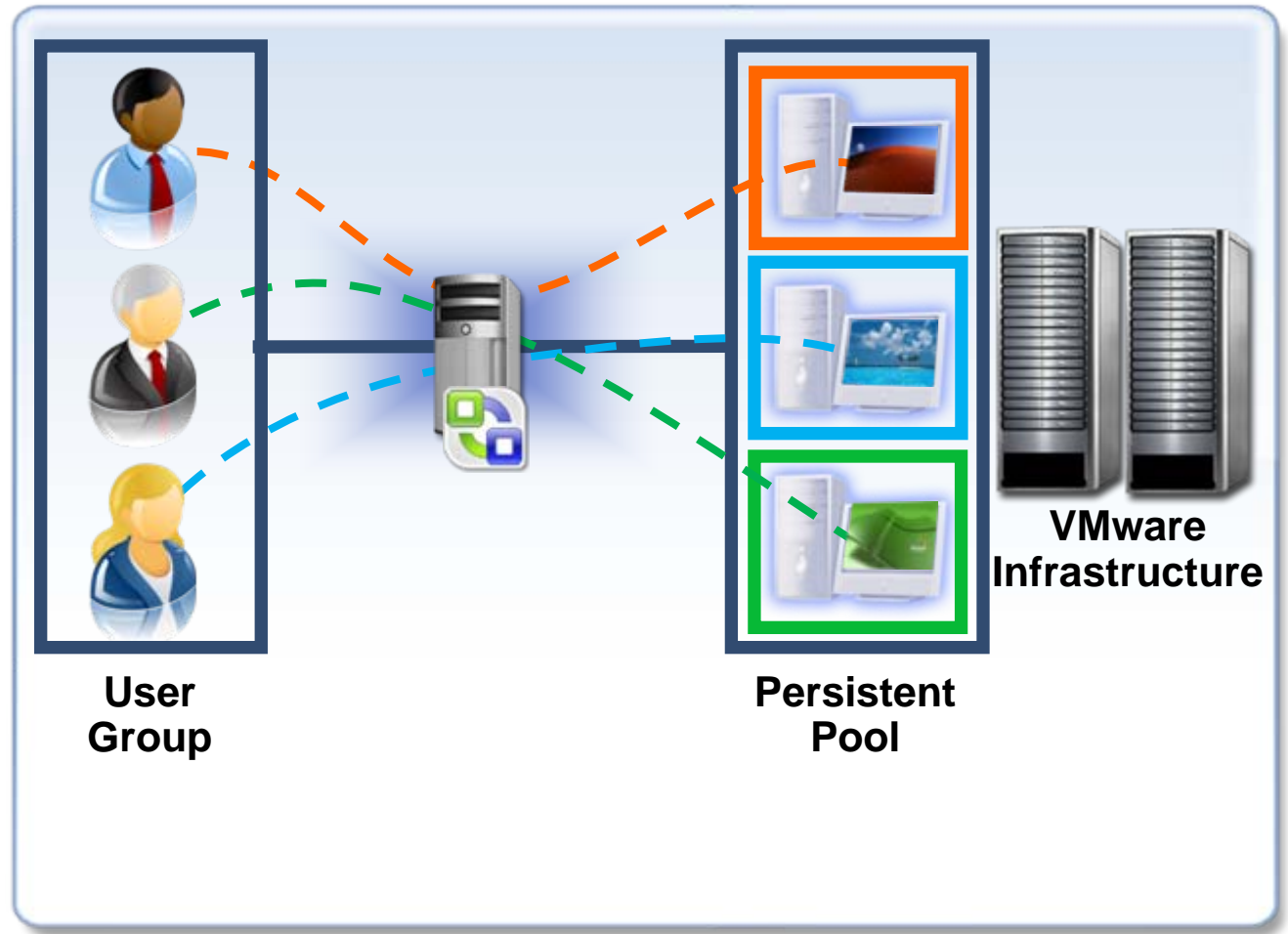
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## View Manager: Provisioning Persistent Pools

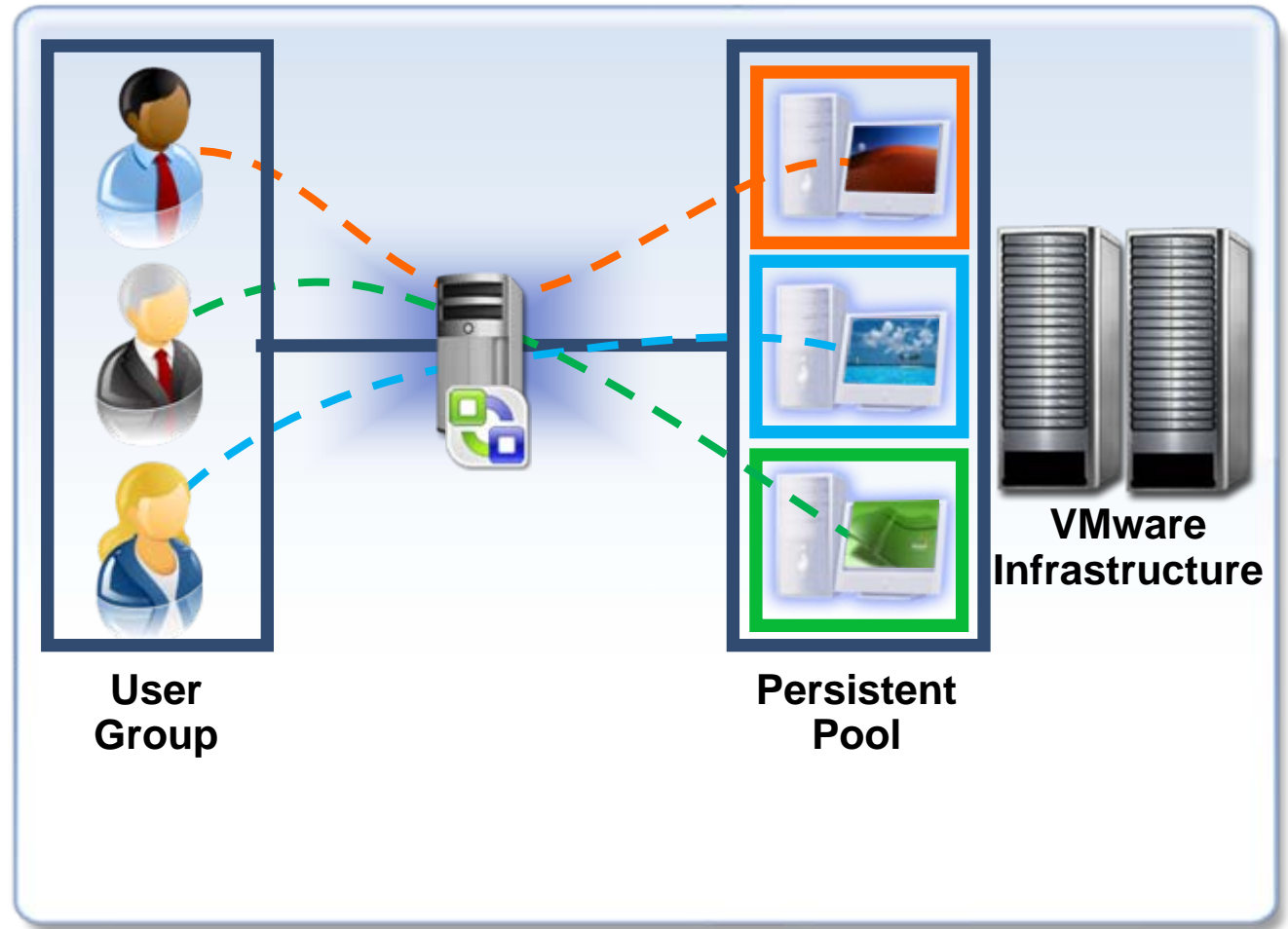
- Provisioning from template
- Automated connection
- Desktop assigned on first log-in
- Remains associated with user & can be personalized
- Ideal for knowledge workers





