Enterprise Strategy Group

TECHNICAL REVIEW

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Dell PowerFlex With Nutanix Cloud Platform: Providing Flexibility and Choice When Modernizing IT Environments

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Abstract

This Technical Review by Enterprise Strategy Group documents our evaluation of Dell PowerFlex with Nutanix Cloud Platform (NCP). We review how the joint solution can enable organizations to increase operational efficiency while providing the flexibility in architecture to respond to ever-changing business needs.

The Challenges

Modernizing data center infrastructure is critical for organizations to achieve so that they can address changing business needs quickly and efficiently in today's competitive environment. In fact, Enterprise Strategy Group research found that 91% of organizations agreed, if not strongly agreed, that data center modernization is strategic and leads to a competitive advantage.[1]

As modernization efforts emerge, consolidating workloads onto less hardware has been key to reducing complexity in IT environments. However, managing and optimizing workloads across multiple environments remains cumbersome. This complexity creates inefficiencies in handling diverse applications, which undermines operational performance. IT complexity is increasing, according to Enterprise Strategy Group research, with 60% of organizations reporting that their IT environment has become more complex over the last two years, while 21% cite a significant increase. Data-related issues such as data volumes/growth and data security are key drivers of this complexity.[2]

However, the choice of hypervisor has come into focus. Changes in the hypervisor market have led organizations to reevaluate their choices, especially given cost increases in specific licensing models. However, organizations investigating alternative hypervisors would not only consider cost to displace their primary hypervisor—they might also consider other factors such as improved application support, scalability, and flexibility to better address how to adapt to evolving business needs.[3]

[1] Source: Enterprise Strategy Group Research Report, *Navigating the Cloud and AI Revolution: The State of Enterprise Storage and HCI*, March 2024.
[2] Source: Enterprise Strategy Group Research Report, *2025 Technology Spending Intentions Survey*, December 2024.
[3] Source: Enterprise Strategy Group Research Report, *Navigating the Cloud and AI Revolution: The State of Enterprise Storage and HCI*, March 2024.

Figure 1. Top Drivers for Using Alternative Hypervisors

Source: Enterprise Strategy Group, now part of Omdia.

To respond to emerging and evolving business needs, scaling compute and storage independently is also necessary to reduce overprovisioning of resources, operational overhead, and IT complexity. Enterprise Strategy Group research found 68% of organizations agreed that the complexity of the organization's IT infrastructure environment slows down IT operations and digital initiatives.[4]

Dell PowerFlex With Nutanix Cloud Platform

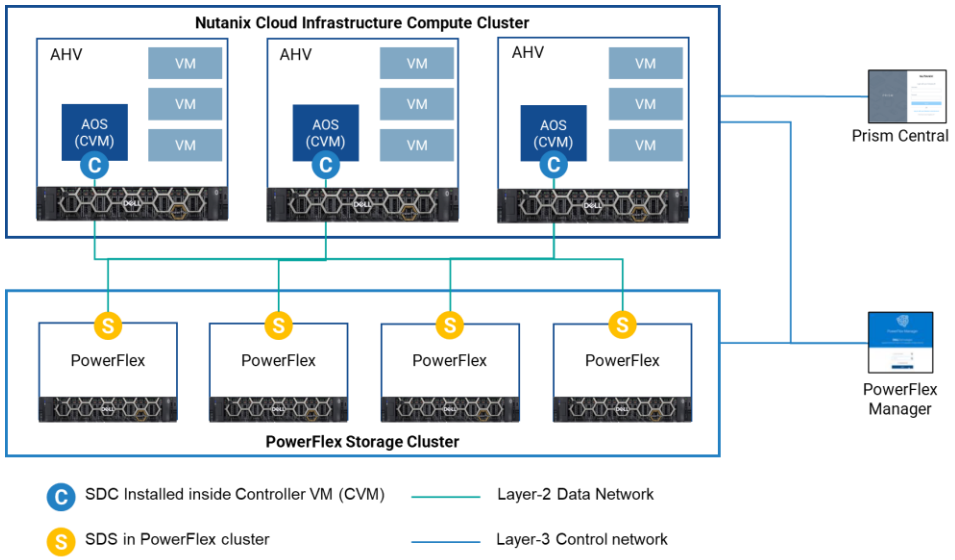
This latest joint collaboration between Nutanix and Dell brings together Dell PowerFlex and Nutanix Cloud Platform (NCP). Dell PowerFlex is the first external storage array to be supported by and be integrated with NCP. Designed for both brownfield and greenfield deployments, the solution enables flexibility in the choice of data center architectures, as Dell's software-defined infrastructure integrates with NCP. With this collaboration, Dell PowerFlex customers can choose the Nutanix Acropolis Hypervisor (AHV) as their hypervisor, while Nutanix customers can use Dell PowerFlex as the storage pool for virtualized workloads supported on the Nutanix AHV.

