

CloudCasa DR: Kubernetes disaster recovery for Dell PowerStore



Storage-integrated disaster recovery for Kubernetes on Dell PowerStore

Current challenge

Dell PowerStore customers are running more of their production estate on Kubernetes®, often with virtual machines migrated onto KubeVirt, Red Hat® OpenShift® Virtualization, or SUSE® Virtualization. Many have already put a backup tool in place. Far fewer have solved disaster recovery: a way to fail these environments over to a second site in minutes, not hours.

CloudCasa by Catalogic closes that gap with storage-integrated disaster recovery for Dell PowerStore.

The result: customers keep their data on PowerStore, protect the Kubernetes applications that depend on it, and achieve recovery objectives measured in minutes – without moving persistent data through a third-party data plane or having to add a new storage replication layer.

What CloudCasa is

CloudCasa by Catalogic is a Kubernetes-focused data protection platform built for disaster recovery, backup and restore, migration, and Kubernetes-native virtualization. It is designed around Kubernetes resources and persistent-volume data rather than using traditional VM-first backup workflows.

Backup & restore

Protects/restores entire clusters, namespaces, resources by type or label selector, PVs, and individual files from PVs.

Disaster recovery

Recovers containers and VMs in minutes using PowerStore's native replication, with near-zero RPO under synchronous replication.

Migration

Moves applications or whole clusters across clusters, sites, or clouds, with available restore transforms such as storage-class remapping.

VM protection

Backup, restoration, DR, and migration of virtual machines running on KubeVirt, Red Hat OpenShift Virtualization, and SUSE Virtualization.

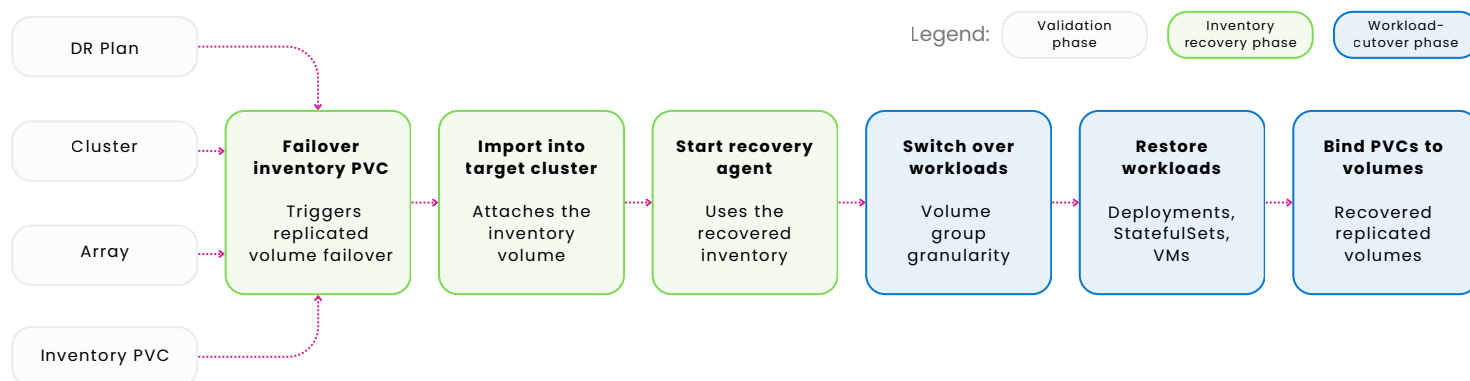
CloudCasa DR for Dell PowerStore

- CloudCasa DR recovers Kubernetes workloads – containers and VMs alike – at a secondary site by orchestrating Dell PowerStore's native array-based replication and failover.
- Persistent-volume data never passes through CloudCasa; PowerStore's enterprise-grade replication engine moves the data array-to-array.
- CloudCasa continually records protected workload state into a replicated inventory PVC. When failover is needed, it triggers failover and rebuilds Kubernetes resources, PVCs, and VMs on the target cluster from that inventory.
- For Dell, this is a purpose-built PowerStore integration: CloudCasa orchestrates PowerStore's sync/async replication via the PowerStore API, handling discovery, validation, orchestration, failover, and failback – with no need to replace or re-platform existing Dell storage.



How a **failover** works

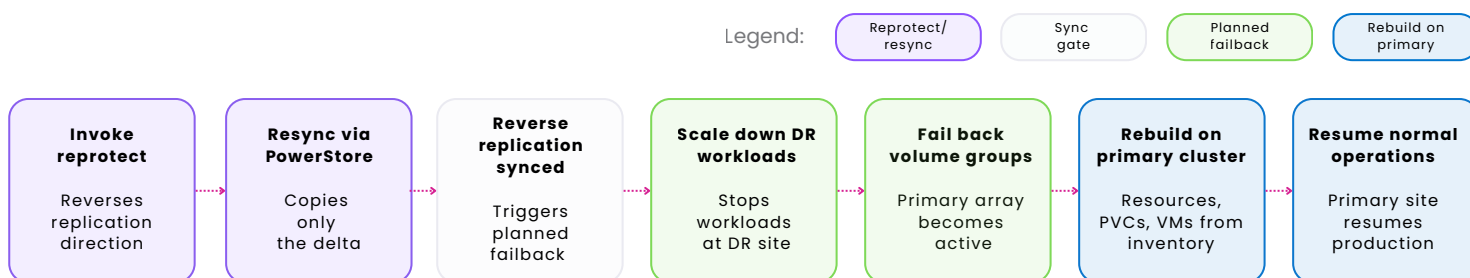
- CloudCasa validates the DR plan, the target cluster, the array, and the replicated inventory PVC.
- It triggers failover of the replicated inventory PVC first, imports it into the target cluster, and starts the recovery agent utilizing that inventory.
- It then switches over the remaining workloads at volume group granularity, restores the selected Deployments, StatefulSets, and VMs, and binds their PVCs to the now-recovered volumes.



