



Branch Office Desktop

VMware Solution Lab Validation

HOW-TO GUIDE

Solution Overview

Regional and branch offices need access to corporate assets but often lack local administrative resources to maintain and manage these assets in a timely manner. The Branch Office Desktop delivers consistent and scalable desktops as a managed service for remote and branch office workers across the WAN to maximize uptime, streamline desktop management, and drive down operational costs. With VMware View you can:

- Provide consistent high performance desktop experience across the LAN and the WAN using VMware View with PCoIP
- Simplify desktop IT management and accelerate provisioning of remote desktops
- Ensure high availability with better SLAs
- Reduce desktop operating costs and travel across sites and locations

The lab identified the hybrid approach combining best of both worlds in VMware View and VMware Mirage technologies. The VMware Branch Office Desktop is seamlessly assembled to offer user flexibility, enforce branch office policy, single image management, and deliver optimum experience. By integrating vCenter Operations Management Suite (vCOPS) and View Adapter collection at the branch, the solution offers the business the visibility and more flexibility for managing their branches.

The core design includes

- Application Performance Management and end user monitoring tools to ensure delivery the best user experience
- vCOPS for View (V4V) for virtual infrastructure single pane of management
- VMware View and VMware Mirage to support both physical and virtual image management, persistent and stateless desktops
- Security best practices for anti-virus protection with vCNS* Suite and vSphere Endpoint for virtual environment and recovery from virus infections, in addition recovery for physical desktop to last known good image with VMware Mirage
- Full VMDK level backup practices on virtual profiles / persona server, SQL database, and all infrastructure VMs to ensure a fast recovery when needed

By bringing the VMware View compute design, resource, and workload locally to the branch offices delivers the true “Branch-in-the-Box” concept execution. The design leverages [VMware Rapid Desktop Appliances](#). By using VMware Mirage to manage all physical computers and failover to persistent virtual desktops it's now easy to accelerate desktop management and software delivery.

Architecture & Design

In some user scenarios, VMware Mirage can be deployed at the branch on its own for simple and single image management deployment. In our solution lab validation, we explore the hybrid approach taking the best of both worlds, VMware View centralized management and VMware Mirage image management. In the branch location, one or more clients can be designated dynamically as a Reflector to serve peers and only one image brought across for all users. This helps delivering the images more efficient and help reduce the network utilization.

In the main datacenter, a simple deployment of VMware Mirage Server cluster with file portal is deployed. Enables peer-to-peer downloading for Mirage updates to remote offices. You will install the 2 MB Mirage Client in all physical and virtual desktops. The use case is to allow easy failover from physical to virtual with exact same desktop experience.

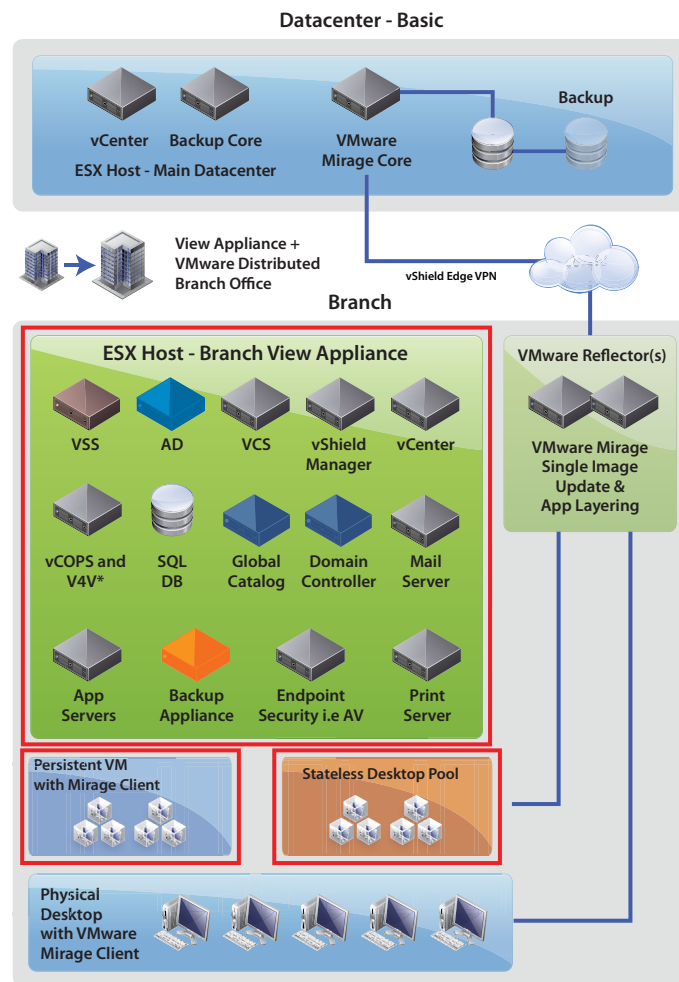
On storage implementation, either SAN, NAS or local storage is supported. In our lab validation, we assume 15 GB per user and enables compression on the selected Mirage storage volume (for savings up to 25%).

