



Remotely Manage POS Systems, Prevent Fraud and Improve Compliance

Retailers rely on VMware to stay competitive and maximize revenue with innovative solutions. VMware Mirage for Retail offers many benefits:

- Drive down costs by managing POS terminals and PCs from a centralized location.
- Improve security and PCI compliance for Windows Embedded POS and Windows operating systems by quickly pushing out security patches and updates to vulnerable endpoints.
- Increase uptime by remotely repairing and restoring POS or physical PC images with automated backup and full system recovery.

VMware Mirage™ for Retail provides centralized image management for PCs and point-of-service and point-of-sale (POS) terminals. Dynamic layering and full system recovery enable IT to quickly and cost-effectively deliver updates to operating systems and applications across thousands of endpoints. Continual monitoring of the POS system detects file changes and restores the POS to a clean image, reducing breaches or data leakage. Simplified patch delivery, upgrades, and migrations from a centralized server improves security, helps retailers adhere to PCI standards, and ensures images are in compliance. Designed for retail store chains and distribution centers, Mirage requires little to minimal infrastructure at remote locations, resulting in decreased capital expenditures.

Compliance Check and Fraud Prevention

Mirage is now able to continually monitor POS images to detect abnormal file activity. If there are unauthorized changes detected on the POS system, the image is immediately repaired and restored to the previous compliant state. This operation can be easily integrated and automated into POS workflows, so all endpoints are continually monitored and repaired if needed. Now you can manage and prevent security breaches and data leakage in real time. With Mirage, you can easily enforce corporate-mandated POS images and applications, plus remediate any operating system issues, all from a central location.

Accelerate POS and OS Migrations

Managing POS devices and physical PCs in remote store locations can be costly, time consuming, and strain valuable company resources.

Whether you are migrating your point-of-service or point-of-sale (POS) system due to end of support and related PCI-compliance issues or to implement a new system, VMware Mirage for Retail offers comprehensive support for a variety of systems, including Windows Embedded for Point of Service, Windows Embedded POSReady 2009, and Windows Embedded POSReady 7.

Mirage for Retail also accelerates common desktop migrations, such as upgrading a Windows XP device to Windows 7, upgrading a Windows 7 device to Windows 8.1 or Windows 10, and migrating an end user's profile and files to a new Windows 7, 8.1, or 10 machine. Before a migration, Mirage takes a full snapshot of the OS or POS system so that IT can quickly restore to a previous state if something goes wrong.

Mirage for Retail saves retailers time and money. For example, migrating 5,000 devices could add up to saving as much as USD \$600,000 in IT or field service time and more than USD \$1,000,000 in continuity and productivity gains.

Centralize Images with Dynamic Layering

With Mirage for Retail, IT can manage images across POS terminals, desktops, and laptops. Dynamic layering simplifies system and application rollouts. Devices are separated into logical layers so that IT can streamline POS, OS, and application layer updates, and end users can maintain their personalized settings on their PCs. This flexible endpoint management technique enables quick updates, migrations, and hardware upgrades.

Automate POS Terminal and PC Backup and Recovery

Whether you need to reimage a desktop or POS terminal, replace a broken hard drive, replace a lost or damaged PC, or roll back a malfunctioning terminal or PC to a previously working snapshot, restoration can be difficult. Mirage takes snapshots of an entire device—including the OS, applications, files, and personalization—and restores an exact image of the old system to any replacement device. Or you can “clean the image” every night by removing only the changes made during the day. Self-service file recovery and “follow-me” access to files across devices additionally enhances end-user productivity.

Easily Manage Store and Distribution Center POS Terminals and PCs Without Added Infrastructure

Mirage for Retail excels over a WAN by leveraging deduplication capabilities, both in storage and during network transfers. Built-in bandwidth control ensures that network transfers stay within limits across the WAN. Mirage centralizes exact copies of POS terminals and PCs over the WAN and into the data center.

Extend PC Lifecycle Management Tools

Mirage for Retail augments any PC lifecycle management tool. Mirage extends lifecycle tools by providing dynamic layering, backup and recovery, and rollback options, lowering help desk and field service support costs, improving backup and recovery, and simplifying mass OS and POS deployments. API extensibility and an enhanced reporting framework help IT manage PCs and POS terminals more efficiently.

“Mirage helped us to seamlessly migrate our point of service devices across 1,250 stores. VMware Mirage enabled a smooth rollout of our mission-critical software, NOAH4. Without this software we cannot sell the latest hearing aids. Centralized, single-touch Windows 7 migration reduced the time and cost of our project by over 50 percent.”

