New Dell PowerProtect Data Manager Appliance with Transparent Snapshots Restores Virtual Machines up to 44 Percent Faster than the Competition

By Andrew Glinka, Vice President Competitive Intelligence | **December 2022**

Powered by our proven data protection software solution, the new Dell PowerProtect Data Manager Appliance offers significant user improvements and performance enhancements over the competition in terms of installation, configuration, and time to perform data backups.

The Dell PowerProtect Data Manager Appliance simplifies the experience of implementing modern data protection through:

- Purpose-built, software-defined architecture optimization for Dell hardware
- More secure operational and cyber-resilient data protection
- Simple, universal user experience for quick deployment and management
- Fast, efficient, and reliable backup and recovery for on-prem installs

Specifically, the Dell PowerProtect Data Manager Appliance deploys in 15 minutes[1] and can grow in place from 12TB to 96TB. This is a game changer for small and mid-sized organizations seeking a cyber-resilient, multicloud data protection solution to carry them into the future with the convenience of an easy to deploy, use, and manage integrated appliance.

But how well does it perform against comparable data protection solutions from the competition? Dell commissioned Principled Technologies to find out.

Principled Technologies Test Scenario

Principled Technologies tested our new Dell PowerProtect Data Manager Appliance with Transparent Snapshots against competitors' deployment times and conducted these identical simulated performance tests:

- Incremental Virtual Machine (VM) backups comparing Dell's appliance solution to "Vendor X" for a typical VM workload consisting of:
  - ➢ An initial backup of 500 VMs, followed by simulated 10 days of typical operations on those 500 VMs, including data changes such as file system and database updates and backup operations
  - ➢ An incremental backup and restore on a single large VM and five large VMs
- Restoration of a single large VM (530 GB) and five large VMs (530 GB each) back to a Dell PowerStore production storage array compared to Vendor X's appliance solution
- All solutions were physically located in an offsite data center lab

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[1] Based on a Principled Technologies paper commissioned by Dell comparing Dell PowerProtect Data Manager Appliance with Transparent Snapshots vs competitive data protection solutions, November 2022. Actual results may vary.

Faster backup performance reduces the time to complete data protection tasks, reduces network traffic, and shortens backup windows and admin task demands. This time savings directly translates to cost savings that can be applied to other parts of your business. The same naturally applies when restoring production data copies after operations are impacted by data corruption, cyberattacks, and other data disruptions.

Principled Technologies Lab Test Results

1. Time to Deployment – Dell PowerProtect Data Manager Appliance Deploys Faster

Principled Technologies deployment testing included installing and configuring appliance software, installing GUIs, and configuring storage and networking. Deployments were deemed complete when a backup administrator could log into the backup application and start backing up VMs.

Per the graphic below, the Dell PowerProtect Data Manager Appliance and one other competitor achieved the fastest deployment time.
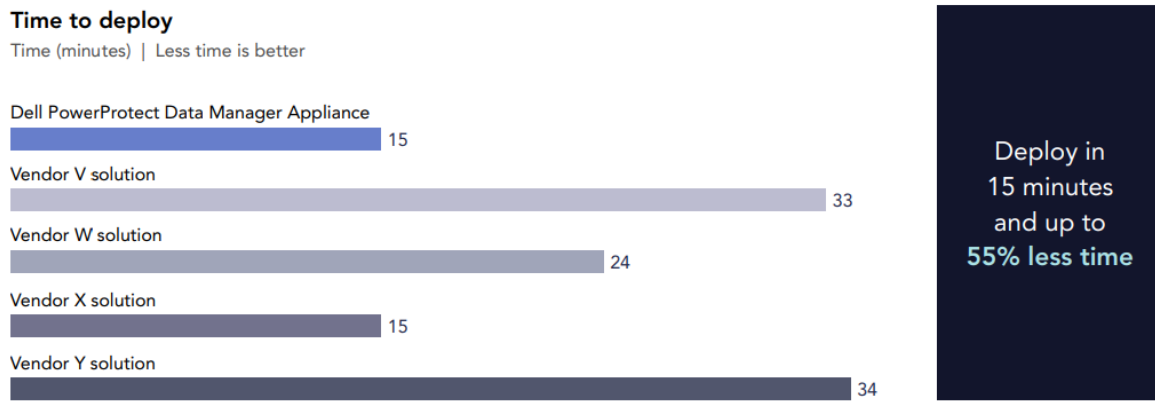
Time to deploy
Time (minutes) | Less time is better

Dell PowerProtect Data Manager Appliance
15

Vendor V solution
33

Vendor W solution
24

Vendor X solution
15

Vendor Y solution
34

Deploy in
15 minutes
and up to
55% less time

Figure 1: Time, in minutes, to deploy each storage solution. Lower is better. Source: Principled Technologies.