The disaggregated architecture of the joint solution, as shown in Figure 2, is comprised of::

- A compute layer enabled by a Nutanix Cloud Infrastructure Compute (NCI-C) Cluster, composed of PowerFlex servers and installed with Nutanix Cloud Infrastructure software, Nutanix AHV, and Acropolis Operating System AOS) on Dell Boot Optimized Storage Solution (BOSS) cards.
- A storage layer enabled with PowerFlex software-defined storage (SDS).

[4] Ibid.

Figure 2. Dell PowerFlex With Nutanix Cloud Platform



Source: Nutanix and Enterprise Strategy Group, now part of Omdia.

With this joint solution, organizations can take advantage of PowerFlex for provisioning high-performance scale out storage to accommodate any data growth experienced by individual virtualized workloads supported by NCP, while maximizing their existing storage investment. Organizations can also scale compute and storage independently to meet a wide variety of workload requirements, without the need for hardware architectural changes or time-consuming workflows.

The disaggregated architecture leads to greater operational flexibility. Though the compute and storage infrastructure can be planned and managed independently, the administration of applications deployed in the solution is greatly simplified by the Nutanix Prism UI's VM centric administration framework. Further reducing complexity is how the joint solution distributes operations between NCP and PowerFlex. Organizations leverage NCP for VM-centric operations such as snapshots, clones, and disaster recovery, while PowerFlex handles data efficiency and data reliability services (e.g., encryption and compression).

Lifecycle management is handled by each platform for its respective domain. While Nutanix Prism Central manages the Nutanix OS and AHV on the compute layer, PowerFlex Manager oversees BIOS/firmware updates and the PowerFlex storage layer. Together, they provide simple, streamlined management across the two-layer architecture, ensuring platform, workload, and data security is primarily handled via NCP. The Nutanix AOS supports features and workflows to manage identity and access, data encryption, security auditing, and continuous regulatory compliance. Nutanix also delivers the joint solution’s capabilities to protect application networking with Flow Virtual Networking and Flow Network Security, as well as isolation to prevent ransomware attacks.

With this joint solution, organizations can experience the benefits that the Dell-Nutanix partnership has offered over the course of their partnership. The integration of PowerFlex with NCP combines PowerFlex’s storage capabilities with Nutanix’s virtualization and management tools, offering a unified solution for storage and compute. Along with expanded data services designed to improve storage optimization, scalability, and resilience across IT environments, organizations can leverage Nutanix’s ecosystem to other critical IT needs, particularly backup and recovery solutions from third-party vendors.

