

Calsoft delivers disaster recovery solution for Kubernetes with near-zero downtime

Calsoft, a fast-growing data, AI, engineering company, has successfully designed deployed a high-availability & DR ready Kubernetes infrastructure.

SAN JOSE, CA, UNITED STATES,
December 11, 2025 /

EINPresswire.com/ -- [Calsoft](#), a fast-growing data, AI, and engineering company, has successfully designed and deployed a high-availability (HA) and [disaster recovery](#) (DR) ready

Kubernetes (K8S) infrastructure for a major enterprise client operating critical services across multiple AWS regions. The solution combines Velero backups, Amazon Elastic Block Store (EBS) snapshots, and ArgoCD to enable automated failover between an active Amazon Elastic

Kubernetes Service (EKS) cluster in one region and a passive standby cluster in another region, ensuring business continuity in the event of a regional outage.

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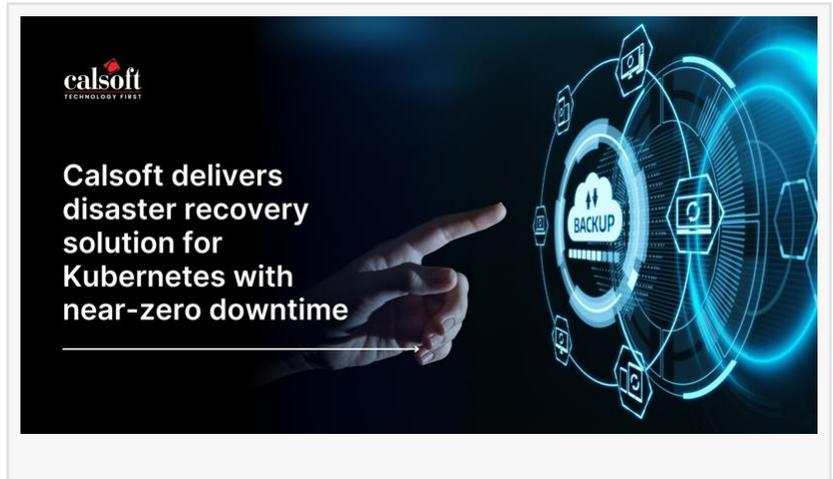
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Nilesh Arte, Senior DevOps Architect at Calsoft

mission-critical microservices

• Technical validation: Successfully tested automated failover from active to standby cluster with selective backup strategy across ArgoCD, EBS, and Velero

The implementation uses Amazon EKS (Elastic Kubernetes Service) with a combination of ArgoCD for Kubernetes resource synchronization, EBS-aware storage class configurations for



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- Solution delivered: Multi-region Kubernetes disaster recovery architecture using AWS EKS across two geographic regions with intelligent backup orchestration
- Client impact: Enterprise operations protected with tested failover capability and zero-downtime resilience for

persistent volume backups, and Velero for selective cluster state management. Helm Charts and S3 storage complete the technical stack. The enterprise client operates a large-scale microservices architecture requiring continuous availability, and the solution architecture is applicable across industries.

The architecture goes beyond standard disaster recovery approaches by using a selective backup strategy rather than a single-tool backup method. Different types of data are backed up using the most appropriate tool for that specific data type, similar to how modern smartphone backups intelligently separate app data, cloud-synced content, and operating system configurations rather than creating one monolithic backup.



"The key differentiator in this implementation is the intelligent use of multiple backup tools based on data characteristics rather than forcing everything through a single backup mechanism," said Nilesh Arte, Senior DevOps Architect at Calsoft. "This approach reduces backup windows, minimizes storage costs, and accelerates recovery times because each tool is handling exactly what it does best."

The solution has been tested with successful failovers from the active cluster to the passive cluster, validating both the technical architecture and operational procedures. The testing confirmed that the standby cluster can smoothly take over as the primary operational environment when needed.

While initially deployed for a client in the telecommunications sector, the solution is industry-agnostic and applicable to any organization running microservices on Kubernetes that requires multi-region resilience. The architecture provides organizations with confidence in their disaster recovery capabilities while optimizing the combination of high availability and backup tools.

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Calsoft is a technology services company specializing in cloud infrastructure, DevOps automation, and enterprise architecture solutions. The company works with organizations to design and implement scalable, resilient systems across cloud platforms. Calsoft delivers engineering services for networking, cloud, storage, and data center technologies.

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