On the network side, Mirage consumes average of 15 Kbits/sec per user, which equals roughly 50 MB per user per day.. Of course, the workload varies by use cases. Bandwidth will be dynamically adjusted depending on user activities to ensure best user experience.

VMware View provides central management and real-time secure access. You can create either persistent desktop or stateless desktop for various workloads in any branch functions. All View event database, security events, user business application transaction QoS data, and backup events can be fully integrated into the vCOPS with View Adapter (V4V).

The Branch Office Desktop carries some VMware ISV partner's solution in this design including load balancing, backup, replication, WAN acceleration, security and data loss protection (DLP) products. The exhaustive vendor listed to remain neutral as a functional validation purpose only.

* VMware vCloud Networking and Security (vCNS) is formally vShield Suite



- Mirage Core at main datacenter
- Images are being stored and manipulated in datacenter
- Redundancy backup for images
- vCNS Edge VPN created for secure access for Application Servers to main datacenter
- SSL can be enabled for all communication between the client and the server.
- vCNS App highlighted in red for security policy rules and compliance settings
- CIFS share is created for Thinapp, Persona, and corporate files
- Domain Controller with Global Catalog Service configuration
- VMDK level backup on all infrastructure VM and Mirage Reflector VMs
- Mirage Client installed
- Secure endpoint access

Validation Result

The main objectives for this validation are:

- Enhanced local experience by bringing VDI workload directly to local branch
- Ease of management: Any level of IT professional can have role-based access to manage the branch office environment either via View Administration console or vCOPS management console.
- Security: It's fully deployed with complete vCloud Networking and Security (vCNS) from Edge, App, to Data Protection along with 3rd party ISV's anti-virus products. In addition, the lab also deploys Microsoft RADIUS for View authentication with 2FA authentication like USB eToken access into the physical and virtual desktops.

This test activity supports the goals of the design objectives by extending coverage of VMware View and Mirage, combining and exploring interactions between ISV products, as well as Network Systems in a customer representative environment. The extended coverage of designs, combined with the sustaining capability result will be detailed in the Branch Office Desktop Validated Design Guide at VMware [Desktop Solution Portal](#) which will help ensure improved quality and a successful real-world deployment.

Design Components

The following design components represents options and not an absolute approach. You should consult with your current software and hardware partners to put together your branch office desktop solution.

Software Product	Function / Description / Version
vSphere	5.0.1
vSphere with vCenter	5.0
VMware View with Persona Management	5.1
VMware View Composer	3.0
VMware Mirage	
vCloud Networking and Security Suite	5.1
Application Transaction Monitoring / User Perspectives	Aternity
vCOPS	5.0.2
vCOPS for View	1.0
Backup and Restore	CommVault Simpana 9
Antivirus	Trend Micro Deep Security 8.0

You can leverage any Rapid Desktop Appliance for your hardware consideration in the branch appliance. For exhaustive list on all components and how to configure them, please refer to the Validated Design Guide.



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