Enterprise Strategy Group Tested

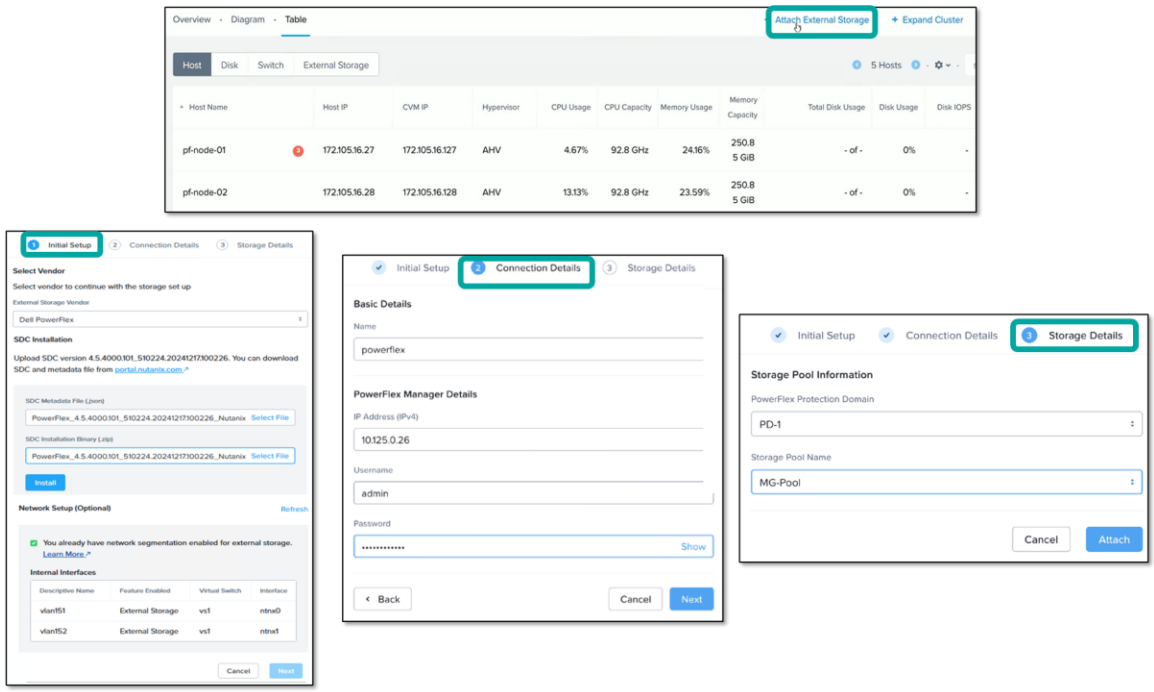
Enterprise Strategy Group evaluated how the Dell PowerFlex and NCP joint solution can simplify operations for managing consolidated virtualized workloads. We first looked at how the joint solution delivers the data services that organizations require to ensure data availability and resiliency. While NCP and Dell PowerFlex offer similar data services, the joint solution has been designed so that Dell PowerFlex assumes full responsibility for delivering specific data services and data security measures. They include:

- Snapshots and clones: Triggered and managed from Nutanix Prism Central and maintained as Dell PowerFlex snapshot.
- Compression: Transparent to Nutanix and performed and maintained using Dell PowerFlex.
- Application data reliability and availability: Transparent to Nutanix and protected by Dell PowerFlex SDS resiliency scheme.
- Data-at-rest encryption: Managed by the Dell PowerFlex Manager interface, while transparent to Nutanix.

Conversely, NCP assumes responsibility for asynchronous replication and VM backup, along with protection of VM configuration and availability (via the Nutanix Fault Tolerance (FT) setting on the Nutanix cluster).

Enterprise Strategy Group then reviewed how these services can be performed using the Nutanix Prism UI, eliminating the need to switch between Dell and Nutanix management interfaces. We first observed the simplicity in adding Dell PowerFlex array as an external storage pool, shown in Figure 3. (We should note that this action was completed using Prism Element). Configuring external storage was completed via a wizard-driven process, focusing on the initial setup, connection details (IP addressed to be used when connecting to workloads), and storage details.

