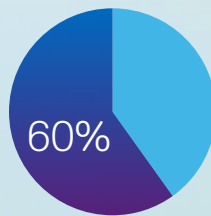# Transparent Snapshots

Protect VMware VMs without Business Disruption
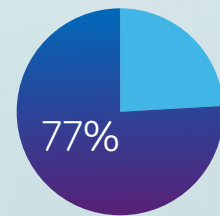*Available with Dell PowerProtect Data Manager*

Exponential VM Growth Poses Significant Backup Challenges

VMware Virtual Machines (VMs) are becoming larger and more critical at the same time. Organizations need a reliable way to protect them without disrupting their business operations.

Large virtualized environments are often complex and difficult to protect. As they increase in size and complexity, organizations struggle to protect their mission-critical applications and data.

60%

IT professionals that identify "Protecting VMs and Data" as their #1 functional challenge. [1]

77%

On-premises VMs that are successfully backed up and restored, on average. [2]

Legacy Solutions Fail to Meet Modern SLAs

Many organizations cannot meet their data protection SLAs because they rely on legacy technology, such as VMware vStorage API for Data Protection (VADP).

This introduces many challenges that compromise day-to-day operations, and results in:

Business Disruption
Poor-performing, mission-critical applications negatively impact business operations.

Increased Costs
These solutions require more resources, proxies, and infrastructure.

Risk of Data Loss
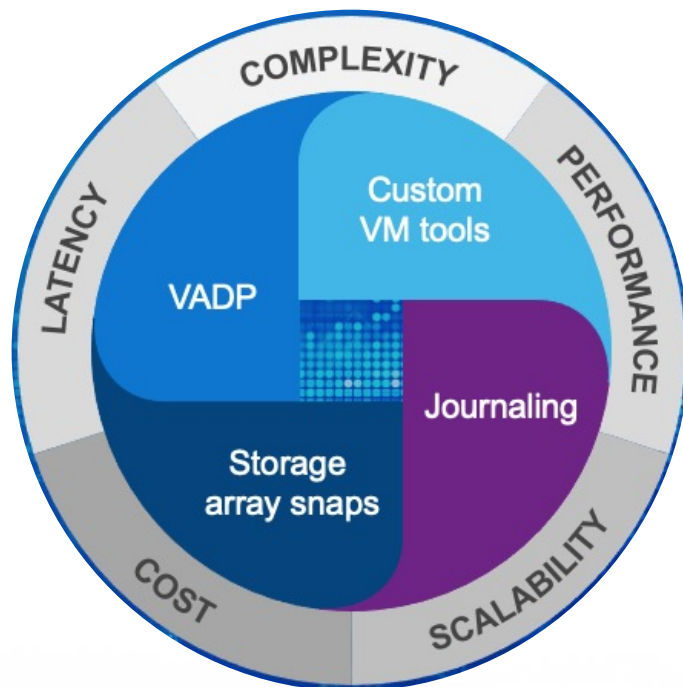Fewer image-level backups are performed to avoid disruptions.

Compromise is Unacceptable

Many VM backup technologies have been brought to market over the past decade, but all require tradeoffs between and among complexity, performance, scalability, cost, and latency. They also lack standardization capabilities.

All of these limited solutions fail to solve the fundamental issues that cause application disruption in the first place and are, ultimately, sub-optimal.
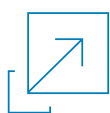

The Bottom Line

Organizations like yours need a better way to protect their virtualized assets without making these difficult compromises, relying on incomplete tools and approaches, or disrupting your business. The answer is to revolutionize how you protect VMware VMs and your business.

Transparent Snapshots
Simplify VM Image Backups

Transparent Snapshots, a feature within Dell PowerProtect Data Manager, is a new VM image method that doesn't require compromise and eliminates application disruption during VM backups. It offers these significant advantages over other solutions:

VM Backup Protection Without Compromise – at Scale

Transparent Snapshots modernize how organizations protection VMs. This innovative solution simplifies VM image backup and recovery and is a VMware-certified solution.

Boost VM Backup Performance

Transparent Snapshots simplifies and automates VM image-level backups with near zero impact to your VMs or environment during the backup process, significantly boosting performance:

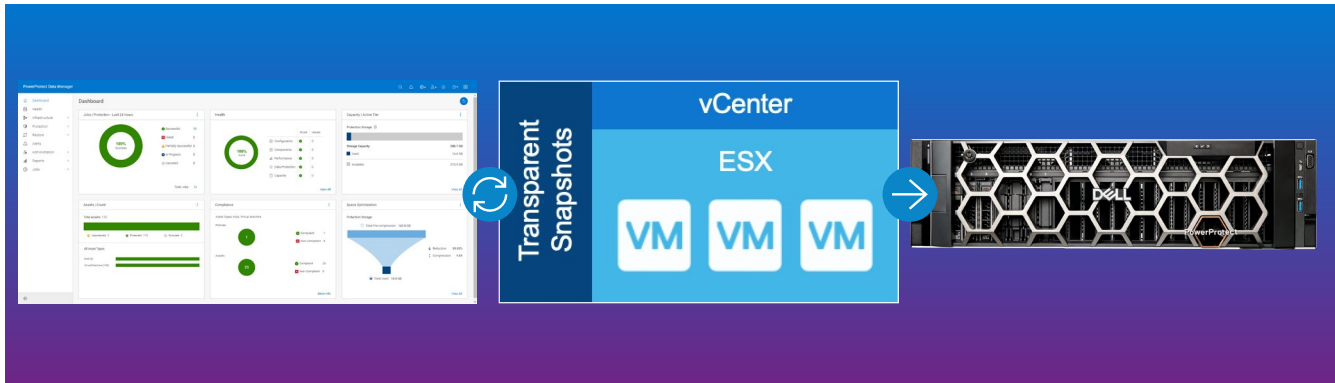| Up to **5X** faster backups [3]	Up to **6X** faster restores [4]	Up to **5X** reduction in VM latency [5]

Reduce Costs & Simplify Management

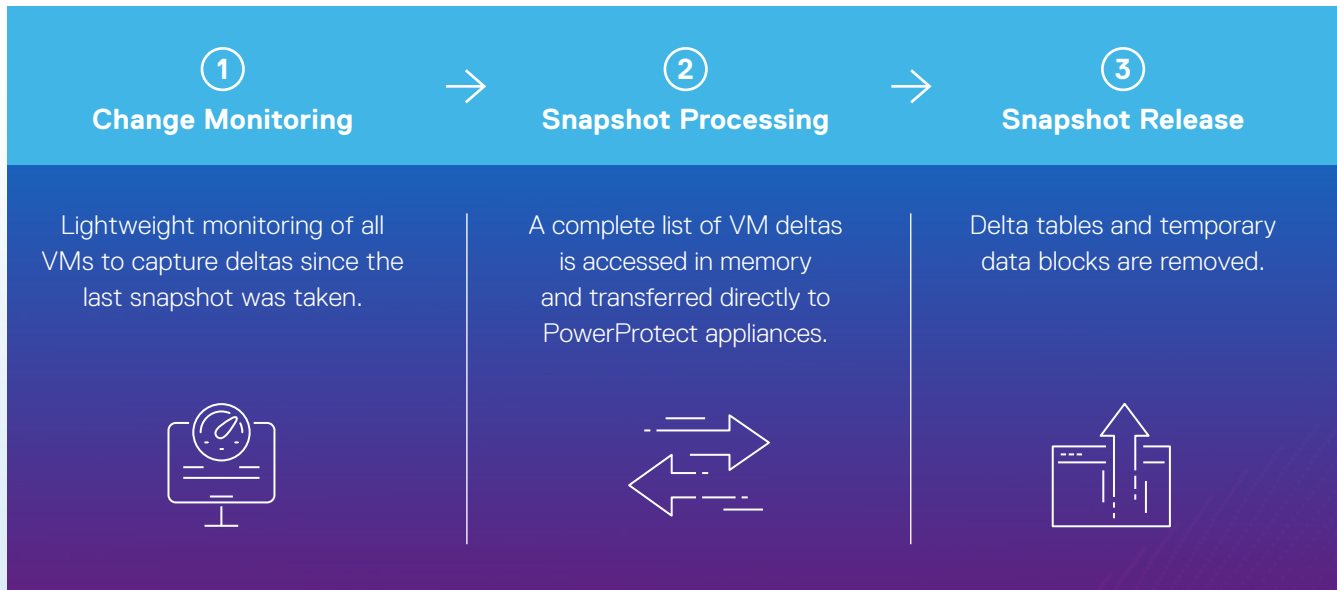Transparent Snapshots lowers costs and greatly simplifies VM backup management:

- **Zero proxies:** Proxies not required for data movement
- **Storage agnostic:** Single VM backup that works with any VMware-supported storage
- **Auto-scaling:** Orchestrated management via ESX-based plug-in without proxies and additional impact to the host
- **Storage Direct with PowerStore:** Centralized management and orchestration of PowerStore snapshots without database disruption
- **Recovery Orchestration:** Perform mass restores of VMs with an automated, powerful and granular data recovery solution
- **Direct data transfer to PowerProtect appliances:** No need for copies which results in reduced infrastructure

How *Transparent Snapshots* Works

This innovative solution enables direct data transfer to PowerProtect appliances without the need for external proxies to move full-image or incremental backups during the backup.

Superior VM Image Backup in Three Simple Steps

① Change Monitoring	② Snapshot Processing	③ Snapshot Release
Lightweight monitoring of all VMs to capture deltas since the last snapshot was taken.	A complete list of VM deltas is accessed in memory and transferred directly to PowerProtect appliances.	Delta tables and temporary data blocks are removed.

Other VM Backup Solutions Deliver Sub-Optimal Results

Transparent Snapshots vs. Other Methods

Legacy VM backup technologies have proven themselves sub-optimal for large-scale or rapidly growing VM environments. IT organizations have been forced to accept uncomfortable tradeoffs which lead to operational inefficiencies and disruptions for critical applications and business processes.

