

Independent Study confirms Dell's PowerProtect Data Manager recovers Virtual Machines up to 51% faster than the Competition

By Andrew Glinka | September 2022

Since its market debut, Dell Technologies has been consistently demonstrating how much faster [Dell PowerProtect Data Manager's Transparent Snapshots](#) can back up and recover large, complex virtual machines (VMs) when compared to a competitive offering (Vendor X). Dell Technologies commissioned Principled Technologies (PT) to validate the performance for this innovative VM replication technology.¹

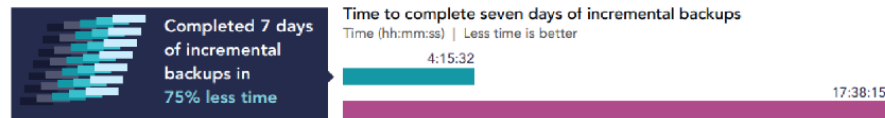
The graphic below summarizes [PT's test scenario and results](#).

Transparent Snapshots – Dell Performance Advantage

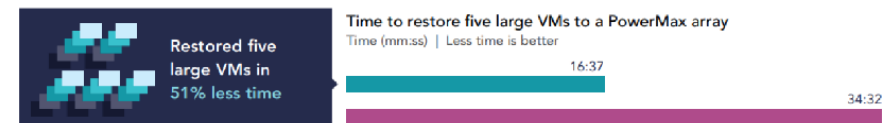
We found that Transparent Snapshots: ■ Dell PowerProtect Data Manager with TSDM ■ Vendor X with NBD



On an initial ingest of 1,000 VMs of various sizes, Dell PowerProtect Data Manager with TSDM completed the backup within a single overnight backup window—while the Vendor X solution could not.



Incremental backups copy data that has changed since the last backup. Dell PowerProtect Data Manager with TSDM was substantially faster than the Vendor X solution—which reduces risk of downtime and disruption to end users.



Restoring five VMs to a different array was also much faster using Transparent Snapshots on Dell PowerProtect Data Manager, showing its consistency as a backup and restore solution for both midrange and enterprise-level storage.

*Based on a Principled Technologies report commissioned by Dell Technologies, "Reduce time to complete backups and restores with Transparent Snapshots with Dell PowerProtect Data Manager", compared to the Vendor X solution with VADP NBD, June 2022. Actual results may vary. Full report found [HERE](#).

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We're excited about these results because that shows PowerProtect Data Manager with Transparent Snapshots Data Mover (TSDM) are faster than a similarly sized solution from Vendor X using VMware VADP's NBD transport mechanism.¹

PowerProtect Data Manager's faster performance means shorter backup times. When it comes to reducing VM stun impact for large, complex virtual environment incremental backup and recovery, PowerProtect Data Manager's unique Transparent Snapshots architecture deliver impressive results.

¹ Based on a Principled Technologies report commissioned by Dell Technologies, "Reduce time to complete backups and restores with Transparent Snapshots with Dell PowerProtect Data Manager", compared to Vendor X solution with VADP NBD, June 2022. Actual results may vary.

Why should you take note? Protecting VMs with PowerProtect Data Manager means shorter backup and recovery windows – with lower latency – when copying many large and complex VMs in virtual environments. In addition, this results in shorter time intervals for performing routine IT backup of virtual environments, which can optimize the use of resources across the board for greater on-premises, edge, hybrid and multi-cloud efficiency and cost savings.

Of course, faster backup and recovery performance can free up more time to do other important tasks in your data center, including reducing IT or business operations disruption for sites around the world.

The Test Scenario

PT captured an initial backup of 1,000 VMs, then simulated seven days of typical operations on those 1,000 VMs, including data changes such as file system and database updates and real backup operations. The test cases were comprised of a mix of operating systems and various VM sizes, with most VMs being 130 GB, 136 GB or 139 GB.

This test scenario simulates an organization that performs incremental backups each day of the week, copying only the data that users have changed or created since the previous backup. PT also performed an incremental backup and restore on a single large VM and five large VMs. Test runs were performed on PowerProtect Data Manager, and then on the Vendor X solution using the VADP framework in the NBD transport mode.

The Results

- PowerProtect Data Manager completed large backups (1,000 VMs) in less time than Vendor X.
- PowerProtect Data Manager saved time on incremental backups compared to Vendor X using the VADP framework and NBD transport.
- PowerProtect Data Manager lowered overall performance impact during VM backups.
- PowerProtect Data Manager restored data faster after a data copy incident.
- PowerProtect Data Manager restored data faster with an average 79.1% lower latency compared to Vendor X using NBD.

Source: Principled Technologies “Reduce time to complete backups and restores with Transparent Snapshots with Dell PowerProtect Data Manager”; June 2022

Yet Another Innovative Backup Solution and Technology from Dell Technologies

In closing, compared to Vendor X backing up VMs with the standard VADP framework and NBD transport mechanism, PowerProtect Data Manager with Transparent Snapshots ([click here for a white paper](#)) allows you to perform backups and recovery faster and more efficiently, greatly reducing the impact of VM stun during replication/copy of many large VMs.

Check out our PowerProtect Data Manager backup, disaster recovery (DR), multi-cloud and cyber recovery solutions [here](#), or reach out to your Dell sales representative or Dell partner to learn more about this industry-leading solution.