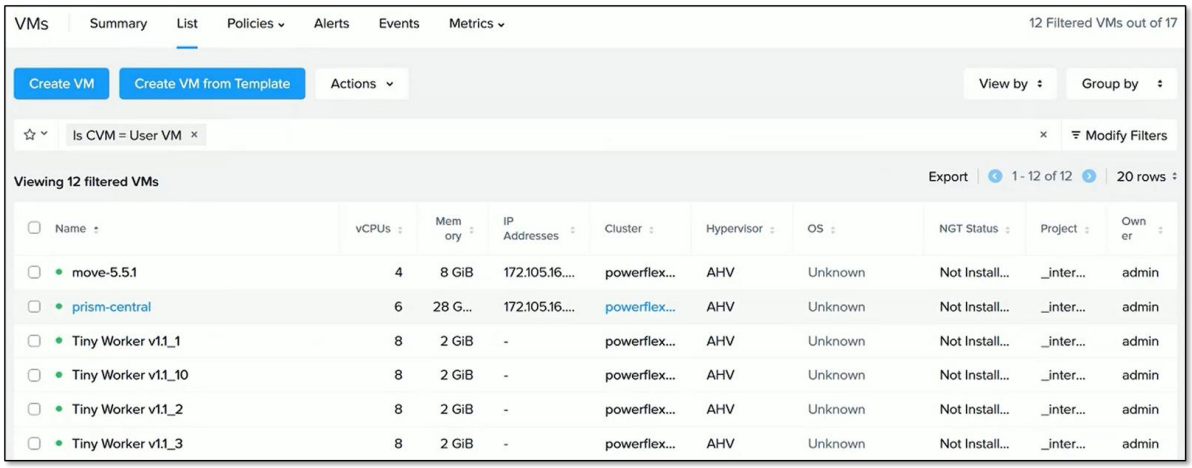
Figure 3. Adding Dell PowerFlex as External Storage Pool



Source: Enterprise Strategy Group, now part of Omdia

After switching over to Nutanix Prism Central, we could view all the VMs and clusters supported by Dell PowerFlex (see Figure 4). From this view, we could create a new VM, either from scratch or by using a template.

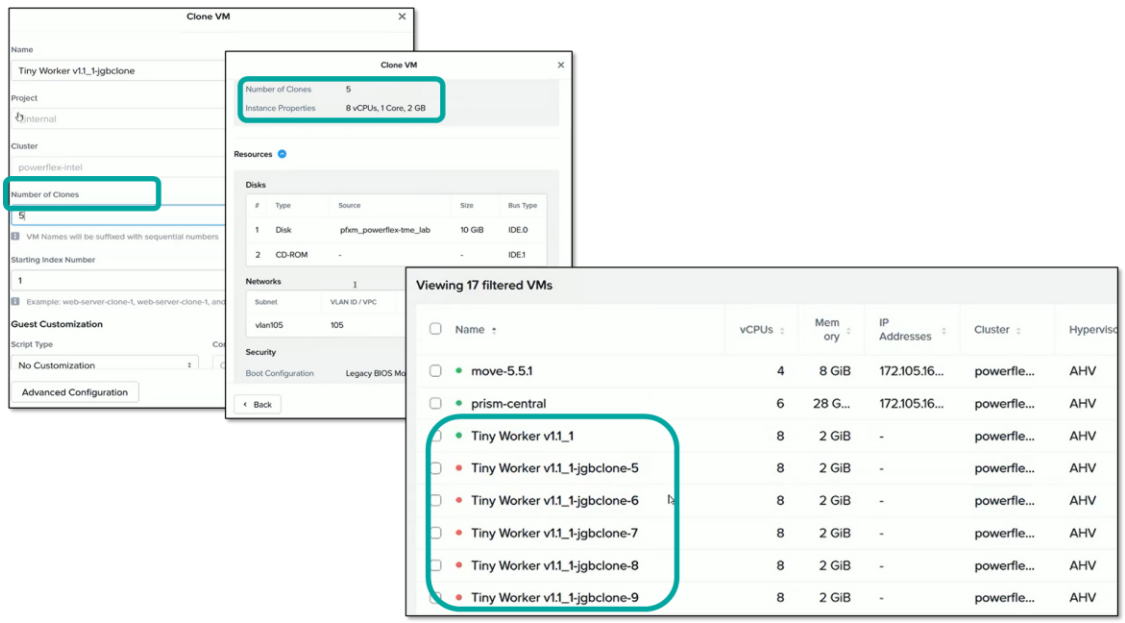
Figure 4. Viewing VMs and Clusters Supported on Dell PowerFlex



Source: Enterprise Strategy Group, now part of Omdia

Creating new VMs can also be done via clones, especially when multiple end users have the same requirements. To create a clone in Prism Central, we simply selected a VM ("Tiny Worker V1.1_1"), created a new name for the clones, selected how many were to be created, and verified the configuration of the VM clones (see Figure 5). Five clones were created, each indexed with sequential numbers for easier identification.