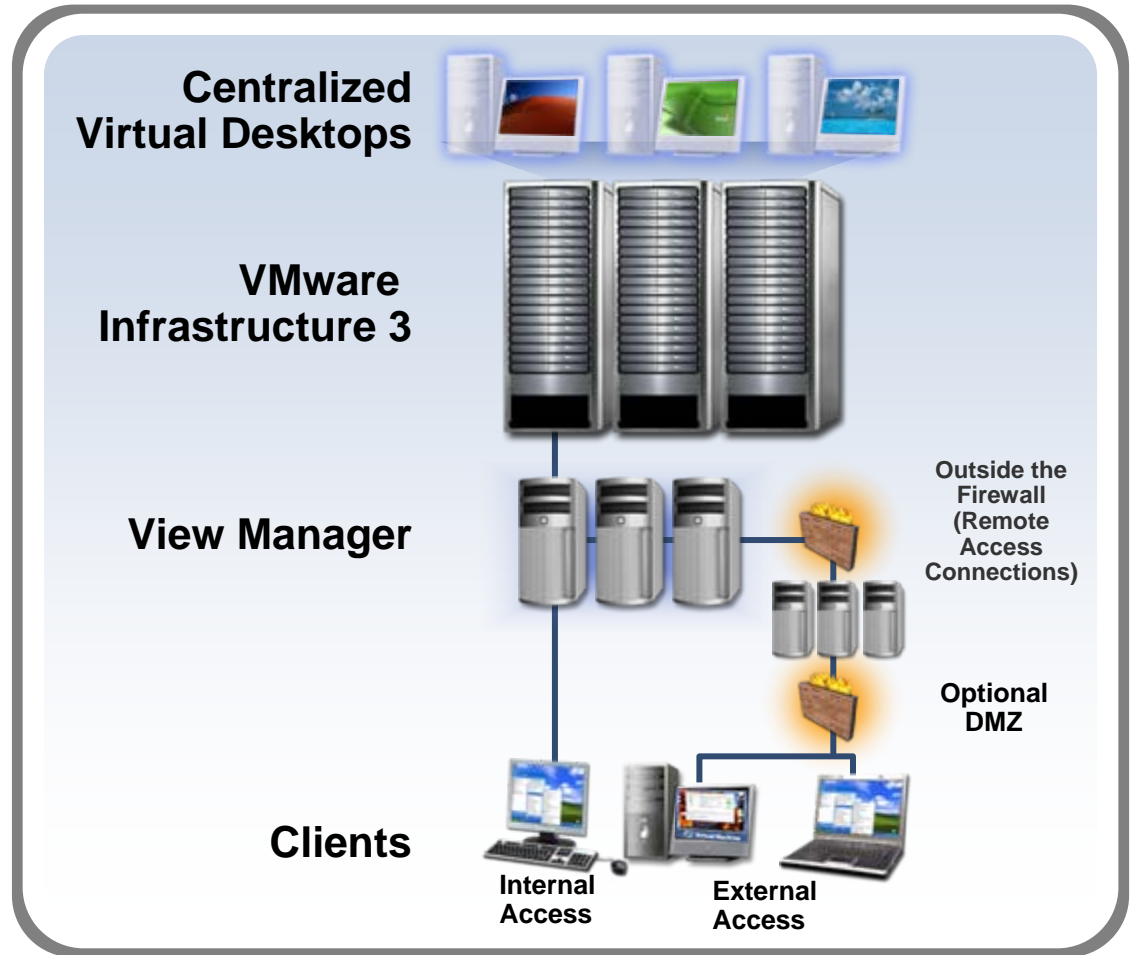
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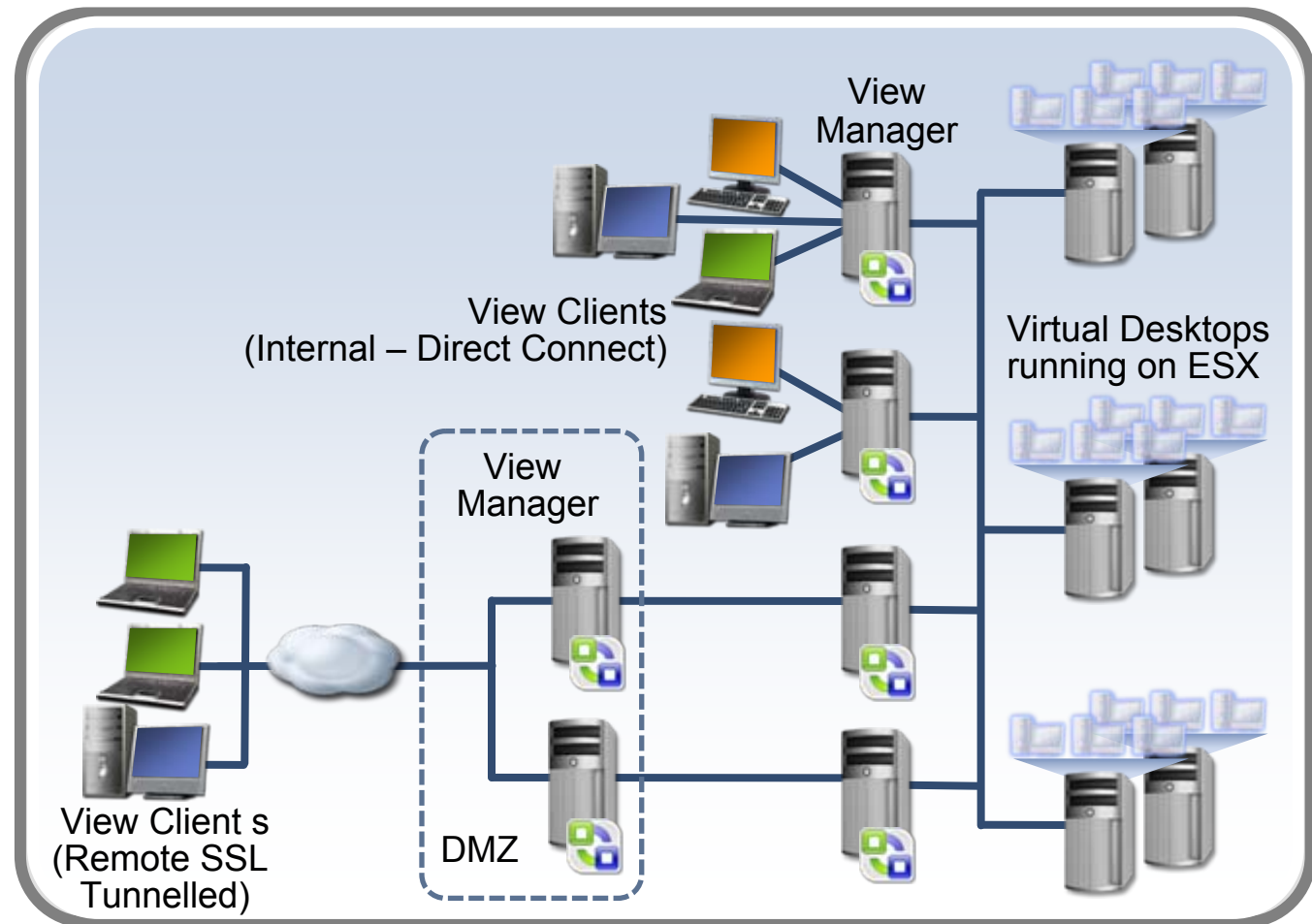
## View Manager: Built In Security

- > SSL encrypted connection between clients and virtual desktops
- > Secure Single sign-on for end users
- > Runs within the DMZ for remote access users
- > Optional integration with SecurID for two-factor authentication



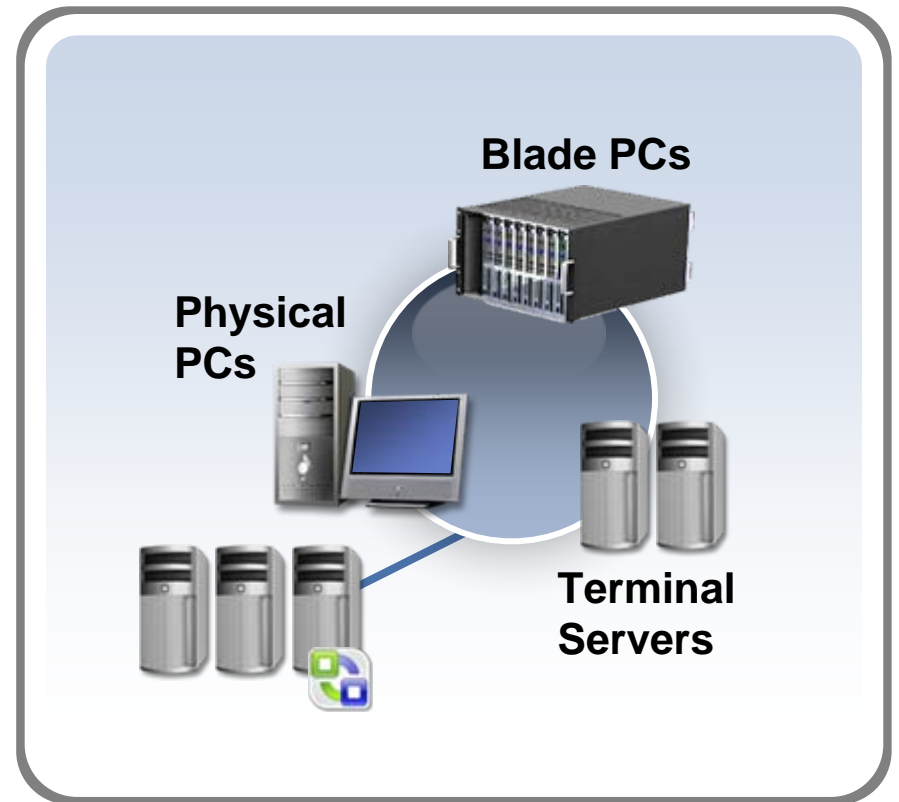
# View Manager: Enterprise Class Scalability and Reliability

- > No single point of failure
- > Enterprise class scalability provided through ability to cluster both View Manager servers and ESX servers
- > Fault Tolerance and High Availability of virtual desktops



