Self-service data protection for container and app developers

Business needs
Dell Digital, the internal IT organization of Dell Technologies, needed to ensure that corporate data protection policies were met for their 71,000 containerized workloads. Dell EMC PowerProtect Data Manager enabled them to provide their developers with easy-to-consume, self-service data protection.

Business results
- Provides easy, self-service data protection for 1,000s of VMware Tanzu containers
- Assures adherence to data protection policies in Kubernetes containerized environments
- Protects traditional and modern cloud workloads
- Enables easy self-service data protection for developers

Solutions at a glance
- Dell EMC PowerProtect Data Manager
- Dell EMC PowerProtect DD series appliances
- Dell EMC PowerProtect Cyber Recovery solution

Partner: VMware
For organizations seeking to modernize and transform their IT, the trend to containerization requires a fresh look at data protection. Dell Technologies’ own internal IT organization, Dell Digital, is no exception. To speed their software innovation for Dell.com, one of the internet’s busiest commercial web sites, they modernized their development environment with a VMware Tanzu infrastructure. To keep their vast amount of containerized data safe and compliant, they deployed Dell EMC PowerProtect Data Manager, enabling their developers to leverage containers as needed, along with self-service data protection that meets company standards.

To learn how PowerProtect Data Manager helps Dell Digital meet their data protection challenges, we spoke with Jim Hall, a Senior Consultant responsible for Dell’s compute and storage infrastructure, and Tejas Pandit, Senior Director of Software Engineering for Dell. Here’s their story, in their own words.

Jim Hall: “New peace of mind for our container environment.”

“We’ve modernized our application development infrastructure with VMware Tanzu. This enables our developers to quickly build microservices by provisioning cloud services, containers and virtual machines on their own. And we’re busy: At present we have 71,000 VMware Tanzu application containers and 28,000 Kubernetes pods. The question has been, how do we protect these containerized environments?

“For a long time, the industry said that we didn’t need to worry about data protection for containers. But then persistent data came along in persistent volumes, and we started to care about protecting that data. With our large container environment, that presented a challenge.

“You can build a lot of resiliency into a container platform, but at the end of the day, if you’re putting critical data in there, you have to be able to adhere to corporate policies. Are we retaining the data? Are we replicating it? Are we able to lock it away so that we’re protecting it against cyber attack or ransomware attacks?

“We now look to PowerProtect Data Manager to protect our containerized data. The biggest impact it’s had is giving us that peace of mind we didn’t have before.”

Tejas Pandit: “PowerProtect Data Manager is new from the ground up.”

“As we looked at our data protection portfolio, we knew we had some really great products. Dell has been solving the challenges of data protection for the last couple of decades. And these products have evolved over time. But we felt it was time to build that next-generation software platform; one that provides you with protection from edge, to core, to cloud. All three dimensions, because the need for this is coming up pretty fast. We wanted to provide software that was both proven and modern for cloud data protection.
“With that clarity of purpose, we developed PowerProtect Data Manager. It provides coverage for all of the current or legacy workloads you might see; the kind of data protection environment anybody needs. But at the same time, it covers modern workloads like Kubernetes. It provides newer database coverage, scalability, and some very cool, cutting-edge features like cyber recovery. That’s where the PowerProtect platform comes together.

PowerProtect Data Manager is new from the ground up, an innovative platform that provides coverage across the spectrum. But also it is architected in such a way that it makes it easier for our customers to protect their data, to define policies and rules. It gives them automated discovery, the benefits of deduplication and operational agility. As well as self-service and IT governance, which are now core to any IT organization. Because, gone are the days when an organization wants to have one person handling each and every role.”

Jim Hall: “It makes data protection easily consumable by our developers.”

“PowerProtect Data Manager solves those critical IT functions, making sure we have good stewardship, that we can restore in the event of a disaster, those types of things.

“Here’s a platform that’s easily deployable, easily consumable by the developer, by the container admin. We can now ensure that we’re providing those teams with a level of security that we didn’t have before.

“At Dell, we have a regulatory environment that we need to be very cognizant of. We have to make sure that anything we put into our Dell Digital infrastructure meets certain thresholds around data retention. Is it backed up? Is it not backed up? We need to know what is and what is not. PowerProtect Data Manager helps us with a lot of that, being able to apply our corporate standards around data protection policy to container environments. And it takes away the complications of adhering to our data protection standards.

“Now we can open up data protection to self-service, and just make it a part of running the infrastructure. Adhering to policies just melts away into the background, just becomes a part of the service. We can say to our developers, ‘Hey, you don’t have to worry about how you’re going to “roll your own” data protection solution anymore, you can just subscribe to this service that we’re providing now. We’re going to take care of all the backend infrastructure, you just hook into this and it just seamlessly works.’ And that give them that developer-friendly experience, so that when they deploy their containerized workload, we can ensure that we’re compliant and everybody is happy.”

“We can amp up self-service, thanks to the rich API instruction set.”

“When you look at Kubernetes containers, there are so many different options. VMware Tanzu Kubernetes Grid infrastructure lets us provide something familiar to container and app developers. They can leverage containers as they need, where they need. What PowerProtect Data Manager does on top of that is give them the ability to protect their workloads now.

“We’re getting to leverage our great network, our great compute, our great PowerProtect DD. PowerProtect Data Manager is going to be transformative and give us back a lot of time to focus on things we want to do.

“Today, with PowerProtect Data Manager we have the Dell Digital cloud portal. We leverage Avamar and vRealize and NetWorker with the vRealize Data Protection Extension and vRealize Orchestrator to provide VM agent and traditional backup. With PowerProtect Data Manager’s very rich API instruction set, we expect to really amp up our self-servicing for those Dell Digital cloud-delivered services. Going forward, we intend to apply what we’re doing today in the container space with PowerProtect Data Manager to our traditional workloads. That’s a high priority item for us.”
“We're light years ahead. I'm comfortable with PowerProtect Data Manager.”

“We're a big proponent of PowerProtect Cyber Recovery solution, with its air-gapped cyber recovery vault. We have an implementation of it today so that in the event of a ransomware attack we can restore our data, being able to do analytics against our data protection safe sets to find out if there's an issue. When you take that along with all the other things we have to do around disaster recovery, replication and data retention, being able to simplify the entry point for our data protection on PowerProtect Data Manager is going to be pretty cool.

“Data protection is a constantly evolving space and I'm comfortable knowing that we've got PowerProtect Data Manager.

“It's genuine. We really do expect that PowerProtect Data Manager will be the data protection focal point for our data center here at Dell Digital in the not too distant future.”