Figure 5. Creating Clones

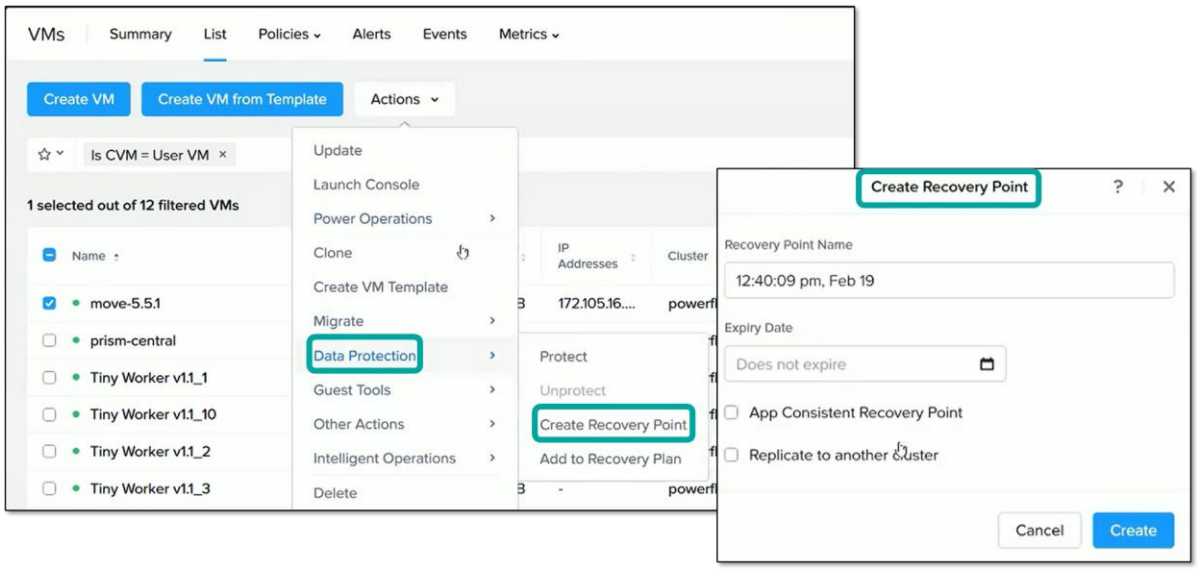


Source: Enterprise Strategy Group, now part of Omdia

For configuring data protection options, we right-clicked on an existing VM and selected "Data Protection" from the menu (see Figure 6). After selecting "Create Recovery Point," we could set the name, expiration date, and

advanced settings, namely if the recovery point is application-consistent and if the recovery point is going to be replicated to another cluster. The level of integration in the joint solution is evident, as the data protection options are governed by Dell PowerFlex functionality yet accessible via Nutanix Prism. Completion of these tasks was also viewable via PowerFlex Manager.

