Sicredi embraces infrastructure-as-code with Charmed OpenStack

About Sicredi

- One of Brazil's largest cooperative financial institutions, with over 7 million members
- Present in 26 Brazilian states and Federal Districts (Brasília)
- Operates more than 2,500 branches, employing over 40,000 people

Highlights

- Sicredi chose Charmed OpenStack as the foundation for its new infrastructure-as-code strategy
- 400% increase in the number of parallel jobs thanks to infrastructure autoscaling
- Charmed OpenStack is 2-3x more cost-efficient than public clouds

Traditional virtualisation platforms cannot deliver the agility that a modern financial institution needs to stay ahead.

With rising competition from fintech companies, Sicredi decided to transform its infrastructure strategy to maintain its competitive edge. The company wanted to optimise its resource utilisation and enable its developers to work more efficiently so that it could accelerate time-to-market for its innovative new products.

To make this vision a reality, Sicredi decided to migrate away from its traditional virtualisation platform and embrace an infrastructure-as-code approach on Charmed OpenStack. The new OpenStack environment is proving to be up to three times more cost-effective than public clouds – and it's only getting better.

Challenge

As they face growing competition from a rapidly increasing number of new, nimble fintech companies, leading financial institutions now find themselves under immense pressure to become more agile and modernise their systems with new technologies.

To meet these new demands on the industry, Sicredi aimed to empower its 200 developer teams with a new infrastructure-as-code strategy. By delivering an unprecedented degree of automation and placing a greater emphasis on cloud-native applications, the company aimed to give its developers the flexibility and tools to better focus on their most valuable tasks.

Cléber Alexandre Agazzi, Head of Infrastructure and IT Operations at Sicredi, explains: "Teams were spending too much time building and managing infrastructure. It was negatively impacting our developers and delaying the time-to-market of new products".

Some internal teams were already using Terraform to seamlessly provision infrastructure on public clouds, and Sicredi set its sights on achieving the same experience with on-premises infrastructure. However, the leading virtualisation suite that the organisation relied on was not up to the task. To support the new infrastructure-as-code paradigm, Sicredi needed an infrastructure platform that could be managed via code using APIs.

Solution

Sicredi began looking for a private cloud platform that was scalable, mature, stable and manageable through APIs. At the same time, the solution needed to be cost-effective and, ideally, open source.

The company quickly determined that OpenStack was the perfect platform. Not just a mature open source solution, but one of the largest open source projects in the world, OpenStack satisfied all of Sicredi's criteria.

The next step was to find an enterprise-ready OpenStack distribution that offered the support and security necessary for the company's mission-critical workloads. Sicredi evaluated a variety of options, and Canonical OpenStack emerged as the clear winner.

"We chose Canonical OpenStack due to its attractive cost and support model", recalls Marco Palma, IT Infrastructure Manager at Sicredi. "Besides meeting all our technical requirements, we also felt that Canonical had the most skilled technical team of all the vendors we talked to. We came to this conclusion based on the depth of our own conversations and feedback from other Canonical customers".

As part of its OpenStack exploration process, Sicredi's internal team spent several months building a non-production private cloud. But with the help of Canonical, it was able to design and deploy its production cloud in just one month. And now, the entire OpenStack estate benefits from Canonical's security maintenance and 24/7 enterprise support.

Results

Charmed OpenStack gives Sicredi the tools it needs to manage infrastructure as code, unlocking new levels of automation and integration with tools like Terraform, Ansible and Docker.

Autoscaling is proving invaluable for driving agility and efficiency, enabling Sicredi to dynamically spin up and decommission virtual machines (VMs) on demand in response to its developers' requirements.

"Over 1500 VMs are created and destroyed daily", confirms André Hamerski, Infrastructure Coordinator at Sicredi. "Previously, we could only run a limited number of pre-production tests simultaneously in our cluster jobs, and it couldn't be increased as it was a static environment. Now that we can create clusters on demand with Charmed OpenStack and make more efficient use of resources, we've increased the number of parallel jobs by more than 400%".

The new infrastructure is transforming Sicredi's Kubernetes strategy. In the past, Sicredi managed its Kubernetes clusters manually. It took several hours to add a node and days to upgrade or patch the clusters. With Charmed OpenStack, it has been able to integrate with the Kubernetes Cluster API and implement autoscaling for nodes – no manual intervention required.

Sicredi's team has also been able to automate image creation. Instead of spending an entire day manually upgrading software in a static environment, they can simply run the pipeline to create a new image and the next execution will take place in the upgraded environment automatically.

Sicredi's 200 developer teams now enjoy the same agility, flexibility and self-service autonomy in the private cloud that they previously only had in public clouds. The breadth of automation made possible by Charmed OpenStack means that users spend less time managing infrastructure and waiting for jobs to be executed and more time creating value for the organisation.

Cléber Alexandre Agazzi concludes: "We recently reassessed our cloud strategy, and one of the parameters was cost-efficiency. We observed that OpenStack is helping us to achieve two-to-three times more cost-efficiency than using public clouds, and the forecast is that efficiency will grow as the cloud grows".

Canonical