2. Incremental Backup and Restore Times

The results for incremental backup and restore performance were impressive for the Dell PowerProtect Data Manager Appliance compared to "Vendor X". Specifically, the Dell PowerProtect Data Manager Appliance's Transparent Snapshots was run against a similarly sized solution from Vendor X using their management software and VMware's vStorage API for Data Protection (VADP).

Initial Backup – Dell PowerProtect Data Manager Appliance is Faster

Time to back up 500 VMs
Time (hh:mm:ss) | Lower is better

Dell PowerProtect Data Manager Appliance with Transparent Snapshots
9:32:07

Vendor X solution
17:48:34

Backed up 500 VMs in
46% less time

Figure 2: Time required for each solution to complete an initial backup of 500 VMs of various sizes. Lower is better.
Source: Principled Technologies.

Incremental Backup – Dell PowerProtect Data Manager Appliance is even Faster

Time to complete ten days of incremental backups
Time (hh:mm:ss) | Lower is better

Dell PowerProtect Data Manager Appliance with Transparent Snapshots
7:35:10

Vendor X solution
24:30:35

Completed 10 days of
incremental backups in
69% less time

Figure 3: Time required for both solutions to complete 10 days of incremental backups on 500 VMs of various sizes. Lower is better.
Source: Principled Technologies.

3. Recovery Performance – Dell PowerProtect Data Manager Appliance Shrinks Time Again

The whole point of a backup appliance is to recover and restore your data copies quickly (and reliably) after a data integrity, security or outage event. Here, once again the Dell PowerProtect Data Manager Appliance with Transparent Snapshots was much faster according to Principled Technologies' test results below.

Time to restore one large VM
Time (mm:ss) | Lower is better

Dell PowerProtect Data Manager Appliance with Transparent Snapshots
12:07

Vendor X solution
21:51

Restored one large
VM in
44% less time

Figure 4: Time required for each solution to restore a single 530GB VM to a Dell PowerStore array. Source: Principled Technologies.

Restoring five large, 530GB VMs also highlighted differences in performance. The Dell PowerProtect Data Manager Appliance with Transparent Snapshots took 30% less time than Vendor X to accomplish the same recovery task to a PowerStore storage array.

Time to restore five large VMs
Time (mm:ss) | Lower is better

Dell PowerProtect Data Manager Appliance with Transparent Snapshots
30:57

Vendor X solution
44:20

Restored five large VMs in 30% less time

Figure 5: Time required for each solution to complete a restore of five 530GB VMs to a Dell PowerStore array. Lower is better. Source: Principled Technologies.

These test results demonstrate the great performance Dell PowerProtect Data Manager Appliance with Transparent Snapshots can bring to your business. Principled Technologies test results for throughput and IOPs performance similarly showed the Dell PowerProtect Data Manager Appliance's performance edge over Vendor X.

In summary, the Dell PowerProtect Data Manager Appliance brings tremendous value to businesses of all sizes through its:

➢ Simple and easy install and use
➢ Best-in-class efficiency
➢ Leading performance in VMware backup and recovery
➢ Next-Gen workloads with native Kubernetes support
➢ Cyber Recovery Guarantee*

* Expected availability in the US starting in January 2023. Cyber Recovery Guarantee: Requires minimum purchase of storage capacity, DD Retention Lock Compliance Edition software license, Dell ProSupport with Mission Critical maintenance agreement, Dell ProDeploy Plus for PowerProtect DD and Cyber Recovery, and Dell Professional Services. Applicable products include PowerProtect Cyber Recovery Solution vault models PowerProtect DD9900, DD9400, DD6900 and DD6400. Signed Terms and Conditions and other eligibility criteria apply. For more information contact your Dell sales representative.

Yet Another Innovative Integrated Backup Solution from Dell Technologies

The Dell PowerProtect Data Manager Appliance's faster performance means shorter backup and recovery times as Principled Technologies' test results prove. When it comes to reducing VM stun impact for a large, complex virtual environment's incremental backup and recovery, the Dell PowerProtect Data Manager Appliance benefits from Dell's Transparent Snapshots software in delivering the performance advantages highlighted in the Principled Technologies summary white paper.

We're excited about the Dell PowerProtect Data Manager Appliance and the practical day-to-day value it can bring to your organization. Check out our Dell PowerProtect Appliances and other Dell PowerProtect Data Manager backup, disaster recovery (DR), multicloud, and cyber recovery solutions here, or reach out to your Dell sales representative or Dell partner to learn more about our innovative, industry-leading IT solutions.

About the author: Andrew Glinka is Vice President, Competitive Intelligence at Dell Technologies. Andrew is an 11-year Dell Technologies veteran and brings over 23 years of experience in technology sales, management, and operations. Prior to assuming his current role, Andrew served as Global Director of Sales Strategy for the Data Protection Solutions Division. He has also managed the Global Software Sales team as well as other sales teams in the Data Protection Solutions Division. Prior to joining Dell through the EMC acquisition, Andrew owned and operated an IT Managed Services business in Virginia for over 8 years before successfully selling the company.