



OPCITO TECHNOLOGIES

Microservices-Based SaaS Application For Database Management

About The Customer

The customer is a leading database clustering & replication service provider and empowers enterprises to run business-critical applications cost-effectively. Their customer base includes successful organizations from a broad spectrum of industries across the globe.

Business Challenge

The product in discussion provides clustering and replication for databases to achieve High Availability (HA), Disaster Recovery (DR), and performance-enhancing scalability. This product could be deployed on-cloud and on-premises; however, such deployment was tedious and time-consuming due to factors including low automation and security-related challenges. The product has a vast user base. The geographically spread database locations and the number of customers increased the complexity of managing clusters and associated operations such as upgrading, debugging, patching, etc. It was laborious to reach out to all the on-prem databases, and in the case of the cloud, most organizations were concerned about security aspects and sharing the log files. This resulted in the loss of customers for the customer and affected revenue numbers. The customer wanted a solution that could solve these problems and, at the same time, work perfectly with database engines such as MySQL, MariaDB, and Galera.

How Opcito Helped

Opcito's team of architects analyzed the existing application and gathered requirements that could solve the associated problems. It was evident that automation was necessary to reduce the time taken, and reducing complexity was another important aspect. The solution to the customer's problem was a SaaS application that could act as a deployment engine for their database products. Opcito designed and customized the existing application to a SaaS platform for easy and faster database deployments. This application has features such as a persistent database, auto-recovery of microservices, and a secure vault database for customers' data and credentials. The SaaS application's infrastructure has been built to ensure that all microservices and the underlying nodes are replicated accurately.



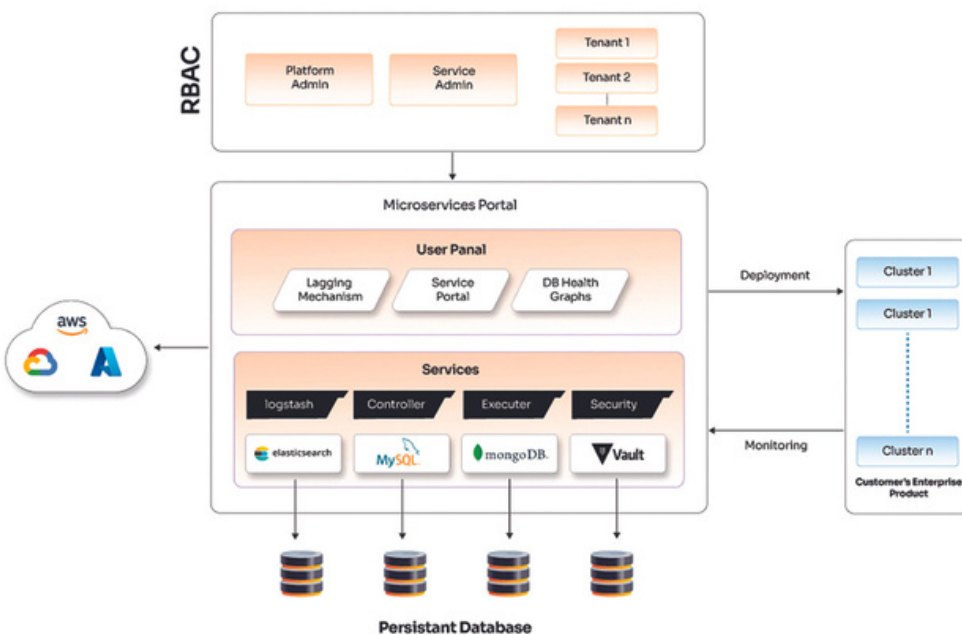
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Communication between replicated microservices and the associated database is another important aspect taken care of. In node termination, the node spins up in minimal time, and the backup is restored from the associated backup database. And the portal automation code provides the flexibility to launch on different cloud providers.

The portal facilitated easy onboarding of new customers, launching database clusters, monitoring cluster health, and providing all-round support. It enables customers to create customer accounts in the cloud and deploy different database clusters in their own cloud environments. Opcito also configured and launched this platform with support for leading cloud service providers, including AWS, Azure, and GCP. By integrating this portal with the customer's existing enterprise database product, Opcito facilitated the customer to launch multiple types of database clusters conveniently.



Technologies, Tools, and Platforms used

MICROSERVICES

RBAC

ELASTICSEARCH

MYSQL

MONGODB

VAULT

Benefits

RBAC

Multi-level Role Based Access Control feature for admin and tenant users

SEAMLESS ONBOARDING

Easy onboarding of new customers

SIMPLIFIED DATABASE CLUSTER DEPLOYMENT

Simplified process for database cluster deployment of different sizes with different database engines



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TIME SAVING

Reduced deployment time

FLEXIBILITY

Freedom to deploy database clusters in different cloud environments

USER-FRIENDLY CLOUD MONITORINGEasy monitoring of cluster health with a user-friendly logging mechanism that shows deployment, cluster, and microservices logs for the admin

About Opcito

At Opcito, we believe in designing transformational solutions for our customers, start-ups, and enterprises, with our ability to unify quality, reliability, and cost-effectiveness at any scale. Our core work culture focuses on adding material value to your products by leveraging best practices in DevOps, like continuous integration, continuous delivery, and automation, coupled with disruptive technologies like containers, serverless computing, and microservice-based architectures. We also believe in high standards for quality with a zero-bug policy and zero downtime deployment approach.



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