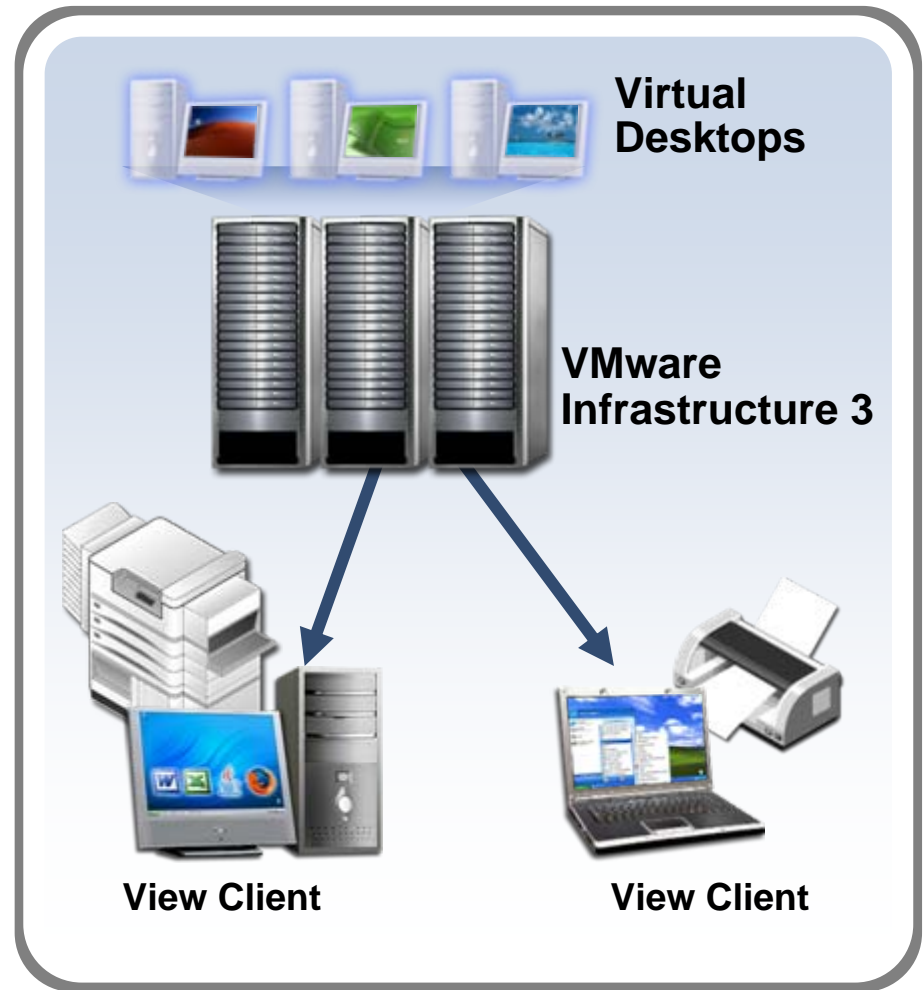
## View Manager: Unified Access

- Leverage View Manager's secure connection brokering capability for other platforms accessible by RDP
  - Terminal Servers
  - Blade PCs
  - Physical PCs
- Load Balancing of multiple Terminal Servers
- Monitoring and auditing within View Manager



## View Manager: Virtual Printing

- Driver Free Printing: No Installation and Maintenance of printer drivers
- All printers automatically available
- Minimize network utilization with advanced print stream compression
- High quality printing even over WAN connections



# View Manager: Enhanced User Experience

- > Multimedia Redirection:
  - Multimedia stream decoded at client
    - Better user experience
    - Min impact on servers, bandwidth consumed
  - Win XP, Win XPe clients supported
- > Support of critical codecs
  - MPEG-1, MPEG-2, MPEG-4 part2
  - WMV 7/8/9, WMA, AC3, MP3
- > USB Redirection
  - Provides support for local storage, scanners, printers

## Remote user experience



# View Manager: Enterprise Desktop Manager



**Seamless Integration With VMware VI3**



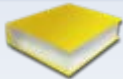
**Automated Provisioning and Desktop Management**



**SSL Encryption of Connections, SSO, DMZ deployment**



**High Availability and Scalability**



**Active Directory and SecurID Integration**



**Unified Access**



**Virtual Printing (Universal print driver)**



**Multimedia Redirection**



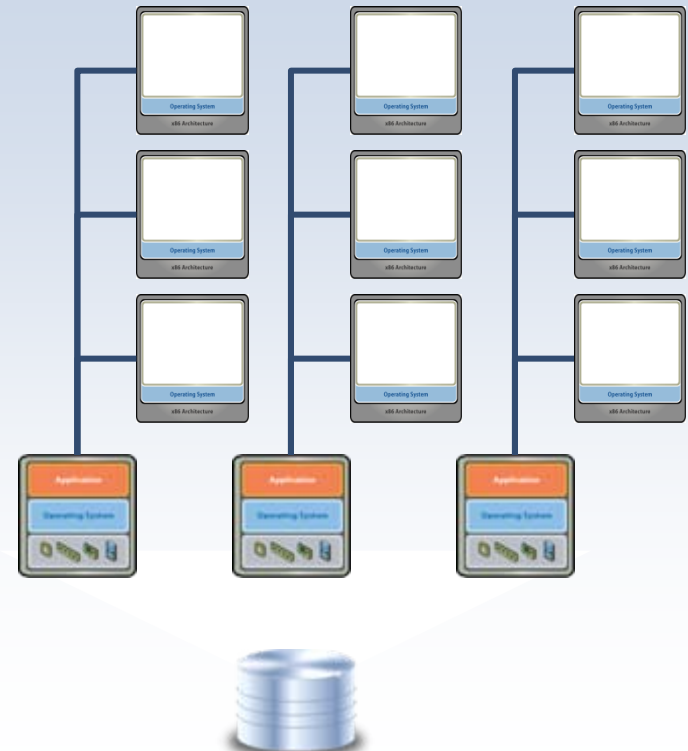
**USB Redirection (Supports Printers, Scanners, etc.)**

# View Composer: Storage Optimization, Simplified Management

## Traditional VDI



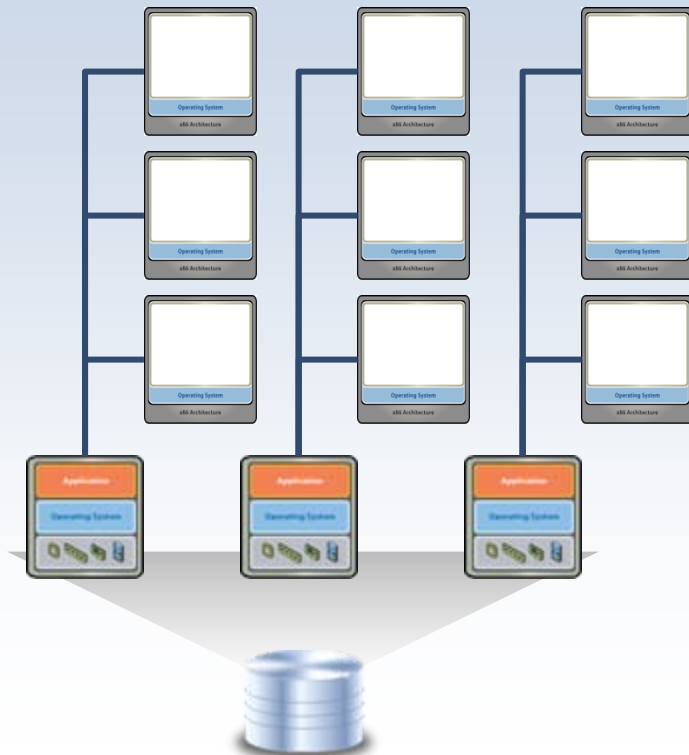
## VMware View + Clones





# View Composer: Storage Optimization

## With View Composer



- > Multiple virtual machines share common base disk
  - > Each virtual machine has own disk that stores its writes to disk
  - > Patches applies to base disk are seen by all linked clones
- 
- > Reduce storage costs for Virtual Desktop Infrastructure by up to 70 to 90%
  - > Manage 100s or 1000s of desktops from single image
  - > Simplify patch process

# View Composer: Image Management

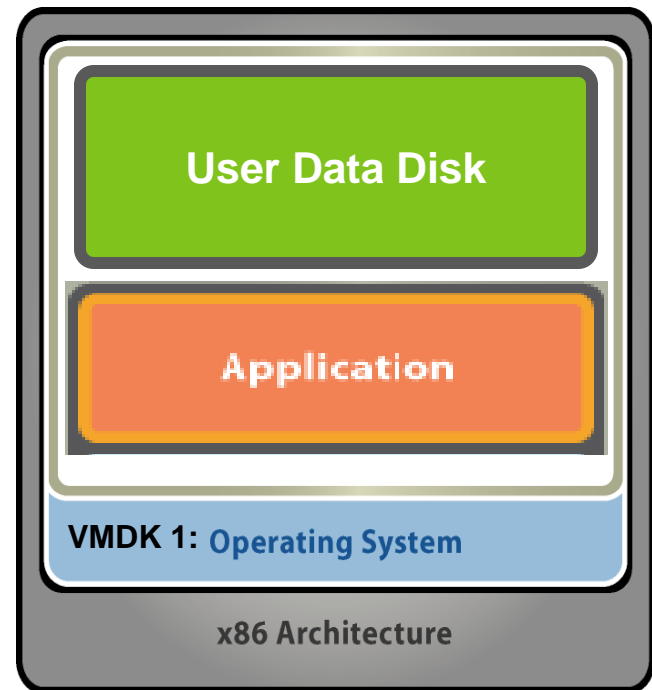
## Disk Separation

### Highly Managed OS Disk

- Reduce the provisioning time
- Roll out updates and patches by creating a new snapshot.

### User Data Disk

- Persistent disk to store user data and settings
- Provide a user with a fully consistent experience while maintain tight controls and compliance.