– MARK KLERKX,
MANAGER IT
INFRASTRUCTURE,
AUDIONOVA INTERNATIONAL

How Does VMware Mirage Work?

When Mirage is installed on a PC or POS terminal, it scans the entire device, referred to as an endpoint, and categorizes its contents into logical layers for easier management. Mirage does not move anything on the PC or POS terminal.

Mirage then sends a complete copy of the endpoint image to the Mirage server, which resides in the data center. The Mirage server keeps the image synchronized. For instance, if a PC end user goes offline, Mirage performs a synchronization the next time the user comes back online. The synchronization includes updates IT has made to IT-managed layers and changes that the end user has made to the system.

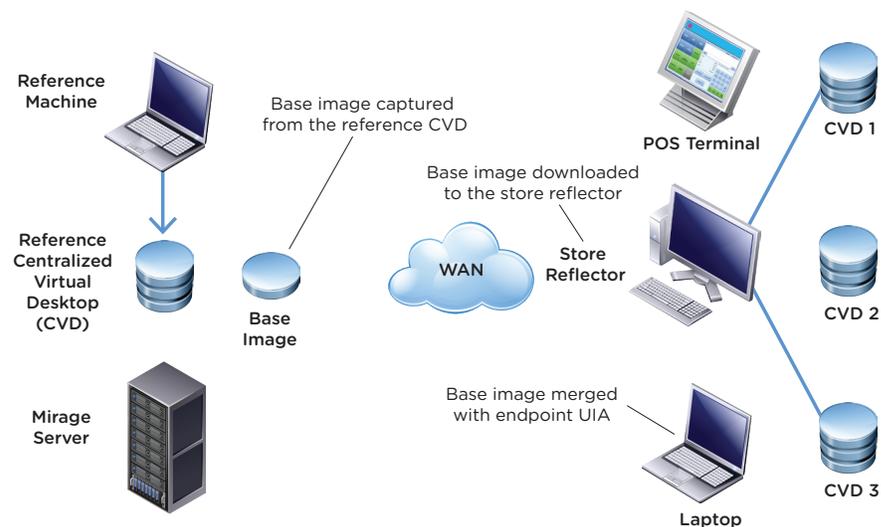


Figure 1: Mirage for Retail Delivers Image Management, Provisioning, and Migration

The Mirage architecture includes the Mirage server in the data center to centralize endpoints for management and protection, the Mirage client to create a local cache at the endpoint, and advanced WAN designed technology to speed bidirectional synchronization over the WAN.

Simplified POS Terminal and Desktop Management

Dynamic layering and full system recovery ensure that IT can quickly and cost-effectively deliver, manage, and protect updates to operating systems and applications on devices at stores and distribution centers.

Dynamic Layering

- **Layered image management** – Manage your POS terminal or PC image as a set of logical layers. If an endpoint malfunctions, IT can restore the system layers on the endpoint to fix the issue without compromising applications and data. Extend existing management processes and solutions for POS and PC lifecycles for quick migrations.
- **Layered application management** – Easily deploy individual applications or groups of applications—or VMware ThinApp® packaged applications—to any collection of PC end users by leveraging Mirage managed-application layering. Applications common to a particular team can be grouped into a single application layer and applied to all endpoints for a group of employees.

Full POS Terminal and Desktop Backup and Recovery

Ensure quick POS terminal and desktop recovery with full snapshots and ongoing synchronization of changes in the data center. By quickly restoring the system to a new device, IT can minimize downtime. The Mirage file portal also enables PC users to access any file on their endpoint from any Web browser. Users can also restore any file or directory with a few clicks.

Optimized for Stores and Distribution Centers

Optimize management of devices at stores and distribution centers by enabling any Mirage client endpoint to be a reflector. A Mirage reflector allows you to download updates once from the Mirage server, followed by peer-to-peer updates to other Mirage clients in stores or distribution centers. Advanced algorithms ensure that only required data is sent between the Mirage server and Mirage clients in a remote location. Mirage for Retail supports up to 1,500 end users per server, and it can easily scale up to tens of thousands of devices per server cluster with minimal infrastructure.

About VMware End-User-Computing Solutions for Retail

VMware end-user-computing solutions for retail help businesses maintain their competitive edge and maximize revenue by modernizing store operations, empowering store associates, and enhancing customer engagement. To learn more about VMware end-user-computing solutions for retail, visit <http://www.vmware.com/solutions/industry/retail.html>.

Find Out More

For information or to purchase VMware products, call 877-4-VMWARE (outside North America, +1-650-427-5000), visit <http://www.vmware.com/products>, or search online for an authorized reseller.

