Software giant chooses Palette and CloudCasa to replace VMware for K8s management

Anonymous, but very real

This organization is a publicly traded, US-based enterprise data and analytics provider. It operates globally, serving Fortune 500 clients across many industries with annual revenue of around $2 billion and more than 5,000 employees.

Starting in 2024, Spectro Cloud engaged with this enterprise to modernize its K8s-based application infrastructure platform, which is now live in production.

In this document, we'll share the authentic detail of the customer's situation and challenges, and how they're using Spectro Cloud Palette with CloudCasa to handle management and data protection for its Kubernetes infrastructure.

The customer's internal policy prohibits named public references, but we've worked closely with their team, and the results you'll read below are real.

Highlights

Who: US-based enterprise software company

What: Migrating 28 on-prem clusters from Tanzu to Palette, with CloudCasa for data protection

Why: Triggered by Broadcom VMware price increases, goal to reduce costs, maintain availability, improve devex

When: October 2024, ongoing

What next: Managing clusters in Azure, dev self service with Virtual Clusters, and migrating 500 VM workloads to Palette VMO

The Broadcom effect

By mid 2024, this software company had reached a crisis point in its relationship with VMware. Like many organizations, it ran much of its on-prem compute infrastructure on VMware vSphere.

The team we first engaged with was a case in point. It is an internal IT team responsible for running workloads like the company's Jenkins-as-a-service CI/CD services, and testing frameworks for the company's development teams.

All this sat on six beefy 64-core servers, virtualized into 880 vCPUs and forming 28 Kubernetes clusters with 80 virtual worker nodes in production. They managed these clusters with another VMware product — Tanzu.

Broadcom's VMware renewal price rises have made CIOs around the world sweat, and for this organization, the nightmare became real. Its Tanzu contract was up for renewal in just a few months, with its vSphere contract coming due in a year, and the numbers were looking scary. The mandate was clear: reduce the VMware footprint and look for alternatives to all VMware products.

When we sat down with the team in October 2024, they told us their first priority was to find an easy to manage K8s "mission control" to replace Tanzu. But they wouldn't settle for just anything. For a software company, CI/CD and testing frameworks are critical workloads — they need to be managed effectively, with rock-solid availability, security and performance. These workloads are also critical to developer experience, productivity, and therefore code velocity.

The IT team also knew they had to look to the future. Their new "mission control" had to be flexible and support multi-platform, and multi-cloud. Their timeline was decisive: they wanted to make a purchase by the end of 2024.

Head to head, one clear choice

The enterprise put Spectro Cloud Palette head to head with five other vendors in a proof of concept process, including the giants of the old guard, Red Hat OpenShift and SUSE Rancher.

After we stood up multiple test clusters for this enterprise, it became clear that Palette had the edge technically — one engineer told our solution architect that our implementation of Cluster API was highly tuned, for faster change detection and redeployments, and they were amazed by our decentralized architecture.

Why? In our architecture, each cluster holds a copy of its desired state locally, all the way to the application layer, along with the CAPI agent. This means that even if the cluster loses network connectivity, the local agent can still self-heal and perform management locally.

Spectro Cloud also had the edge on commercials. After the pain of Broadcom turning the screws, of course all the alternatives promised cost savings. But Spectro's licensing model proved not only good value, but simple and aligned with how the team expected its usage to evolve.

Backup? Time for a power up

The proof of concept process did highlight one deficiency in the Palette platform. Out of the box, Palette bakes in the open source Velero backup tool, giving customers a simple way to back up their entire clusters to a location like an S3 bucket.

But Velero has some limitations: it lacks RBAC (Role-Based Access Control) management, has no robust Disaster Recovery (DR) support, and no support for file-level restores from Persistent Volume Claims (PVCs).

This is where the enterprise's system integrator, EVOTEK, introduced CloudCasa from Catalogic. CloudCasa is a Kubernetes-native backup and DR solution that ticked all the boxes for this customer: sophisticated data protection that works at scale across multiple clusters in multiple environments, including support for stateful data and VMs (which we'll come on to in a moment).

The final bill of materials

With the data protection issue solved, the decision was made. The enterprise signed a three-year engagement with Spectro Cloud, using Palette to manage its on-prem clusters, fully replacing VMware Tanzu. Its clusters would migrate over to Spectro's Palette eXtended Kubernetes (PXK) distribution, eventually running on bare metal with Canonical MAAS and Ubuntu Pro to eliminate vSphere from the stack.

The enterprise chose Palette's multitenant SaaS deployment option, backed with premium Solution Support and professional services from EVOTEK.

On the data protection side, they chose CloudCasa's SaaS option, moving on-premises backup storage to NetApp StorageGrid.

Microsoft Azure entered the picture as an offsite backup, with CloudCasa maintaining secondary backup copies to Azure Blob Storage. They'd be using AKS for DR, Any2Cloud recovery, and future hybrid cloud expansion.

The customer needed enterprise authentication integration, so we implemented support for Microsoft EntraID and SAML 2.0 for single sign-on (SSO).

CloudCasa also created a 'Pack' for Spectro Cloud Palette, enabling Palette users to deploy CloudCasa into clusters in a consistent, repeatable way, as part of the initial cluster software loadout. The CloudCasa pack is directly available from the Palette Community Pack repository, available with a click from within the Palette UI.

Looking to the future

It's been a few months since the agreement was signed, and implementation work is well underway, and the end is in sight for a Tanzu-free K8s infrastructure, and ultimately a VMware free environment. Although no project runs entirely smoothly, the enterprise has achieved its goal of avoiding downtime for its developers during the migration from Tanzu.

Based on the positive experiences during this first collaboration, the enterprise has already started work on a second phase of projects. They've already signed another contract to use Palette to meet internal demand for cloud clusters, deploying into Azure. And now they're expanding developer self service, looking at Palette's Virtual Clusters (using the vCluster project) to provide fast access to clusters on demand.

But the big opportunity — and the reason why

CloudCasa's VM capabilities are so important — is the enterprise's long-term ambition to move its VM workloads from vSphere into K8s.

Spectro Cloud Palette has a capability called Virtual Machine Orchestrator (VMO), based on the open source project KubeVirt. It enables teams to schedule VMs in K8s clusters, just like containerized workloads, unifying governance and simplifying the enterprise architecture.

This enterprise is working towards moving approximately 500 VMs into K8s using VMO, a task that will take careful planning and migration support from its partners. But key to a successful move is a backup and data protection solution that can handle these containerized VMs. That's exactly what CloudCasa is for.

The last word

This enterprise software company is not the only one using VMware and Tanzu, facing a choice about how to manage Kubernetes, and what to do about their virtualized environment, and their VM workloads.

In this case, Spectro Cloud Palette provided a future-ready solution for managing K8s clusters on VMware today, on bare metal, and in cloud hyperscalers, for both containerized workloads and the estate of legacy VM workloads.

CloudCasa by Catalogic provided a neat integration with Palette, replacing the out-of-the-box Velero backup solution, and offering the customer powerful Kubernetes-native on-prem backup, offsite cloud DR, and the ability to provide assurance for VM workloads too.

If you're in the same situation as this enterprise… you know who to call.

Next steps

To learn more about Spectro Cloud Palette, check out our **solutions for bare metal** and for managing **VM workloads on K8s**.

Explore CloudCasa's powerful **K8s backup and restore capabilities**, and features for backing up **KubeVirt VMs**.