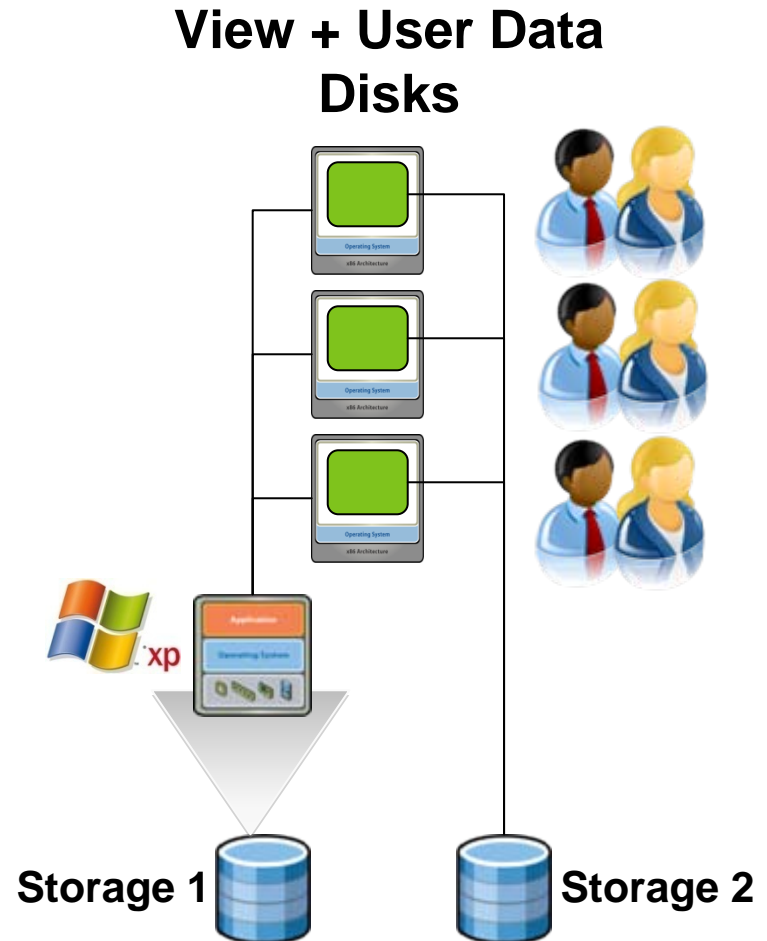


# View Composer: Image Management

**Seamless user experience by logically joining two virtual disks**

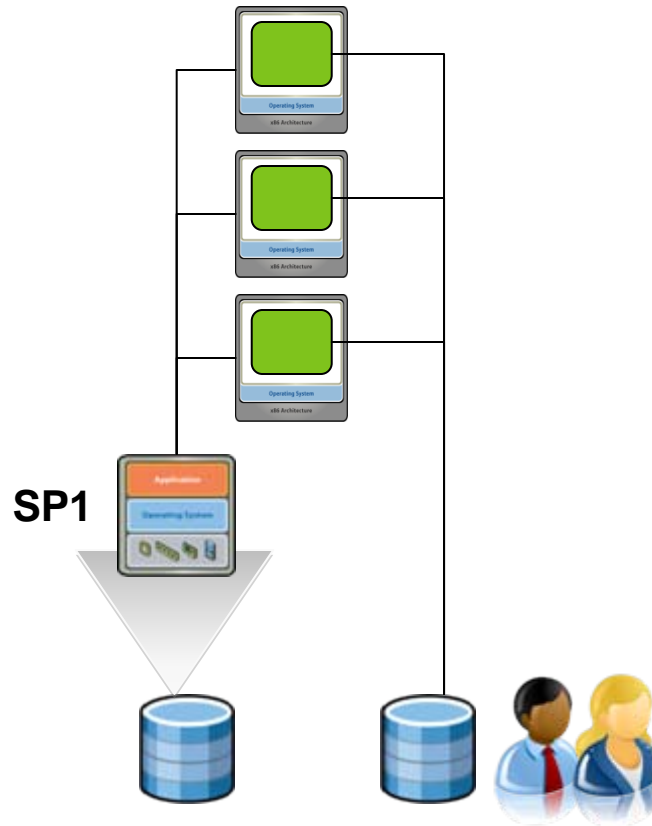
- > Highly Managed OS Disk
  - Reduce provisioning time enabling creation on-the-fly
  - Roll out updates and patches by creating a new snapshot
- > User Data Disk
  - Persistent disk to store user data and settings

**OS and user disks can be on different storage**



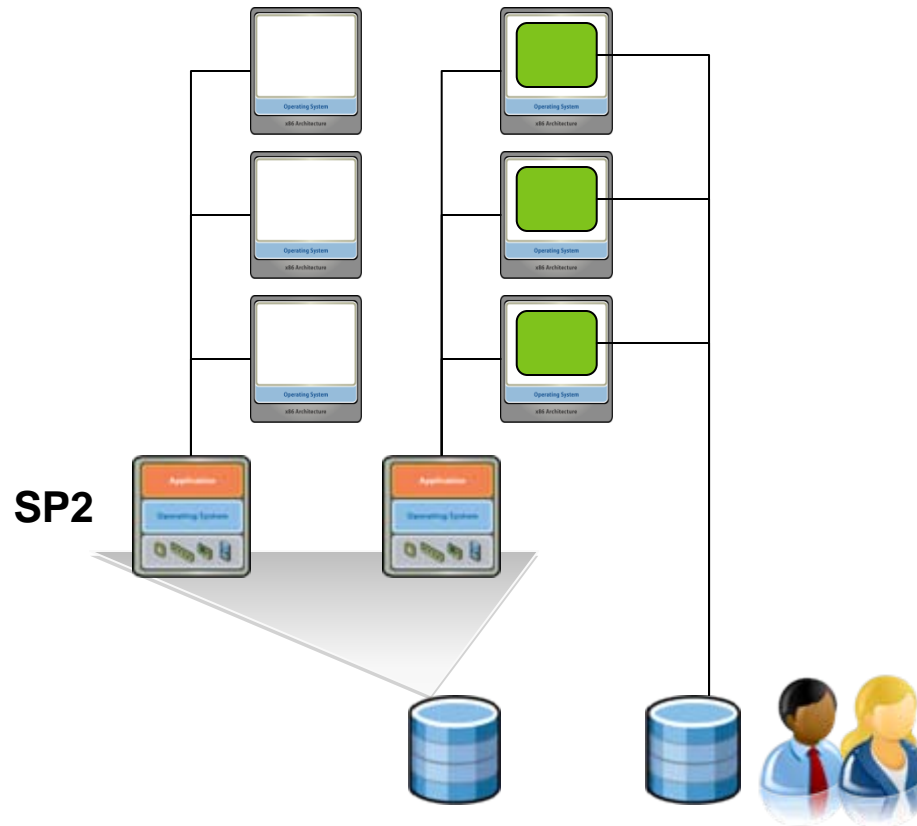
# Managing Patches and Updates

## Users Currently on XP SP1



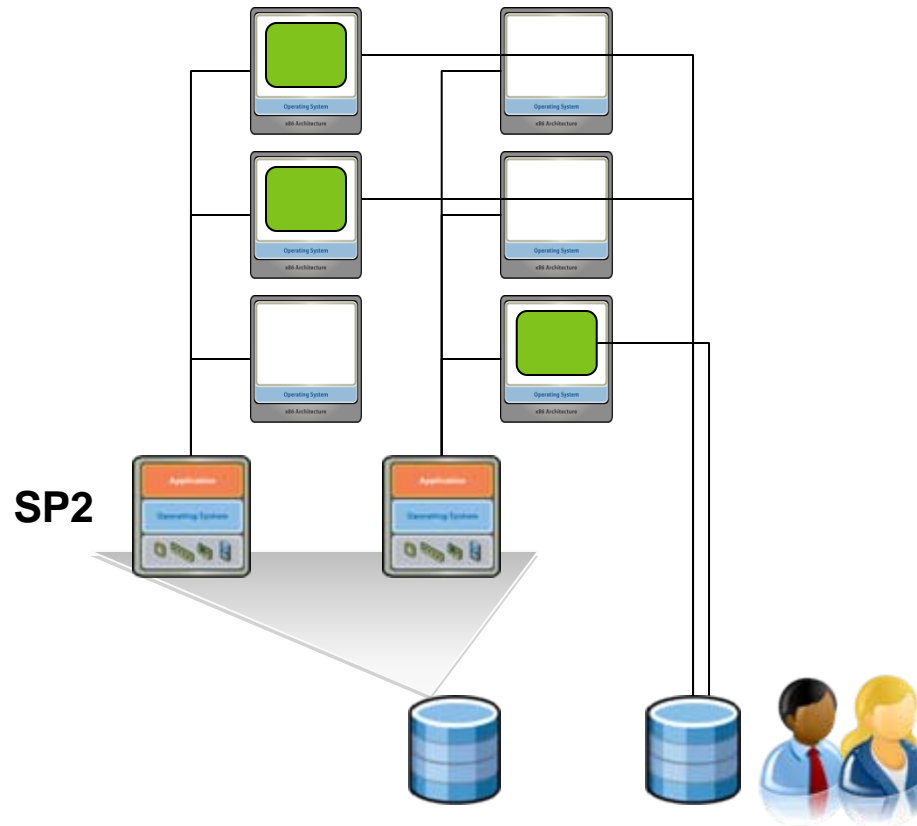
# Generate an Updated Snapshot

**Administrator creates new master image (SP2)**



# Seamless Migration of Users and Groups

User data disks are “connected” to the new master at next login or user prompt.