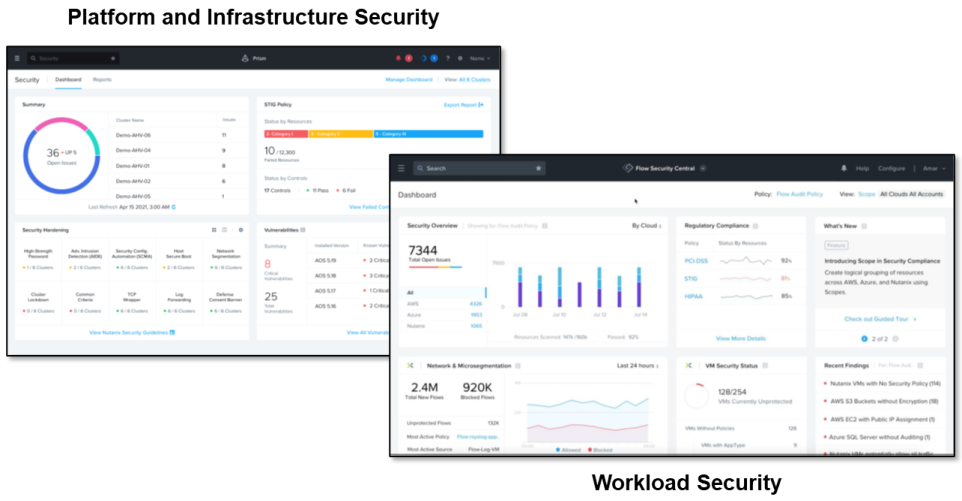
Figure 6. Creating Recovery Point



Source: Enterprise Strategy Group, now part of Omdia

Finally, we reviewed how organizations can track platform, infrastructure, and workload security on this joint solution (see Figure 7).

Figure 7. Monitoring Platform and Workload Security via Prism Central



Source: Enterprise Strategy Group, now part of Omdia

Using the “platform and infrastructure security” view, organizations can monitor the level of security hardening achieved across all nodes and clusters, such as password strength and advanced intrusion detection.

The "workload security" view enables monitoring of security posture and network traffic along with compliance status. With this view, organizations can also leverage common vulnerabilities and exposures (CVEs) supplied by Qualys to prevent potential attacks.

Why This Matters

As organizations continue to embark on digital modernization efforts, the most cited objective for such initiatives according to Enterprise Strategy Group research is to become more operationally efficient (cited by 56% of organizations).[5] Such efficiency is achieved by reducing the complexity in IT environments when consolidating workloads onto a single platform, without sacrificing the performance, security, data resiliency, and scalability organizations need to respond in today's dynamic business climate.

Enterprise Strategy Group validated that Dell PowerFlex with NCP can support organizations in increasing operational efficiency when modernizing their IT infrastructure. We observed how all operations and management can be conducted using the single Nutanix UI, such as adding external storage to NCP, creating and cloning VMs, configuring data protection schemes, and maintaining overall platform and workload security. Completing these tasks via a single interface, regardless of whether Dell or Nutanix delivers the capability, decreases both operational complexity and costs.

Conclusion

Consolidation of virtualized workloads has been a long-standing approach to decreasing IT complexity. However, changes in the hypervisor market have prompted organizations to explore their options. Undertaking this effort is not just a one-off initiative. Enterprise Strategy Group found that 89% of organizations believed that the usage or evaluation of multiple hypervisors or orchestration options is strategic to their organization.[6] As the business environment remains competitive, organizations are continually seeking ways that they can respond to evolving business needs with a flexible architecture that can deliver the required compute and storage resources needed, without sacrificing performance and security.

Dell and Nutanix have partnered to offer Dell PowerFlex with NCP, designed to deliver the performance and resource scalability organizations need to support a diverse mix of workloads, while providing the security, disaster recovery, and simplified management needed to run business operations efficiently. Because Dell's software-defined infrastructure integrates with NCP, organizations can choose to run Dell PowerFlex with the Nutanix AHV as their hypervisor for supporting virtualized workloads and use Dell PowerFlex as the storage pool.

Throughout our review, Enterprise Strategy Group validated that completing workload and platform-related operations was simplified, as all operations can be done via the Nutanix Prism interface. We verified that organizations can continuously monitor overall security to combat against known and unknown threats, particularly ransomware. Simplifying operations helps organizations advance modernization efforts in decreasing unwanted overhead and costs.

Organizations using Dell PowerFlex with NCP can leverage its disaggregated architecture to decrease operational complexity. Enterprise Strategy Group urges organizations to consider this solution should they want to advance their digital modernization efforts.

[5] Source: Enterprise Strategy Group Research Report, *2025 Technology Spending Intentions Survey*, December 2024.
[6] Source: Enterprise Strategy Group Research Report, *Navigating the Cloud and AI Revolution: The State of Enterprise Storage and HCI*, March 2024.

About Enterprise Strategy Group
Enterprise Strategy Group, now part of Omdia, provides focused and actionable market intelligence, demand-side research, analyst advisory services, GTM strategy guidance, solution validations, and custom content supporting enterprise technology buying and selling.

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