Failover is performed for complete volume groups, not individual volumes, so workloads with different recovery requirements should be placed in separate groups. For self-hosted deployments, the CloudCasa server itself can be deployed at each site for high availability of the DR control path.

How a **failback** works

- Once the primary site is back online, CloudCasa invokes a reprotect that reverses the replication direction on the affected volume groups, so PowerStore resynchronizes only the delta accumulated since failover rather than a full copy.
- Once the reverse-replication session reaches a synchronized state, CloudCasa initiates the planned failback. The workloads running at the DR site are first scaled down, after which the volume groups are failed back to the primary array.
- CloudCasa then rebuilds the Kubernetes resources, PVCs, and VMs on the primary cluster from the current inventory and resumes normal operations there.



Failback is a deliberate, operator-confirmed step rather than an automatic bounce-back, so customers control exactly when production returns to the primary site.

Why this model **matters** to Dell customers

Recovery in minutes

Failover runs on PowerStore's native, high-performance replication, designed for recovery in minutes and near-zero RPO with synchronous replication. Results vary by environment.

One console for backup and DR

The same platform covers scheduled backup, granular restore, migration, and storage-integrated DR.

Kubernetes-aware recovery, not just volumes

CloudCasa reconstructs the Kubernetes resources – and KubeVirt VMs – that make the data usable, not just the underlying volumes.

Data stays on Dell

PV data is replicated array-to-array by PowerStore, never passes through CloudCasa, and never leaves Dell's trusted infrastructure. An in-cluster agent drives the array directly over the network, whether CloudCasa is deployed as SaaS or self-hosted.



Kubernetes and VM platforms covered

CloudCasa DR for Dell PowerStore targets CNCF-certified Kubernetes distributions and their virtualization layers: Red Hat OpenShift and Red Hat OpenShift Virtualization, SUSE Rancher Prime, SUSE Rancher Prime: RKE2 and SUSE Virtualization, VMware vSphere Kubernetes Service, and upstream Kubernetes 1.20 and later. Everyday Kubernetes backup and restore to Dell storage, including Data Domain, ECS, and PowerScale, runs from the same CloudCasa console that manages DR.

CloudCasa uses the PowerStore CSI driver (csi-powerstore) for volume provisioning, and the PowerStore REST API to orchestrate DR failover and failback directly. It does not depend on CSM functionality for DR failover or failback. Today's integration covers block-based (SCSI) persistent volumes on PowerStore; file-based (NFS/SMB) volume DR is on the CloudCasa roadmap.

Why CloudCasa vs. the alternatives

Dimension	CloudCasa	Typical alternatives
Storage-integrated DR	✓ Array-integrated DR that orchestrates PowerStore's native replication, shipping today for Dell PowerStore.	✗ Storage replication alone recovers the volumes, but the Kubernetes side still has to be rebuilt by hand. Software-defined storage overlays add DR, but also add complexity and overhead.
Delivery model	✓ SaaS control plane plus self-hosted option; per-worker-node licensing.	✗ Typically available in only one delivery model - SaaS-only or self-hosted-only - requiring a change in tooling if deployment needs change.
Hybrid Architecture	✓ Multi-tenant, multi-cluster design that manages protection across on-prem, cloud, and edge environments from a single control plane - with a small footprint and ready for MSP delivery.	✗ Frequently single-tenant or single-cluster, requiring a separate deployment or control plane per environment - a limited fit for edge or MSP delivery.
Scope	✓ Backup, restore, migration, DR, and in-cluster VM protection in one platform.	✗ Typically covers only backup or only DR, with replication-based DR sold as a separate product or tied to a specific storage layer.

Plans and licensing



License Metric & Plans

CloudCasa is available as SaaS or self-hosted, both licensed per worker node; a 60-day Free Trial (up to 5 worker nodes) is available.



Backup & Restore

Licensed per worker node on both SaaS and self-hosted; can be licensed independently of CloudCasa DR.



CloudCasa DR

Licensed per worker node on both SaaS and self-hosted; can be licensed independently of Backup & Restore.

Working with CloudCasa

Leverage existing Dell investments: CloudCasa delivers storage-integrated disaster recovery, designed for recovery in minutes, for Kubernetes and Kubernetes-native VMs on Dell PowerStore - data stays on PowerStore, and CloudCasa orchestrates Kubernetes-aware failover, without adding a new storage layer or replacing what's already in place.

Try CloudCasa for free

