

# Delivering the Full Potential of Desktop Virtualization

## AT A GLANCE

Rising management costs and the proliferation of client devices are putting pressure on traditional desktop solutions. Desktop virtualization with VMware® View™ and NetApp® Unified Storage solves these challenges by enabling IT to deliver elastic, secure, and reliable desktop services to all users from the data center. With centralized management and an optimized storage infrastructure, IT can reduce total costs, improve agility, and provide a rich, customized, and consistent user experience across devices and locations.

## Key Benefits

- **Increase infrastructure agility** with the ability to deploy hundreds of virtual desktops in minutes
- **Reduce desktop TCO by 50%<sup>1</sup>** through simplified management and optimized end-to-end infrastructure
- **Use 50% less storage** by deduplicating redundant data stored across virtual desktops, user directories, and backup and DR copies
- **Maintain continuous user access to desktops** through quick VM failover to backup and DR images
- **Achieve compliance of desktop data** by keeping a daily history of every desktop for months or years
- **Deliver a Rich, Consistent User Experience** across locations and devices, even for 3D applications and unified communications

## Challenge and Solution Overview

Enterprises today are caught in a desktop dilemma. On one hand, IT organizations face pressures around cost, compliance, manageability and security. On the other, end-users want the freedom to access their applications and data from multiple devices and locations. This dilemma can drive up costs, impact security, and overwhelm IT resources.

VMware View solves these challenges by decoupling applications, data, and operating systems from endpoints to enable centralized management and security, with flexible delivery of personalized desktops. Yet, to achieve the full benefits of desktop virtualization, you need to address the increased demands that virtualized desktops pose for your storage infrastructure.

With desktop virtualization, a storage outage can impact hundreds or thousands of workers, and multiple storage systems may be required to support both SAN and NAS connectivity. 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 protecting the data and making sure that a user history can't be altered or deleted.

NetApp storage solves these challenges to make VMware View implementations simpler, more cost-effective, and more reliable. You can consolidate all desktop data on a single, easily-managed storage platform that improves security, reduces costs by 50 percent, and readily handles the performance demands of large-scale desktop virtualization.

With VMware View and NetApp storage together, you can transform your client infrastructure to deliver better support to end-users at lower cost and with reduced risk.

## Solution Details

### Take Control of the Desktop with VMware View

Desktop virtualization with VMware View allows organizations to adopt a truly user-centric and flexible approach to computing. Applications, data and operating systems are moved from endpoints into the data center where they can be managed centrally. As a result, you can deliver highly available, scalable, secure, and reliable desktop services unmatched by physical PCs, while significantly reducing total costs.

VMware View helps you improve end-user productivity and satisfaction by delivering the highest fidelity performance and experience across locations and devices. With integrated PCoIP and persona management, you can provide users with rich, personalized desktops so they can access their data, applications, unified communications, and 3D graphics more flexibly and reliably.

### Maximize the Benefits of Desktop Virtualization with NetApp Unified Storage

NetApp storage provides a common platform across all tiers of desktop data to improve utilization and simplify management. The benefits are immediate, and the value continues to increase as more virtual desktops are added to the system. In combination with VMware high availability and disaster recovery solutions, NetApp storage provides continuous availability and best-in-class data protection, along with the flexibility and cost-effectiveness you need to grow your virtual desktop environment on demand.

- **Reduce storage costs by 50%.** NetApp helps you lower storage system and management costs in several ways. Using deduplication technology, you can reduce storage use by eliminating redundant data stored across virtual desktops, user directories, and backup and DR copies. Combined with NetApp thin provisioning, which increases average storage utilization above 70%, you can slash 50% to 90% off your VMware View storage requirements.<sup>1</sup> With NetApp, you also get the benefits of RAID 10 (local mirroring) protection at half the disk capacity.
- **Provide continuous user access to virtual desktops.** With NetApp storage, you can eliminate downtime with proven reliability and a field-measured 99.999% uptime. Because NetApp storage efficiencies extend to the backup and DR environments, you can afford advanced replication and recovery capabilities for your virtual desktops. End-users can recover their own data directly from backup. And in the event of an unplanned site outage, you can recover to the disaster recovery site in minutes.
- **Increased agility for virtual desktop infrastructure.** To respond to rapid growth, you need to be able to deploy new virtual machines and provision storage quickly. NetApp storage solutions let you provision thousands of VMware View virtual desktops in minutes with nearly instant, low-overhead storage cloning. You can flexibly support both the SAN and NAS aspects of a virtual desktop environment on the same storage system with NetApp multiprotocol capabilities (FC, iSCSI, NFS, or CIFS). You can scale to support thousands of virtual desktops on a single system. In addition, the same system can be used for controlled or sensitive data that needs to be retained in tamper-proof (WORM) storage to meet corporate or regulatory requirements.

### What's New in VMware® View™ 5?

- **3D graphics support** without the cost of additional hardware.
- **Efficient persona management** to preserve user settings and data while reducing cost and complexity through stateless desktops.
- **Unified communications integration** with VoIP support from Avaya, Cisco, and Mitel.
- **75% bandwidth improvement**, plus simplified roaming and enhanced session management, using PCoIP optimization controls.
- **Enhanced security** with a flexible, configurable, browser-based security model.

## Get There Faster

VMware View with NetApp storage not only provides a better destination, NetApp also helps get you there with Professional Services and support tailored specifically for virtualized environments. NetApp's Professional Services leverages proven methodologies, tools, and best practices to help you implement the right virtualization solution for your business needs. Proactive support services employ innovative NetApp technology that makes it possible for you to resolve potential issues before they can cause problems. With NetApp Professional Services as your virtualization guide, you get the combined power of VMware and NetApp technologies in just the right mix for your needs.

### Assess

NetApp experts work with you to identify and characterize your data center environment, including servers, storage, network components, and applications, resulting in a written report that includes a conceptual model, findings, and prioritized recommendations for increased efficiency.

### Consult

NetApp consulting services provide the most efficient server and storage architecture blueprints for your environment and business needs, including a customized virtualization solution incorporating NetApp storage best practices and complete ROI and TCO analysis of the proposed solution and implementation road map.

### Deploy and Manage

NetApp will help you build and manage your optimal virtual desktop platform based on VMware technology.

### Build for Today, Grow for Tomorrow

Along with specialized services, NetApp offers the industry's broadest family of compatible storage systems and data management software to give you unmatched business agility, superior application uptime, simplicity of management, and low TCO. NetApp storage solutions for VMware environments simplify data management and save time while leveraging existing investments in heterogeneous storage arrays across FC, iSCSI, NFS, and CIFS.

- NetApp® SnapManager® for Virtual Infrastructure enables your VMware administrators to increase productivity by automating common storage management functions.
- NetApp's FAS product line (FAS6000, FAS3000, and FAS2000) integrates easily into complex enterprise environments and simultaneously supports all standard network protocols.
- NetApp provides advanced data management software, including Snapshot,™ FlexClone,® FlexVol,® SnapMirror,® SnapRestore,® SnapVault,® deduplication, MetroCluster, and RAID-DP.™

## Find Out More

For more information on VMware and NetApp integrated solutions, visit [www.netapp.com/us/partners/alliance-technology/global-alliance/vmware-partnership.html](http://www.netapp.com/us/partners/alliance-technology/global-alliance/vmware-partnership.html)





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<sup>1</sup>IDC Research, "Quantifying the Business Value of VMware."

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