CASE STUDY

severalnines

Automating MySQL failover on docker to reduce downtime

INSTANT GAMING

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Industry: eCommerce
Technologies: Docker, MySQL
Hosting: AWS
Data Centers: 2
Products: ClusterControl

USE CASE

A high traffic, eCommerce website automating MySQL Replication failover on Docker.

WHY SEVERALNINES

Multi-DC MySQL Automated Failover on Docker coupled with on-premise

BACKGROUND

Instant-Gaming.com is a leading online, worldwide distributor of video games for platforms like Steam, uPlay, Origin, Xbox, PS4, and more. They are a team of enthusiastic gamers who chose to break free from the classic brick-and-mortar retail model and branch out into discounted online distribution. By distributing titles online they save money by not having storage or logistical costs, allowing them to pass savings along to the gamer. Game codes are scanned from the boxed versions of the games and are delivered to their customers within a few seconds of purchase. The codes are then entered legally into the popular online streaming platforms which handle the installation and setup. This exciting new path to market allows Instant Gaming the ability to offer popular titles to their users at up to 80% in savings over traditional retail.

CHALLENGE

As Instant Gaming continued to grow across its different web properties, it was not uncommon for them to have surges of activity trickling down to the centralized database infrastructure. During peak times, this could create performance issues. Occasionally, downtime would occur due to loss of connectivity between data centers, maintenance and upgrade operations, or even operator error in some cases. “Downtime is critical for e-commerce as your revenue stream depends on your uptime,” said Jérémie Bordier, IT Infrastructure Consultant of Instant Gaming.

> ***Docker is an amazing technology that allowed us to abstract our applications from underlying hardware and data center environments. It was a great way for us to deploy our applications and quickly spin up and replace failed infrastructure.***
>
> Jérémie Bordier, IT Infrastructure Consultant of Instant

Built using a custom-made eCommerce framework, Instant Gaming's front-end applications used a MySQL database deployed in Master-Slave mode, with manual failover. The same database was used for back-office applications like order management, billing, inventory, and customer data. The applications ran in a Docker environment, while the database itself ran on barebone hardware.

With the website traffic continuing to grow came an increasing realization that the database had too many potential points of failure. For instance, a network glitch between data centers could lead the database, and therefore the service, to be unavailable for 10 to 15 minutes while the failover was being performed. Even if they could outsource the management of the database to external database consultants, manual failover of the database was just too slow.

SOLUTION

Instant-Gaming.com is a leading online, worldwide distributor of video games for platforms like Steam, uPlay, Origin, Xbox, PS4, and more. They are a team of enthusiastic gamers who chose to break free from the classic brick-and-mortar retail model and branch out into discounted online distribution. By distributing titles online they save money by not having storage or logistical costs, allowing them to pass savings along to the gamer. Game codes are scanned from the boxed versions of the games and are delivered to their customers within a few seconds of purchase. The codes are then entered legally into the popular online streaming platforms which handle the installation and setup. This exciting new path to market allows Instant Gaming the ability to offer popular titles to their users at up to 80% in savings over traditional retail.

OUTCOME

The team then found and installed ClusterControl. For Instant Gaming, ClusterControl offered the MySQL automated failover they were looking for as well as support for multiple data centers which tied perfectly into their disaster recovery needs. ClusterControl also offered support for Docker and integration with Amazon S3 for automatic backups and archiving to the cloud.

ClusterControl was put through rigorous testing by the Instant Gaming team. "We tested extensively the failure scenarios and ClusterControl behaved accordingly, giving us confidence in our infrastructure," said Bordier. "This also allowed us to have better processes for maintenance operations."

From the initial download of ClusterControl to the migration of their databases to the launch into production, it took a little more than two months.