# ThinApp: Application Management through Virtualization

## Problem:

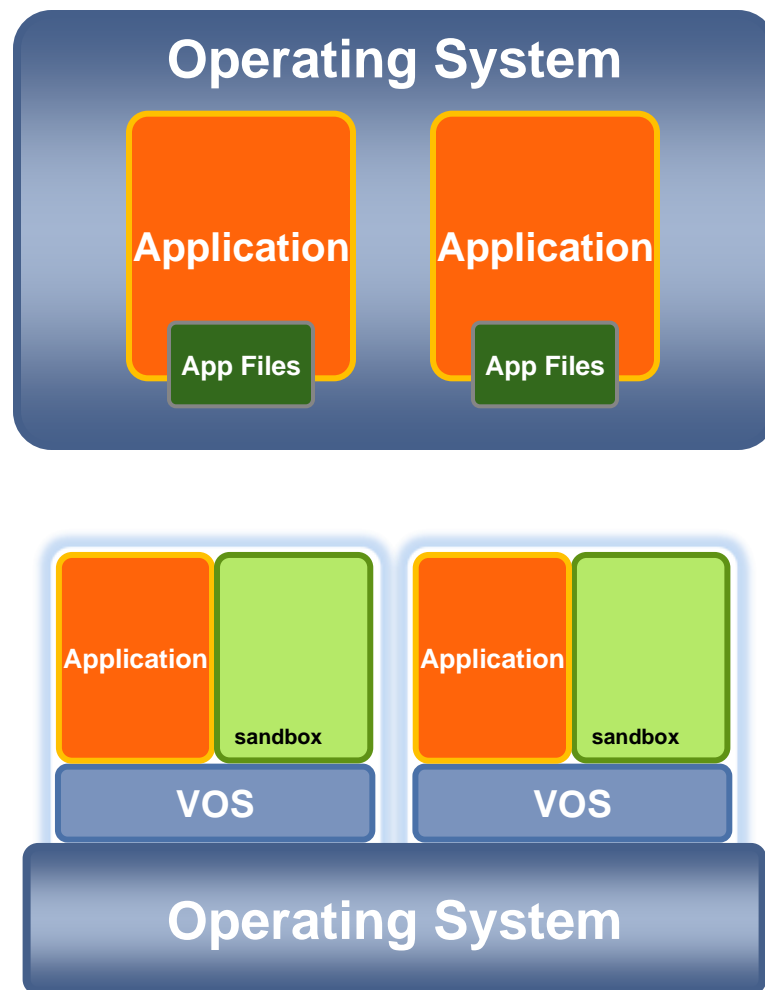
Tightly coupled relationships between OS, Applications and Data Wide platform and application support

## Symptoms:

- Application conflicts and issues with “badly behaving applications”
- Inability to deploy all required applications to specific desktop image
- Expensive application compatibility testing with large testing matrix

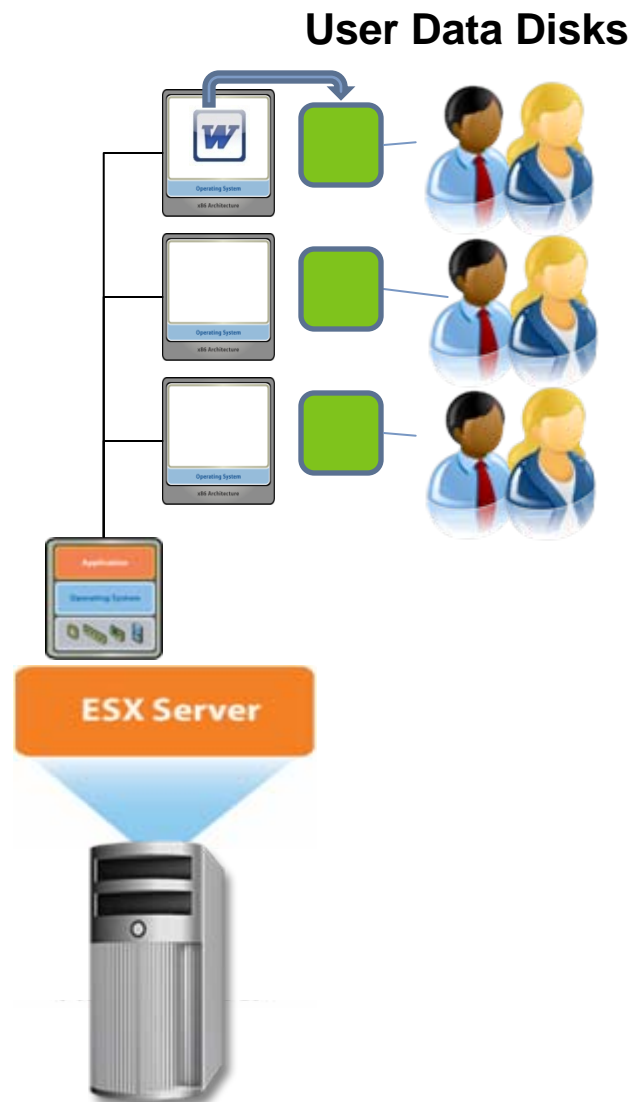
## Solution:

VMware application virtualization to decouple applications and data from the OS



## View Composer and ThinApp

- Reduce the number of master images and size of base disk
- By default, packaged ThinApp applications redirect all application “writes” to the user data disk.
- Provides a simplified means of entitlement, deploying, and managing applications





# AGENDA

← Enterprise Desktop Challenges

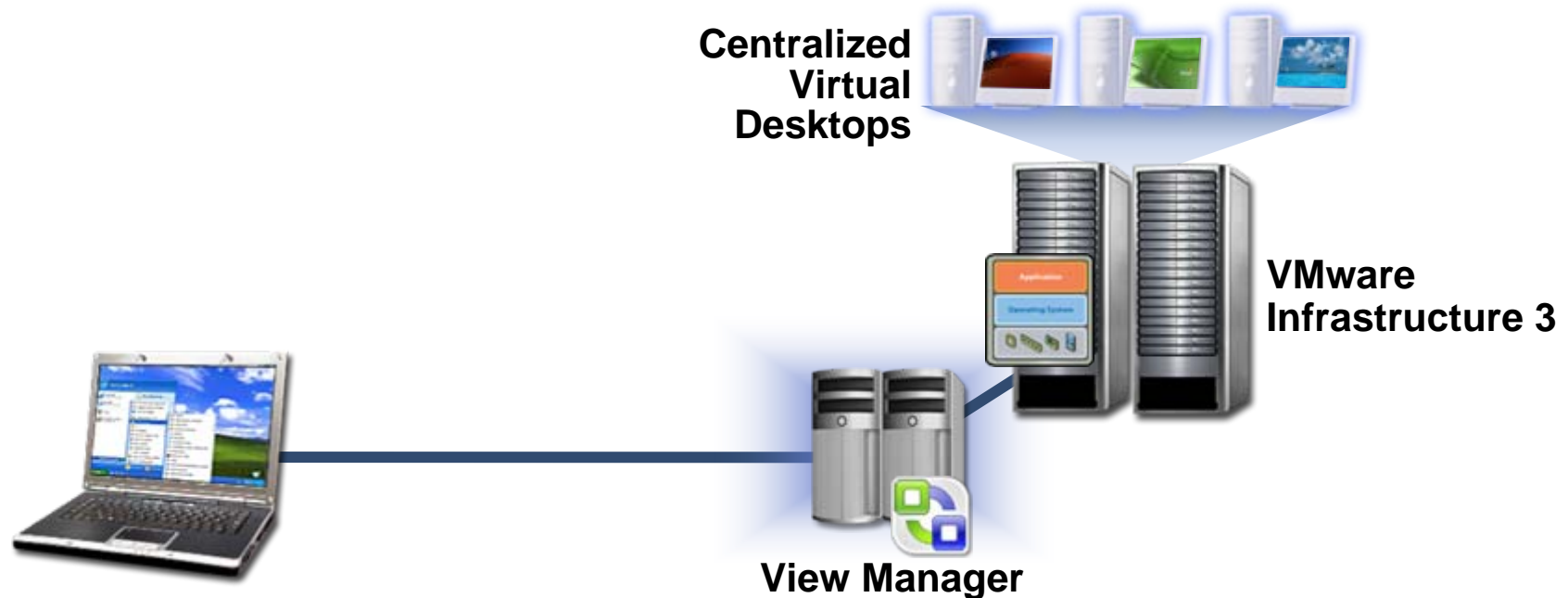
← **The VMware View 3 Solution: Future Technology**

