

Storage-integrated Disaster Recovery for SUSE Rancher Prime and SUSE Virtualization on Dell PowerStore

As Dell PowerStore customers scale their production estates with SUSE Rancher Prime and SUSE Virtualization, a critical gap often remains: disaster recovery. While backups are standard, they rarely provide the rapid, orchestrated failover needed for modern workloads. CloudCasa by Catalogic bridges this gap with storage-integrated DR. CloudCasa is designed to fail over critical environments in minutes, not hours, while keeping persistent data natively on PowerStore, without the complexity of third-party data planes or additional replication layers.

Modern workloads scale rapidly, but recovery objectives remain a gap

THE MODERN WORKLOAD ESTATE

- **Production Clusters on SUSE Rancher Prime:** Organizations are moving mission-critical production estates onto SUSE Rancher Prime / RKE2.
- **VM Co-Existence (KubeVirt):** Traditional VMs are migrated onto SUSE Virtualization to run natively alongside containers.
- **Premium Storage Backend:** Stateful applications utilize Dell PowerStore arrays for low latency and high availability.

vs

THE RECOVERY GAP

- **Backups are Not DR:** Day-to-day backup tools are in place, but they cannot fail over complex workloads easily.
- **Excessive RTO/RPO:** Traditional restores require hours to pull heavy persistent data from various data planes.
- **Re-Platforming Friction:** Adding software storage overlays creates unnecessary complexity, cost, and management silos.

CloudCasa's four integrated capabilities

01

SUSE Rancher Prime Backup & Restore

Protects and restores entire clusters, namespaces, and resources. Safely backs up persistent volumes (PVs) and individual files from within those PVs.

02

Disaster Recovery

Recovers containers and VMs in minutes by orchestrating Dell PowerStore's native, array-based replication, with near-zero RPO under synchronous replication.

03

Frictionless Migration

Moves active applications or whole clusters across infrastructure, sites, or clouds with automated restore transformations like storage-class remapping.

04

VM Protection on Rancher

Delivers enterprise-grade backup, restore, disaster recovery, and migration for virtual machines running natively on SUSE Virtualization (KubeVirt).

Why SUSE, CloudCasa DR and Dell PowerStore

Modern Disaster Recovery for Kubernetes & VMs

PowerStore replicates the data; CloudCasa orchestrates the recovery

CLOUDCASA + POWERSTORE CO-EXISTENCE: How the Storage-Integrated Control Path Operates

KEY ARCHITECTURAL HIGHLIGHTS

1. CloudCasa SaaS / Self-Hosted Control Plane
Orchestrates discovery, scheduling, metadata, and DR plans

2. In-Cluster Recovery Agent (Helm)
Drives DR through the PowerStore REST API; volumes are provisioned by the PowerStore CSI driver (csi-powerstore)

3. Dell PowerStore Array Replication
Replicates persistent volume blocks natively array-to-array

• Data remains on Dell storage:

Persistent-volume (PV) data does NOT pass through CloudCasa. Data replication occurs natively, array-to-array via Dell PowerStore, keeping your data entirely within Dell's infrastructure.

• No storage re-platforming needed:

Leverage your existing Dell investments. There is no need for software overlays or re-architecting your storage backend. CloudCasa drives the array directly over the network using the PowerStore REST API.

• Kubernetes & VM awareness:

While PowerStore replicates the raw data volumes, CloudCasa captures and reconstructs Kubernetes resources, PVCs, and SUSE Virtualization VMs on the target side, making the replicated data usable again.

Automated multi-step workflows orchestrate failover and delta-synced failback

HOW FAILOVER WORKS

1. Validate Integrity:

CloudCasa validates the active DR plan, target cluster state, and replicated inventory PVC to ensure target compatibility.

2. Import Inventory PVC:

Triggers target failover of the replicated inventory PVC first, starts the recovery agent, and prepares the target cluster.

3. Rebuild & Reconstruct:

Performs volume group switchovers, restores Deployments, StatefulSets, and KubeVirt VMs, and binds PVCs to the recovered volumes in minutes.

HOW FAILBACK WORKS

1. Delta Sync Reprotect:

Once the primary site is online, CloudCasa reverses replication, and PowerStore synchronizes only changed data blocks rather than full copies.

2. Scale Down & Failback:

Active workloads running at the DR site are scaled down first, and volume groups then fail back to the primary array in a planned window.

3. Operator-Confirmed Resume:

CloudCasa rebuilds Kubernetes resources and virtual machines on the primary cluster. Operators confirm before final switchback.

Failover validates the DR plan, fails over the inventory first, then switches over workloads at volume-group granularity. Workloads with different recovery requirements belong in separate volume groups.

Failback uses native delta synchronization, meaning only modified blocks are replicated back to the primary site, minimizing network traffic. Returning to the primary site remains a deliberate, operator-confirmed step. Block (SCSI) volumes only today; results vary by environment.

Why SUSE, CloudCasa DR and Dell PowerStore

Modern Disaster Recovery for Kubernetes & VMs

CloudCasa outperforms typical alternatives across four architectural dimensions

Dimension	CloudCasa by Catalogic	Typical Alternative Solutions
Storage-Integrated DR	Array-integrated DR that orchestrates PowerStore's native replication directly, shipping today for Dell PowerStore.	Replication alone lacks Kubernetes-awareness and cannot reconstruct active manifests. Software storage overlays add overhead and management complexity.
Delivery Model	Flexible delivery with a managed SaaS control plane or fully self-hosted options. Simple per-worker-node licensing on an annual subscription.	Typically locked into one model (SaaS-only or self-hosted-only), requiring a full change of tooling if organization or compliance requirements evolve.
Hybrid Architecture	Multi-tenant, multi-cluster design that manages data protection across on-prem, cloud, and edge environments from a single control plane.	Frequently single-tenant or single-cluster, requiring a separate deployment or control plane per environment, creating management sprawl.
Scope & Protection	Consolidates backup, restore, migration, storage-integrated DR, and KubeVirt VM protection in a single platform.	Typically covers only backup or only DR, with replication-based DR sold as a separate product or tied to a specific storage layer.

NEXT STEPS

Leverage existing Dell and SUSE investments immediately.

- **Contact:** casa@cloudcasa.io
- **Try SaaS:** [here](#)



Learn more



<https://cloudcasa.io/cloudcasa-for-dr/>

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CloudCasa by Catalogic provides secure, scalable, and cost-effective backup, disaster recovery, and migration for Kubernetes environments. With SaaS and self-hosted deployment options, it offers policy-driven protection, RBAC, immutable backups, and multi-cluster management across cloud, on-premises, and hybrid infrastructures. CloudCasa ensures seamless backup, restore, and workload mobility, making Kubernetes data protection simple and efficient.

Dell Technologies helps organizations modernize and simplify their IT environments with a broad portfolio of infrastructure, storage, data protection, and cloud solutions. Dell PowerStore delivers intelligent, adaptable storage designed for modern applications and Kubernetes-based environments, providing the performance, scalability, and data resilience enterprises need to run mission-critical workloads with confidence.

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