cloudcasa by Catalogic

HPE

CloudCasa DR for Kubernetes

Powered by

HPE Alletra Storage MP B10000

Unlock exceptional disaster recovery with CloudCasa, providing low RPO and low RTO recovery for Kubernetes inter-cluster disaster recovery applications and KubeVirt VMs. Seamlessly integrated with HPE Alletra Storage MP B10000, our solution makes implementation straightforward and cost-effective, helping you protect your critical data.

MINUTES-LEVEL RECOVERY

NEAR-ZERO DATA LOSS

AUTOMATED FAILOVER

SUPPORTED PLATFORMS

- **HKS, HPE's Enterprise Kubernetes Platform**
- **Red Hat OpenShift**
- **SUSE Rancher**
- **Azure Local**
- **Canonical**
- **Spectro Cloud**
- **vSphere Kubernetes Service**
- **Mirantis**
- **Upstream K8s**

MODERN **DISASTER RECOVERY** FOR KUBERNETES

Backup-based recovery is too slow and manual for modern Kubernetes applications. Customers need a faster, more automated way to restore both **application state** and **persistent data**.

CloudCasa solves this by delivering true **disaster recovery** through B10000's synchronous or periodic replication, Kubernetes-aware orchestration, and automated failover workflows. The result is faster recovery, lower operational complexity, and stronger business continuity.

"Recover applications in minutes—not hours without rebuilding from backup."

TRADITIONAL KUBERNETES DR **FALLS SHORT**

Modern microservices and hybrid cloud workloads demand more than legacy backup agents and manual restore scripts.

CATEGORY	TRADITIONAL BACKUP DR	CLOUDCASA + HPE ALLETRA	BUSINESS IMPACT
Data Transfer	×Backup copies cross network; slow restore	✓Native storage replication; no data movement at failover	Near-zero RPO with instant access to replicated data
Time to Recovery (RTO)	×Hours to restore from backup; unpredictable	✓Minutes-level RTO via orchestrated failover automation	Application availability in minutes, not hours
Recovery Method	×Backup-based restore; not true DR	✓True DR with replicated storage and live orchestration	No rebuild required; production-identical recovery
Protection Scope	×Separate tools required for containers and VMs	✓Single platform for Kubernetes apps and KubeVirt VMs	Unified protection across containers and virtualized workloads
Failover Automation	×Manual processes that are fragile and error-prone	✓Automated failover and failback with workflow guardrails	Reliable,repeatable recovery with operational resilience

Core Disaster Recovery Capabilities

The most comprehensive DR solution for enterprise platforms engineering and IT infrastructure teams.

Automated Disaster Recovery

- Near-zero failover time
- Recovery from primary to DR site

Enterprise RPO / RTO

- Storage replication-driven RPO
- Recovery in minutes, not hours

Granular Recovery

- Namespace / app targeting
- VM grouping failover

Isolated Protection

- Namespace-scoped access control
- Tenant isolation in multi-cluster Clean
- platform consistency

Application Awareness

- Ordered startup dependencies
- Pre- and post-failover hooks
- Annotation-managed pipelines

Enterprise Security

- Fine-grained RBAC controls
- Network policy continuity
- SOC 2 Type II compliant

Simple 4-Step DR Workflow

Efficient orchestration that removes manual complexity from disaster recovery operations

1. **Replicate Data**
   Leverage HPE Alletra to continuously replicate application data at the storage layer to your DR site at low latency.
2. **Deploy CloudCasa**
   Install CloudCasa on both source and target clusters. Register clusters with CloudCasa and validate connectivity.
3. **Define DR Plans**
   Build declarative, application-aware DR plans specifying namespaces, dependencies, order of operations, and RTO targets.
4. **Execute Failover**
   Trigger one-click or automated failover. CloudCasa orchestrates Kubernetes manifests and app start-up in dependency order.

✔ NO REHYDRATION. NO REBUILD. NO MANUAL SCRIPTING.

Built for B10000

- Synchronous and Periodic Supported
- Native Storage Replication
- HPE CSI Driver for Kubernetes

CloudCasa integrates with the HPE CSI Driver for Kubernetes to provision and import replicated volumes during failover and failback operations, while replication is managed natively on B10000.

KEY ADVANTAGES

- **Not Backup-Based**
- **Not Software-Defined**
- **Full Stack Integrated**
- **Cost-Effective**

Bidirectional Disaster Recovery

Support for controlled failover and safe failback ensures applications can move between sites or clusters with minimal disruption.

FAILOVER

- Automated activation of application storage target site
- Kubernetes manifest orchestration at recovery destination
- Automated or manual approval-gated failover workflows

FAILBACK

- Reverse replication to re-establish primary site as active
- Re-synchronize data before transitioning applications back
- Orchestrate full application stack with correct start order

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