← Customer Deployments

← Next Steps

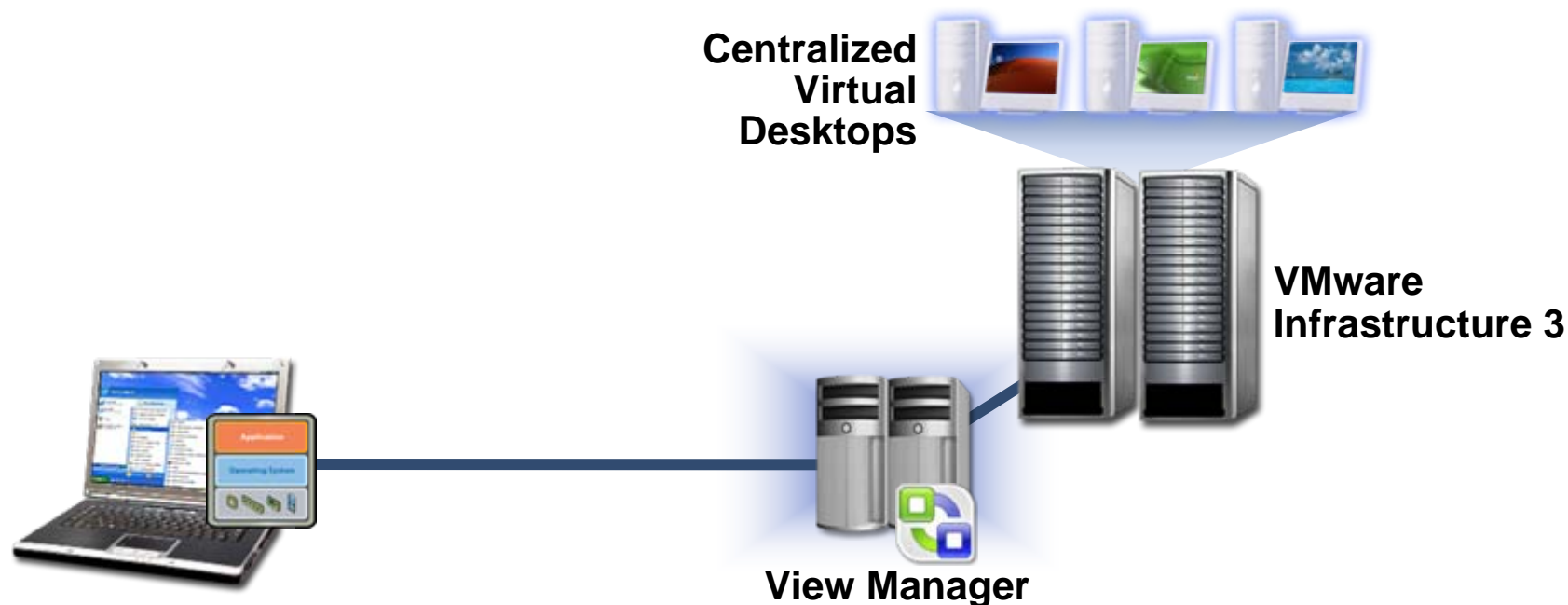
## Offline Desktop (Experimental): Anywhere Mobility

- Enables end-users to check-out their hosted Virtual Machines to a local physical computer for a full user experience
- Enables administrators to extend security and encryption policies of the centralized virtual desktops to the end-user's local computer

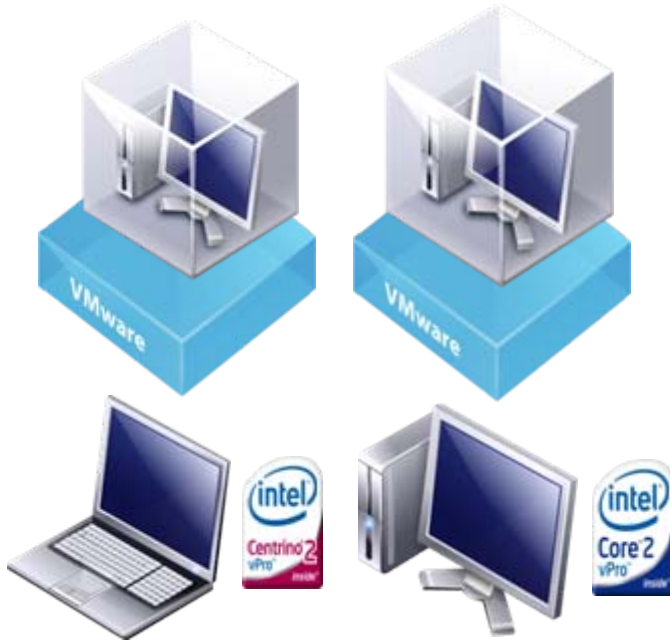


## Offline Desktop (Experimental): Anywhere Mobility

- When checked out – the virtual machine has a “heartbeat” back to the datacenter allow administrators to deactivate if necessary
- When the user checks-in, only the delta is checked in



