

ACCELERATING DEPLOYMENT OF GALERA CLUSTER ON RACKSPACE CLOUD

PROMOHT

- Industry: Mobile Telecom
- Location: United Kingdom
- Data Center: Rackspace Cloud

USE CASE

Deploying MySQL Galera Cluster onto the Rackspace Cloud

WHY SEVERALNINES

Set of tools that accelerated installation, testing and production-readiness of Galera Cluster

INTRODUCTION

Promoht is a mobile service which stimulates purchase behaviour by engaging consumers with compelling, 'intelligently' delivered content. The team has developed a mobile advertising and campaign management solution for advertisers, publishers and mobile network operators. The solution allows a campaign manager to not only create mobile campaigns that have a rich user experience, but also to target campaigns based on the time of day, customer location or profile.

The company runs the solution for the Vodafone Group, one of the world's largest communications companies by revenue and subscribers.

CHALLENGE

Promoht needed a robust and resilient database platform to run the Promoht product for the Vodafone Group. As one would expect from a solution servicing a

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major international operator, high availability was a key requirement. The database had to be performant enough to handle realtime analytics and reporting on the operational database.

The company also wanted to take advantage of the cost savings that the Cloud offered, in contrast with previous database deployments where they used dedicated hardware and high-end SAN storage solutions. Cloud servers had already been used to run front-end web servers, and the team already had experienced the transient nature of Cloud servers.

"When running on virtual cloud instances, we had to be prepared to lose an instance at any time", says Conor

Owens, Head of Operations at Promoht. "Achieving it at the web layer was relatively straightforward, because of the stateless nature of the web servers. However, dealing with cloud server Roulette would be more challenging at the database layer."

The database solution needed to cope with the loss of an instance without losing any data or without interruption to the service. Finally, for a young startup running at full speed, the team could not afford a solution that would take a long time to implement, or that needed dedicated/specialized staff to manage.

SOLUTION

The team ran a 3-month evaluation of different high availability database solutions, including:

- Amazon RDS with multi-AZ (Availability Zone) replication
- MySQL with regular master slave replication
- MySQL Cluster
- MySQL Galera Cluster

Galera was chosen as it did not have the traditional problems associated with MySQL Replication – including slave lag and slave promotion. Selecting Galera over MySQL Cluster meant that the DB schemas could stay almost exactly the same as with a standalone MySQL.

Using the Severalnines Configurator and CMON, the team were able to quickly set up a first test cluster. This was followed by setting up HAProxy for load-balancing, and scripts for load testing, failure tests and backup & restore processes.

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All rights reserved. 4 "In our testing the resiliency and the node recovery and resyncing all worked perfectly so this gives great peace of mind. Previously any database maintenance required downtime – now it can be done server by server with the service still running. Without the Severalnines tools, it would have taken a lot longer to get to a working configuration, so this was very valuable to us.", says Conor Owens

"The Severalnines configurator proved an **excellent way** for us to experiment with and deploy a Galera solution. Once deployed **the support** we received from Severalnines was **very knowledgeable and prompt**. This enabled us to progress very swiftly from initial selection of Galera through testing and then to a **production instance**."

Conor Owens, Head of Operations

The image shows a screenshot of the ClusterControl dashboard. The main heading is "ClusterControl" with the tagline "The Single Console for Your Entire Database Infrastructure". Below this, there are four circular icons representing different functions: "Deploy" (a blue circle with a white arrow pointing up and down), "Monitor" (a blue circle with a white monitor icon), "Manage" (a blue circle with a white gear icon), and "Scale" (a blue circle with a white plus sign and a square icon). The background of the dashboard shows a "Cluster Load" graph with a y-axis from 0 to 100 and a line graph showing fluctuations. There are also various tabs and settings visible at the top of the dashboard.