several9s

ClusterControl helps Mediacloud hit cloud "9s"

MEDIACLOUD

Industry: Hosting
Technologies: Galera, MySQL
Data Centers: 6
Products: ClusterControl

USE CASE

Cloud computing company who requires high availability and a system that can handle high traffic and a complex multi datacenter infrastructure

WHY SEVERALNINES

The quality of support and metrics are really useful in displaying the performance of certain clusters to customers and to predict and prevent future issues

BACKGROUND

Mediacloud manages the data centers of the Mediapro group, one of the largest multimedia communications groups in Spain consisting of 150 subsidiaries. The Mediapro Group provides multimedia and broadcasting services to customers such as FC Barcelona, Real Madrid C.F., Valencia CF, LFP, Manchester City, F1, and other high-profile brands to name but a few.

Mediacloud was founded in 2012 and focuses on cloud solutions, continuous data protection, and various information and communications technology services (hosting, IaaS, and PaaS) worldwide. The company has offices in Madrid, Lisbon, Paris, Miami, Buenos Aires, and Dubai.

Its aim is to provide high availability (HA) to content in multimedia environments, audiovisual broadcasting, and enterprise environments. The industries that it serves are laden with data and therefore need extensive experience managing the infrastructure of data processing centers, telecommunications networks, and information flow management of large volumes of data.

CHALLENGE

Mediapro and Mediacloud provide multi-media and broadcasting services for some of the world's largest football clubs and other organizations with massive, global digital footprints. Scalability is mission-critical. And when running entire infrastructures in the cloud, designing for failure is key.

The most challenging issue then is to maintain the consistency of the databases, especially as data is spread across multiple servers or even multiple data centers. Anyone of these servers or the network connectivity to a data center could go down at any time. For critical environments, however, the infrastructure needs to keep running no

matter what. Any disruption in service has serious consequences for organizations with such a significant digital presence and vast followings.

The need arises then to bring simplicity to such complex environments. It is crucial for instance for the operations teams in charge to understand if and when something is going wrong, and have the ability to quickly troubleshoot anomalies and resolve issues.

The most challenging issue Mediacloud had to deal with was providing a highly available MySQL database solution to its customers with large cloud environments, which could securely store and share content. It was essential that Mediacloud provided enterprise-grade HA solutions to ensure cloud operations are running at optimum levels.

With over 150 organizations trusting Mediacloud to provide HA solutions to their cloud deployments, it was important for the ops team to be efficient. With the number of servers to be managed and monitored, the team could not afford to do things manually. Therefore, deployment and operational procedures had to be automated in a reliable way.

> *Our customers' content matters a great deal to us. These database challenges had a positive impact because it increased the availability of our customers' applications. Therefore, their confi dence in our solutions increased too, contributing to the build-up of their loyalty. These customers became use cases for the rest of our clients.*

Xavi Morrus, CMO & Partner Relations Manager

SOLUTION

The Mediacloud team investigated and looked for different high availability alternatives in the MySQL ecosystem, such as MySQL HA solutions from Oracle like MySQL (NDB) Cluster or even standard replication. These were tried and tested, but none satisfied the needs of Mediacloud, because they were not able to read and write on all MySQL nodes, which is a critical component; and they would not be appropriate in multi-datacenter setups.

MySQL Cluster, for instance, was not easy to distribute across data centers, mainly because of its synchronous replication protocol. Also, customer applications would have to be converted from InnoDB to NDB. This would mean that onboarding a customer would require migration, which would take time, create extra development and test/QA work, and incur extra costs. This would not be efficient when onboarding new customers.

In a cloud environment, it would also be problematic to handle master-slave setups. Especially when reconfiguring topologies in case of failures or maintenance activities. Applications need to be aware of these changes, so they send database changes to the correct server.

Eventually, Galera Cluster managed by Severalnines' ClusterControl was identified as a preferred choice, as it provided a multi-master approach and because of its accuracy in management and monitoring of the databases.

Database instances could be spread across multiple data centers, with the consistency of data preserved. ClusterControl provided a single view of all systems, together with load balancers. Any failures would be automatically handled, and ClusterControl would automatically restart or rebuild instances. Applications were shielded from failures or topology changes, so it simplified the application architecture.

The whole database platform could be automated by ClusterControl, from deployment, health checks, performance advisors, failure recovery, backups, patches and scaling, and more. After further inquiries, Mediacloud chose

Severalnines' ClusterControl due to its performance within the critical environments most incumbent applications have.

The setup is coupled with different application servers such as Apache HTTPS/Tomcat. Also, as a cloud infrastructure supplier, all of Mediacloud's MySQL Galera ClusterControl servers are virtualized in VMWare, or Hyper-V with RedHat and CentOS. All these capabilities are hosted on Mediacloud's two data centers based in Madrid and Barcelona.

As Severalnines ClusterControl was found to be the best high availability solution for MySQL with easy implementation and a user-friendly graphical interface, ClusterControl for Galera was used on different projects as the core database management platform.

Xavi Morrus, CMO & Partner Relationship Manager at MediaCloud said, "ClusterControl has allowed us to have a real active-active MySQL HA solution and gave us confidence because it works all the time."

OUTCOME

Mediacloud and its customers have benefitted greatly from ClusterControl. The quality of support and metrics employees can obtain from the ClusterControl platform are really useful in displaying the performance of certain clusters to customers and to predict and prevent future issues.

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With the Galera Cluster well configured by Severalnines, Mediacloud has seen efficiency increase as well as the high availability of the systems. As a result, the business's prospects have significantly improved. Mediacloud can now continuously cover a broader target market. Morrus added, "With quick installation, ease of use, great support, stable deployments, and a scalable architecture, ClusterControl is just the solution we were looking for to provide a strong MySQL HA platform to our customers."

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