# VMware, Intel Collaborating on Client Hypervisor

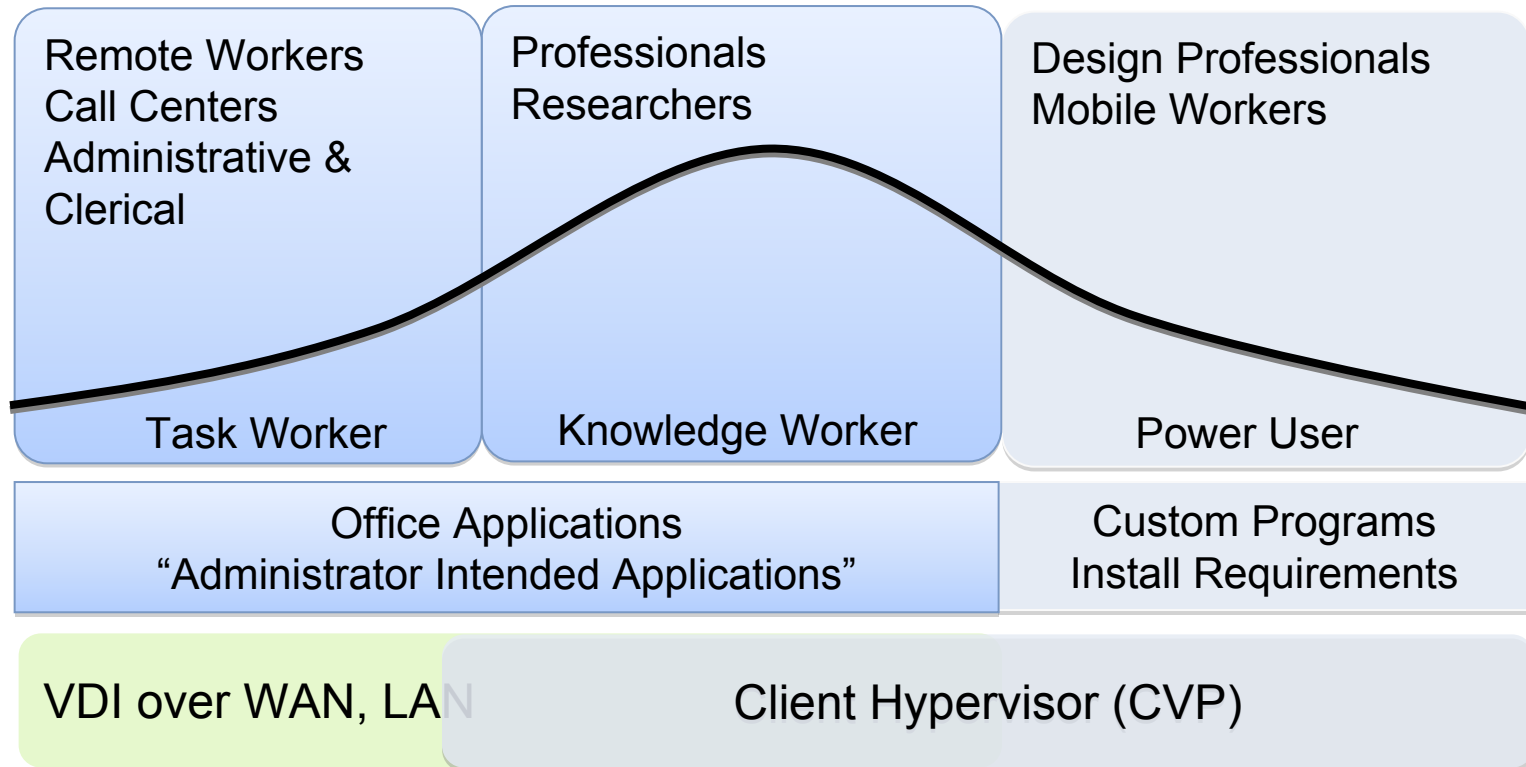


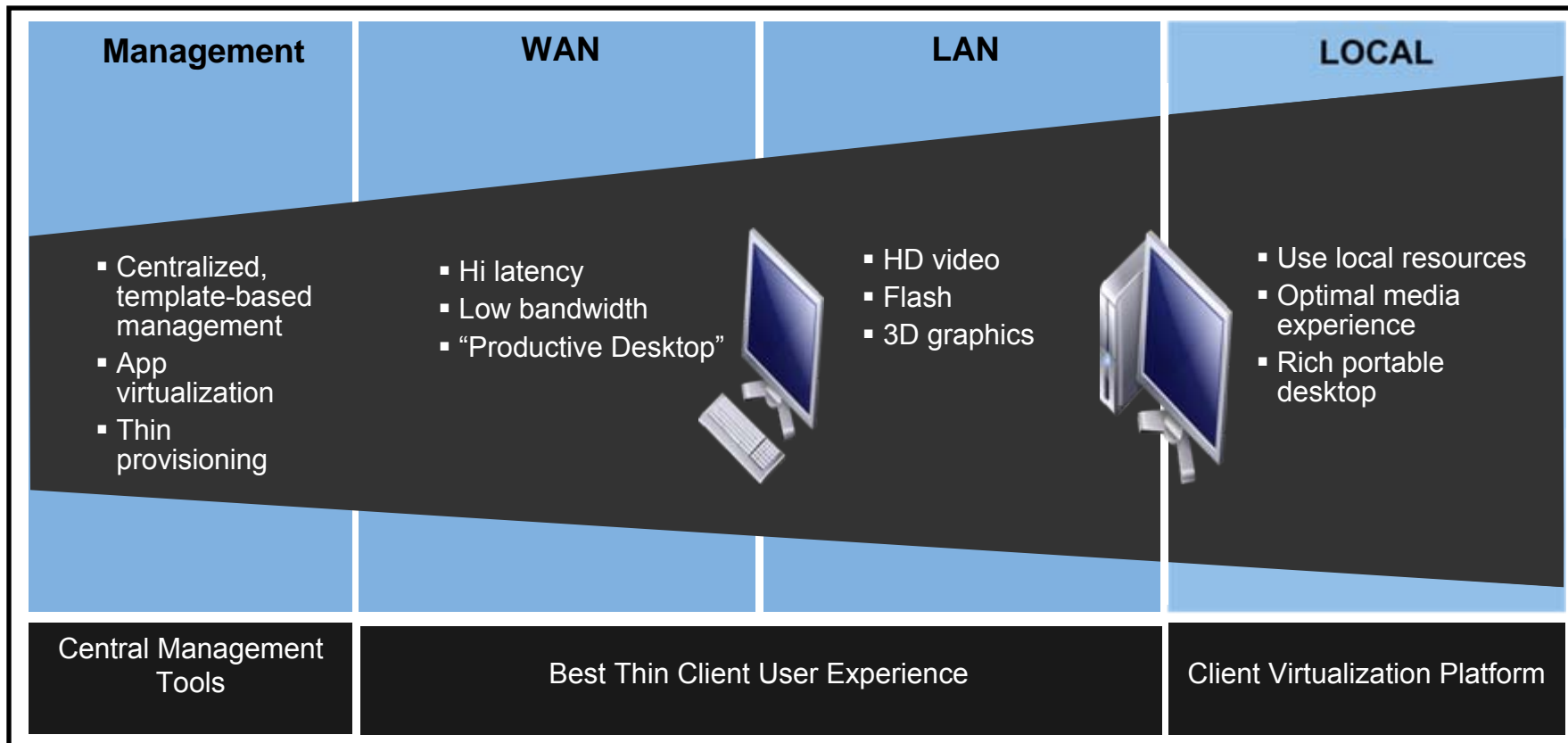
Solving IT's Tough Challenges -  
***IT As It Should Be***

## Client Virtualization Platform

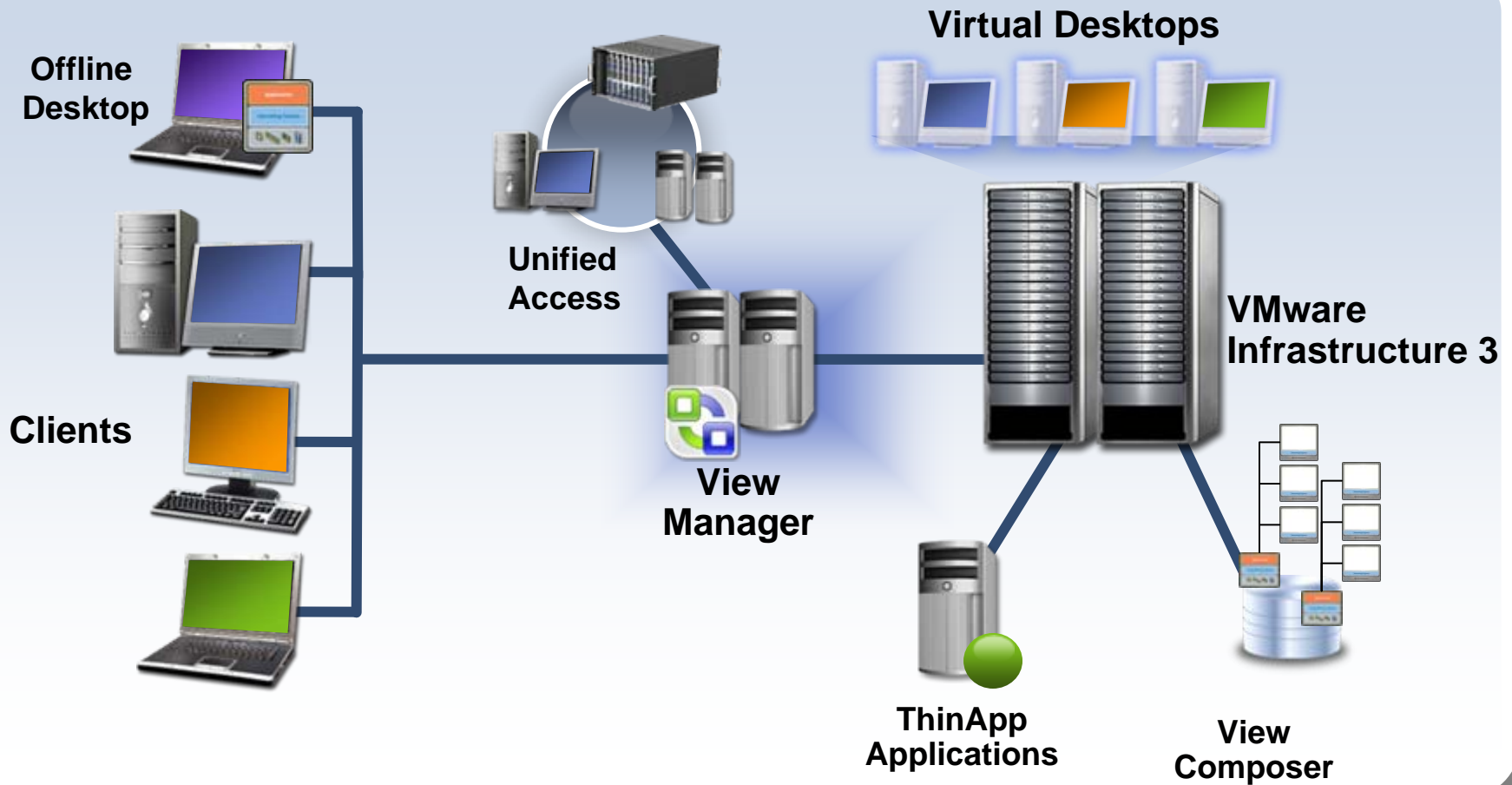
- > Bare metal hypervisor for laptops & desktops
- > Leverages local compute resources for enhanced performance
- > Extends VMware View solution to mobile users and power users
- > Boosts business agility & user productivity
- > Manageability, Security, Flexibility and performance capabilities of Intel® vPro™ technology

# VMware View: From Task Workers to Power Users





## Summary Overview for View 3



## AGENDA

← Enterprise Desktop Challenges

← The VMware View 3 Solution

← **Customer Deployments**

← Next Steps



## Where Customers Use VMware View



### **Desktop Replacement**

Replace traditional PCs with centralized virtual desktops for better control and efficient management. End users have flexibility.



### **Disaster Recovery and Business Continuity**

Provide continuous availability of desktops by making high availability and disaster recovery solutions more cost-effective, simpler, and more reliable.



### **Desktops as a Secure Service**

Eliminate the need for moves, adds or changes. Allow third parties to access corporate applications in secure, controlled way.



### **Focused Solutions**

Offshore development: giving developers control while keeping IP in data center. Platform migration: providing access to, e.g. from Vista to XP and vice versa. Application compatibility resolution. Mergers and acquisitions.

# Case Study: Huntsville Hospital

## Business Challenges

- Quickly and easily provision desktops to the users
- Lower Cost of PC Management
- Satisfy HIPAA requirements
- Access desktop anytime, anywhere using multiple devices
- Desktop Disaster Recovery

## Solution

- VMware View deployment ( Carts on wheels)
- EMC Storage, IBM Blade Servers (60 desktops/blade)

## Why VMware View

- Payback period: 7 months for all 1600 desktops
- Rapid provisioning: <15 mins to provision
- Desktop Business Continuity solution for doctors
- Flexible secure access to sensitive data



***“We’re in the process of opening a new emergency room at the hospital. Because of the critical nature of the computing environment, it has to be up and running extremely quickly. With VMware View, instead of having to buy 150 PCs and fully configure them, we’re going to roll out 150 thin clients, connect them to their pre-configured hosted virtual desktops, and be on our way.”***

**Tony Wilburn,**  
Network Specialist,  
Huntsville Hospital

# Case Study: Jewelry Television

## Business Challenges

- Terminal Services environment produced an unfamiliar desktop experience
- Multiple application compatibility issues
- Increased number of resources needed to support – hard to manage

## Solution

- VMware View using Thin Clients to access virtual desktops

## Why VMware View

- Implemented 300 seat call center in two weeks with XP desktop and applications
- Familiar user interface – no retraining
- Existing knowledge of VI3 platform
- New virtual desktops takes minutes to deploy



**“Our online shopping site runs around the clock, and VMware’s desktop virtualization gives us the flexibility and reliability we need to support 24/7 operations.”**

