

## Address Desktop Challenges with VMware View and NetApp

### PC Desktop Challenges

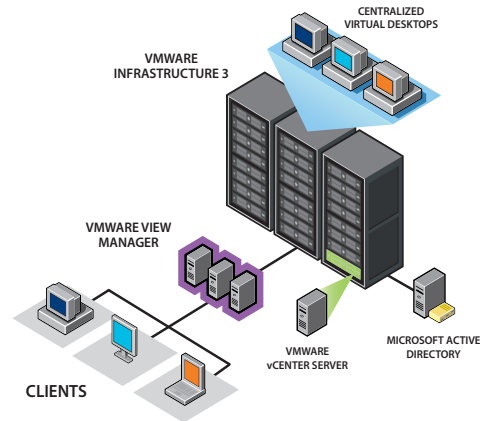
The fully-featured “thick-client” PC has traditionally been the ubiquitous workhorse of desktop computing. However, in many situations, thick-client PCs are not the ideal solution. Among their drawbacks:

- **Difficult to manage.** Centralizing and standardizing PC management is extremely difficult in the face of broadly distributed PC hardware and workers who increasingly require access to their desktop environment from anywhere.
- **High total cost of ownership.** The relatively low cost of PC hardware is often more than offset by the high cost of PC management and support. Ongoing PC management including deployment of software, updates and patches can be labor-intensive because of the need to test and validate deployment for a wide variety of PC configurations.
- **Difficult to protect and secure.** End users often fail to back up critical files and PCs are frequently and unpredictably not connected to backup networks.
- **Inefficient resource utilization.** The distributed nature of PCs makes it difficult to pool resources to improve utilization and reduce costs.

### Manage and Control Desktops Centrally

Addressing these challenges, organizations use VMware® View, including VMware Infrastructure 3 and VMware View Manager, an enterprise desktop management server, to replace traditional PCs with virtual desktops that run on servers in the data center. Administrators can provision new desktops in minutes, giving users their own personalized desktop environments while eliminating the need for retraining and application sharing. VMware® Distributed Resource Scheduler (DRS) can reduce unplanned downtime by automating the process of using VMotion™ to migrate running applications away from servers that cross utilization thresholds or moving virtual machines non-disruptively to servers that have the needed compute resources.

By hosting desktops inside virtual machines running on centralized servers in a data center, users can access their virtual desktops remotely from a traditional PC, thin client or repurposed computer using a remote display protocol.



VMware View enables your IT team to:

- Manage desktops centrally, simplifying desktop installations, backups and maintenance.
- Control access to sensitive data and intellectual property by maintaining information in a secure data center.
- Provide individual isolated virtual desktops to end users that look and feel like their normal desktop.

VMware View gives your organization the benefits of server-based computing without the limitations of shared services technologies or the application integration hassles.

### Benefits of a VMware View

VMware View offers the following benefits:

- **Control and manageability in a single product.** Administrators can more easily provision, manage and maintain desktops because they are running in the data center.
- **Familiar end-user experience.** End users get flexible access to a personalized virtual desktop that behaves just like their normal PC.
- **VMware® Infrastructure 3 integration.** VMware View brings VMware Infrastructure capabilities to the desktop, leveraging backup, failover and disaster recovery (DR) capabilities.
- **Lower TCO.** VMware View can help lower the cost of operating corporate desktops by streamlining administration, reducing energy costs and extending the useful life of PCs.

### Learn More

To learn more about VMware solutions and products, visit <http://www.vmware.com> or call 1-877-4VMWARE.

## NetApp

www.netapp.com

### Overview

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency.

### Key Business Needs

Storage is a critical factor in determining the overall cost, flexibility and availability of a virtual desktop solution. In particular, the costs of migrating end-user data into the data center using traditional storage and backup solutions can make it difficult to justify the benefits of implementing a virtual desktop infrastructure.

### Key Business Benefits

NetApp offers the industry's broadest family of compatible storage systems and data management software to give you unmatched business agility, superior uptime, simplicity of management and lower TCO.

### Business Results

With NetApp, you are able to realize the full potential of your VMware virtual desktop infrastructure, making it more affordable by using less storage. You will increase user productivity by providing continuous access to user desktops and you can quickly respond to new business growth with a more flexible infrastructure.

### VMware and NetApp

NetApp helps you realize the full potential of your VMware environment by addressing the common storage challenges associated with virtual desktop solutions.

### NetApp Products

- NetApp's FAS, S Family and V-series storage product line (FAS6000, FAS3000, FAS2000, S550, V3000 and V6000)
- NetApp SnapManager® for Virtual Infrastructure Snapshot™, FlexClone®, FlexVol®, SnapMirror®, SnapRestore®, SnapVault®, deduplication, MetroCluster, and RAID-DP®

# Realize the Full Potential of your VMware Virtual Desktop Solution

The storage flexibility, high availability, and cost-effectiveness you need for VDI

## Industry Overview

To fully realize the benefits of desktop virtualization, you need to address the increased demands that virtualized desktops pose for your storage infrastructure. Whether you are the Director of Desktop/Client Operations, Security, or IT, you know storage costs can increase as desktop data is moved to more expensive data center storage. With consolidation of many desktops behind a single infrastructure, the solution should encompass a highly available architecture. Both SAN and NAS connectivity are often used for virtual desktops, which can require multiple storage systems. Provisioning virtual desktops is done on a much larger scale—often hundreds of desktops at a time. And while it's now possible to secure end-user data, storage systems have a critical role in both, protecting the data and even making sure that a user history can't be altered or deleted.

## Solution Overview

NetApp provides a combination of storage hardware, data management software and specialized services that enable customers deploying VMware virtual desktop environments to use 50% less storage, provision thousands of virtual desktops in minutes, maintain continuous availability and assure compliant storage of end-user data.

The unique NetApp® deduplication technology eliminates redundant data stored across production storage, backup and DR copies. Combined with technologies such as thin provisioning, space-efficient clones, Snapshot backups, and our patented method to protect against double disk failure, you will use 50-90% less storage.

NetApp makes storage as flexible as the

virtual infrastructure. NetApp FlexClone technology enables instant clones so you can provision thousands of virtual desktops in minutes. You can also achieve 70% better performance under extreme VMware View workloads such as simultaneous desktop boots ("boot storm") or system log-ons.

NetApp provides continuous access to virtual desktops with proven reliability and field-measured 99.999% uptime. In the event of an unplanned site outage, you can recover to the DR site in minutes. Lost or corrupted data can be restored instantly even by end users.

NetApp Snapshot technology ensures all virtual desktop data is backed up regularly without impacting performance. You can cost-effectively archive backups on disk to meet corporate policies and even meet strict regulatory requirements that define retention times and change control.

## Solution Benefits

With NetApp you are able to realize the full potential of your VMware virtual desktop infrastructure by making it more affordable by using less storage. You will increase user productivity by providing continuous access to user desktops and you can quickly respond to new business growth with a more flexible infrastructure.

## VMware and NetApp

NetApp works with VMware virtual server and desktop infrastructure to reduce storage costs and simplify management. NetApp integrates with VMware management tools such as VMware® Site Recovery Manager and VMware® vCenter to automate storage management and improve the availability of virtual desktop environments.