See how Transparent Snapshots compares to other approaches and delivers improved VM backup performance, reliable VM protection and better supported business processes:

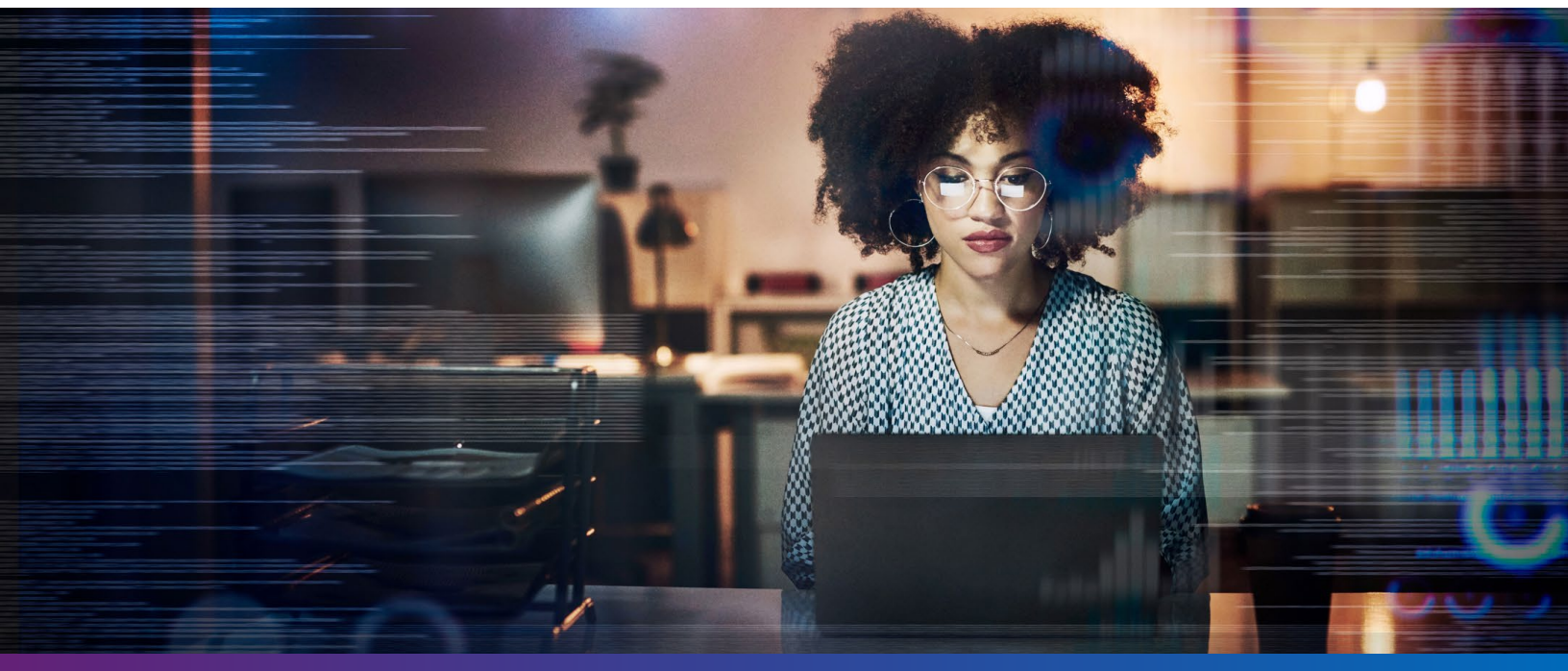|	Transparent Snapshots	VADP	Custom VM Tools	Storage array snaps	Journaling
Low latency	🟢	🔴	🟡	🟢	🟢
Performance	🟢	🟡	🔴	🟢	🟢
Scalability	🟢	🟡	🟢	🟢	🔴
Simplicity	🟢	🟢	🟡	🟡	🔴
Cost	🟢	🟢	🟡	🔴	🔴

A Modern VM Backup Solution
Transparent Snapshots

Simple, Fast, and Efficient VM Backups at Scale

With increased backup performance, lower costs, simplified management, and reduced risk of data loss, Transparent Snapshots offers significant benefits to your VMware environments.

Learn how your organization can modernize your VM data protection.

Learn more about Transparent Snapshots.

1   Christophe Bertrand and Monya Keane, Modernizing VM Backup at Scale Without Compromise – with Dell Technologies (The Enterprise Strategy Group, August 2021).

2   Ibid, 2.

3   When comparing PowerProtect Data Manager 19.13 with Transparent Snapshots backup performance to PowerProtect Data Manager 19.13 with VADP backup performance. Based on Dell internal testing, June 2023.

4   When comparing PowerProtect Data Manager 19.13 with Transparent Snapshots restore performance to PowerProtect Data Manager 19.13 with VADP restore performance. Based on Dell internal testing, June 2023.

5   When comparing PowerProtect Data Manager 19.13 with Transparent Snapshots VM latency performance to PowerProtect Data Manger 19.13 with VADP VM latency performance. Based on Dell internal testing, June 2023.

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