**Wesley Baker,**  
VMware Architect, Jewelry  
Television

## Case Study: Via Health



## AGENDA










← Enterprise Desktop Challenges

← The VMware View 3 Solution

← Customer Deployments

← **Next Steps**

## VMware View 3 Packaging

	View Enterprise	View Premier
VI3 Enterprise		
vCenter		
View Manager		
View Composer		
ThinApp		
Offline Desktop*		

\* Experimental in View 3.0

## Next Steps VMware View

### **More Information on VMware View:**

<http://www.vmware.com/products/view/>

### **Download and Evaluate Solution:**

[www.vmware.com/download/view/](http://www.vmware.com/download/view/)

### **Use the VMware View TCO calculator:**

[http://www.vmware.com/go/view\\_calculator](http://www.vmware.com/go/view_calculator)

### **VMware Professional Services Offerings**

- Jumpstart workshops providing onsite proof-of-concept and pilots for VMware View
- Custom service engagements to plan, design, and implement VMware View deployments

# Summary of VMware View

## Summary of Benefits

- Streamlined Desktop and Application Management
- Reduced Desktop Maintenance and Support Costs
- Improved End User SLAs and Desktop Business Continuity
- Improved Security and Compliance





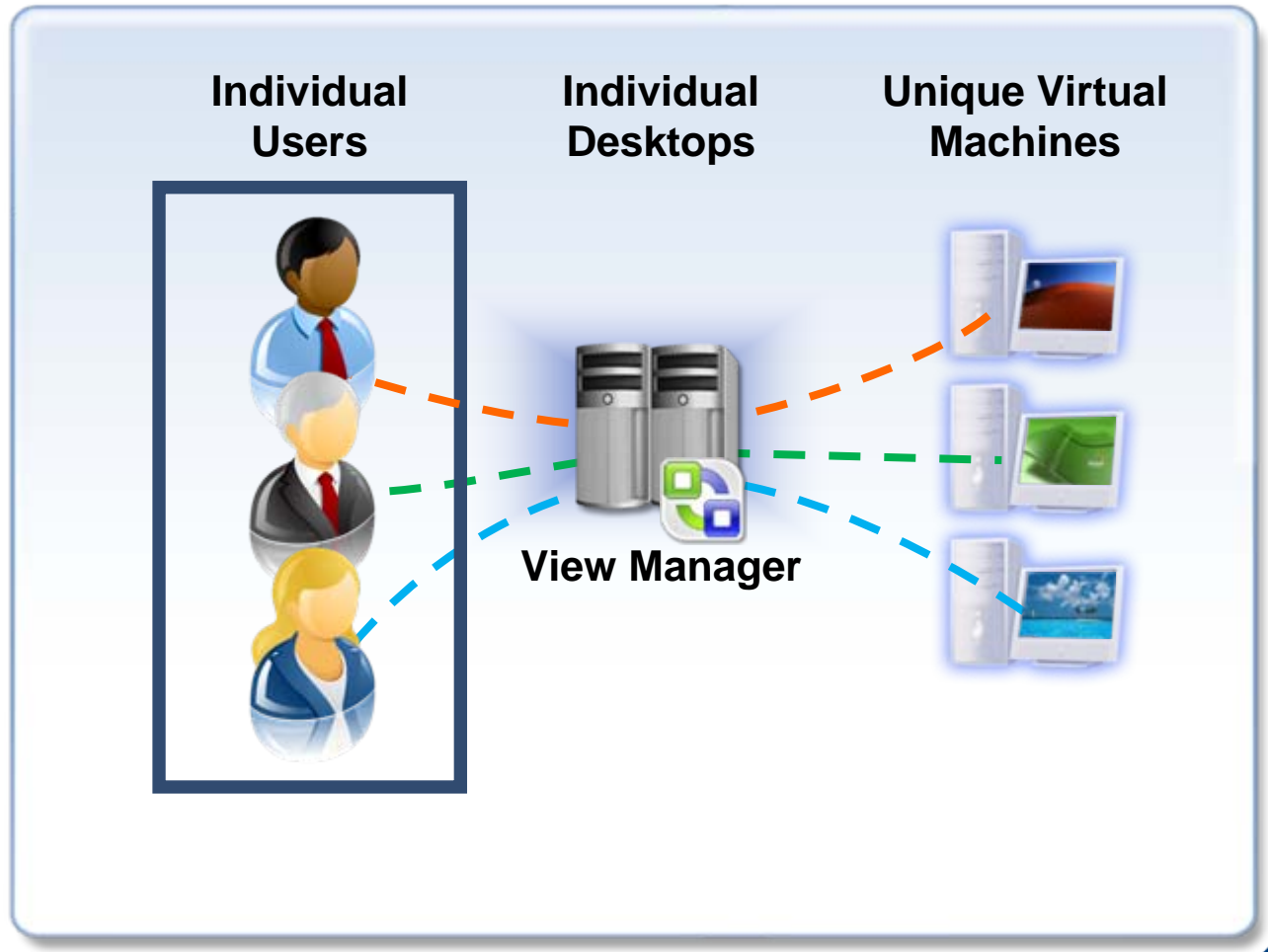
## Questions and Answers

Thank You!

**Q and A?**

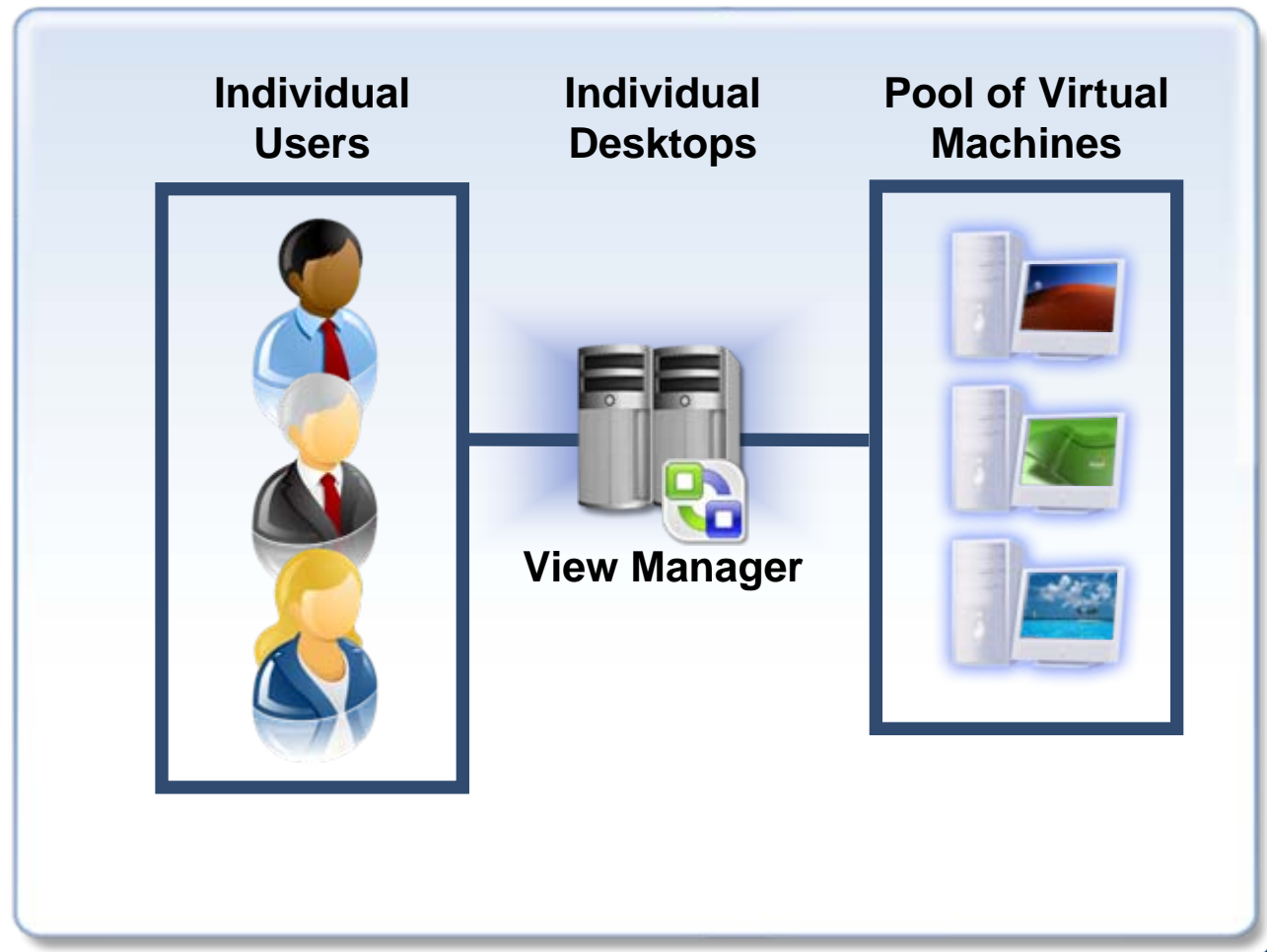
## How Customers Typically Start: Stage 1

- > Pilot group of 50–500 users
- > May use Capacity Planner/Jumpstart
- > Each user gets a dedicated desktop
- > Leverages existing processes and management



## How VMware View Solution Evolves: Stage 2

- > Persistent pool desktops
- > Virtual machine allocated and personalized dynamically



## How VMware View Solution Evolves: Stage 3

