callibrity

How A Nonprofit Embraced DevOps
To Establish A National Presence

INDUSTRY: NON-PROFIT · HEADQUARTERS: CINCINNATI

When thinking of how organizations implement DevOps, a church is generally not the first prospect that comes to mind. Callibrity worked with Crossroads, a Cincinnati based church organization, to help establish a national presence. Crossroads' digital product team worked alongside Callibrity to create software solutions that can support Crossroads' large and expanding user base. With the support of Callibrity, Crossroads embraced modern, scalable approaches such as DevOps to improve the flow of work from ideation to production code.

ABOUT CROSSROADS

Crossroads was a growing church in the greater Cincinnati area with 10+ physical locations. Although the rate of growth was promising, Crossroads aimed to cement a national presence. The staff at Crossroads were open-minded and established a dynamic, risk-taking, fail-fast culture to fuel their growth; they were already using technology to streamline administrative efforts like camp registration, volunteer events and signing up for other events. Additionally, Crossroads had a dynamic website to produce personalized, curated content for its users to aid them on their spiritual journeys. Their prior use of technology to aid with administrative efforts made them much more open to Callibrity's consultation.

CHALLENGE

There were several main challenges Callibrity aimed to address with Crossroads. First, there was instability of the production environment associated with deployments and aging infrastructure. Furthermore, there was concern about the ability of software to scale to meet national demand as the church grew. There was also a desire to improve software practices like the pace of development, production deployment frequency, and downtime required for deployment. Lastly, security is crucial in today's cloud driven world where compromised systems can result in loss of trust from your community and in some cases fraudulent charges. Callibrity was asked to design and implement a solution to improve the security of secrets within Crossroads.

crossroads
church

SOLUTION

The approach to solving the main challenges was multi-pronged and included the following methods. First, there was a shift in software development philosophy and an embrace of DevOps principles. Teams began to own their software products through the entire software delivery lifecycle, including while it was running in production. This created a culture of ownership that leads to higher quality code and more investment in monitoring how a team's application was performing in a production environment. If the team now had to support their product in production, they had a stronger incentive to think about how they would handle/prevent production outages.

Next, the pace of software delivery was addressed by evaluating the software development and delivery process. Software deployments were moved from high stress, off-hours, downtime-required process to low stress, regular hours, zero downtime process. This was accomplished through a microservices approach to architecture which eliminated costly dependencies.

Callibrity encouraged Crossroads to consider leveraging the cloud (Azure), containers, kubernetes, automated testing, and continuous integration and deployment pipelines to address the production instability, scalability, and availability concerns.

To improve the security at Crossroads, Hashicorp Vault was utilized to store sensitive information in an encrypted fashion with strict access controls.

Crossroads had purchased a 3rd party monitoring and alerting tool, but had no subject matter experts to help with implementation. Callibrity used its domain expertise for this product and helped Crossroads take advantage of its full capabilities.

RESULTS

The shift in culture to lifetime ownership of products lead to the reallocation of the production support team of 5 people to more business-critical projects, as they were no longer needed to put out fires. Employees were much happier to not have to work late nights every couple of weeks.

The agility of teams was improved by moving from a company-wide 2 week deploy cycle to a 'deploy at will'/continuous delivery model. Deploying code became a routine part of everyone's daily work, instead of specialized, high stakes, infrequent event.

Crossroads was able to deliver value to production multiple times a day instead of once every 2 weeks. Crossroads invested in infrastructure as code that allowed them to reprovision their entire production environment in 15 minutes, or stand up test environments as needed.

This greatly improved development speeds as teams no longer needed to wait for development environments. Azure cloud was used to shift all software to run in a highly available fashion, with the ability to scale up and down based on workload. This allowed Crossroads to be resilient in the face of unforeseen outages and avoid costly production downtime. Callibrity then designed and implemented a centralized logging solution that allowed increased visibility into production logs. This helped to improve the mean time to resolution for production issues.

The adoption of Hashicorp Vault lead to much-improved security processes and improved the onboarding and developer experience as all sensitive information was now centralized. Developers could start coding day one without needing to gather multiple secrets from multiple sources.

Crossroads was able to leverage the production monitoring tool more effectively, leading to higher visibility into production problems and allowing Crossroads to detect and fix issues before their users alerted them. Callibrity helped Crossroads move from a reactive posture to a proactive one; this was not only a tooling shift but a cultural shift as the process before was to wait for help desk tickets to be sent in before resolving production issues. This resulted in improved monitoring of software running in production and decreased mean time to resolution for production issues.

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Crossroads Church's Digital Product Team helped enable the rapid growth from a local church to a national church. Along with the great software development talent from our partnerships including Callibrity, we have been able to bring in top development talent to co-create an ecosystem of software solutions that enable millions of people to connect with Jesus & join the Crossroads team.

By embracing DevOps culture we have seen a significant increase in how quickly we can deliver value; from ideation all the way to deploying code to production. Callibrity's consultants have embraced DevOps culture and helped our organization transform our culture, process, and tools.

As an Engineering Manager, I remove barriers for our engineers. Many of the barriers we have faced are due to our rapid growth. Callibrity has provided key talent to help me find solutions to overcome those barriers. With Callibrity's help, our team has embraced modern, scalable approaches such as Agile, DevOps, Product Thinking and Cloud-Native technologies.

> DAVE MIYAMASU, DIGITAL PRODUCT MANAGER

ABOUT CALLIBRITY

Callibrity is a developer owned and managed custom software development firm that is dedicated to providing clients with quality software, improved coding practices, and modernized tech stacks. We provide subject matter expertise and solve complex problems with simple solutions for our clients, ranging from midsize to Fortune 100 companies.

WHAT'S IN A NAME?

The name Callibrity comes from two different roots, calli, and caliber. Calli means 'beautiful' in Greek, as in Calligraphy - beautiful writing. Caliber means 'a degree of merit or excellence.' We strive to do beautiful work with a high degree of merit and excellence.

STRATEGIES:
- > Agile
- > Cloud
- > DevOps
- > IoT
- > Test Automation
- > Machine Learning

SERVICES:
- > Custom Software Development
- > Digital Transformation
- > Tech Audit
- > Training

INDUSTRIES:
- > eCommerce
- > Financial Services
- > Insurance
- > Retail
- > Technology

WE ARE ARTISTS.
WE ARE ENGINEERS.
WE ARE INNOVATORS.
WE ARE CALLIBRITY.

Learn more about Callibrity
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