

# Accelerating VMware® Horizon View™ with IntelliFlash™ Arrays

Virtual Desktop Infrastructure (VDI) has the potential to simplify desktop management and provide end users with unprecedented flexibility. However, as you scale from hundreds to thousands of users, it can be difficult to continue delivering rich desktop experiences without hitting the I/O wall or seeing your storage costs spiral out of control.

Think AND, not OR when it comes to the storage for your VMware Horizon View implementation. IntelliFlash arrays deliver the fastest possible response times while enabling you to significantly reduce storage costs. You will have the perfect platform to scale your VMware Horizon View implementation from hundreds to thousands of users and achieve the fastest return on your storage investment.

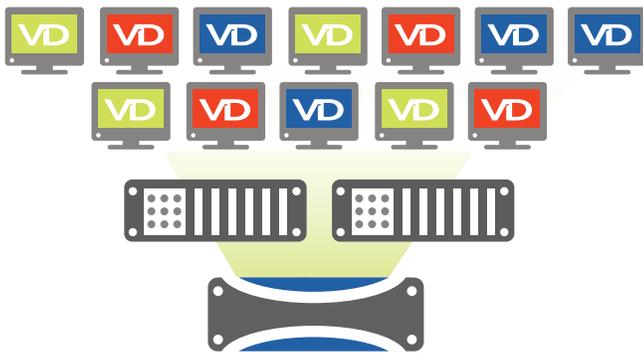
## Deliver Consistently High Performance

It can be a challenge to deliver consistent performance when thousands of desktops are booting up and logging in simultaneously. You need a storage solution that can ride out the storm.

With a massive number of IOPS at its disposal, an IntelliFlash array can easily handle boot storms and make login events an order of magnitude faster. This is accomplished through data reduction and metadata acceleration techniques provided by the IntelliFlash Operating Environment.

Inline deduplication acts as a performance multiplier, freeing up space in the cache for faster reads and writes. Virtual desktop images, applications, and users' files can be deduplicated and stored on flash, IntelliFlash arrays also automatically separate metadata from data. The metadata is then organized, aggregated, and stored on flash. This stands in stark contrast with traditional storage solutions, which co-mingle application data with metadata into one storage pool.

Moreover, IntelliFlash arrays take advantage of vStorage APIs for Array Integration (VAAI), which minimize I/O on the storage network by offloading storage operations such as cloning and snapshots to the array. This means operations complete much faster and with reduced CPU overhead on the host.

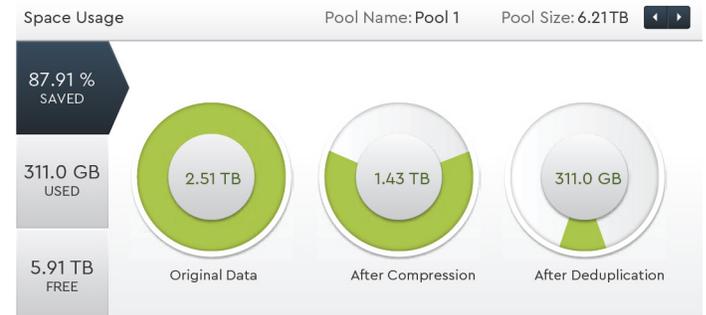


## Drive Down Your Virtual Desktop Storage Cost

IntelliFlash arrays are engineered for storage efficiency, allowing you to dramatically reduce your storage acquisition and operational costs.

Most desktop users only consume a fraction of their allocated storage capacity. IntelliFlash arrays offer thin provisioning so you can maximize storage capacity. Thin-provisioned LUNs automatically allocate physical storage as data is being written. Any space that's been allocated but hasn't been consumed remains available for other virtual desktops and applications.

IntelliFlash arrays also employ inline compression and deduplication, which can shrink the storage footprint up to 90% in VDI environments. Redundant OS images are reduced to a single instance and stored in flash. Hundreds or thousands of persistent VDI instances can be shrunk down to one single boot image.



## Host Virtual Desktops and Data on a Single Array

Consolidate virtual desktop images, applications, and user data on a single array. IntelliFlash arrays support both NAS and SAN protocols. Virtual desktop images can be deployed using NFS, iSCSI or Fibre Channel protocols, while user data can be hosted on the same array and accessed via CIFS or SMB3 for Windows desktops and NFS for Linux® desktops.



You can also consolidate other workloads, such as virtual servers and databases, on an IntelliFlash array for an even greater return on your investment.

## Simplify Deployment and Management

Create and deploy hundreds of virtual desktops in minutes, not hours, and dramatically cut down the time required for performing regular VDI maintenance tasks. IntelliFlash arrays include a VMware vCenter® plug-in, enabling you to provision datastores, manage snapshots and restores, and monitor I/O status, space usage, and latency for all of your IntelliFlash arrays from either vCenter's Web or desktop client. You can also script and automate data protection tasks via IntelliFlash's programmable RESTful APIs.

## Ensure the Availability and Protection of End User Data

End users expect their virtual desktops and data to be available 24x7. When deploying VMware Horizon View on IntelliFlash arrays, you'll benefit from the resilience, end-to-end data integrity, and high-availability features provided by the IntelliFlash Operating Environment.

All IntelliFlash arrays include space-efficient snapshots and remote replication capabilities. Integration with VMware and VSS enables VM-consistent snapshots for virtual desktop images and application-consistent snapshots for application data. Instantaneous thin snapshots create space-efficient, point-in-time copies of data that can be replicated and instantaneously restored.

Additionally, IntelliFlash arrays are fully redundant with no single point of failure and dual active/active controllers to maximize your investment in array hardware.

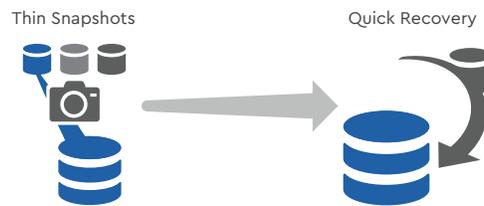


Figure 4. Instantaneous thin snapshots with instantaneous recovery

## Getting Started

Western Digital is an elite VMware technology partner. IntelliFlash arrays are a Horizon Fast Track 2.0 Proven Storage solution, validated and certified for use with VMware Horizon View 6.0, 5.3, 5.2, and 5.1.

To get you started, VMware and Western Digital have published a joint reference implementation for deploying Horizon View desktops and infrastructure. Leverage the pre-tested architecture to minimize configuration guesswork and eliminate deployment risk.

IntelliFlash arrays deliver incredibly high performance while maximizing efficiency not only for IT, but for your business, by keeping your storage costs in check and making your data come alive. For more information on how IntelliFlash arrays can turbo-charge operational data and activate latent data by making your data come alive, visit [westerndigital.com/intelliflash](http://westerndigital.com/intelliflash)

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