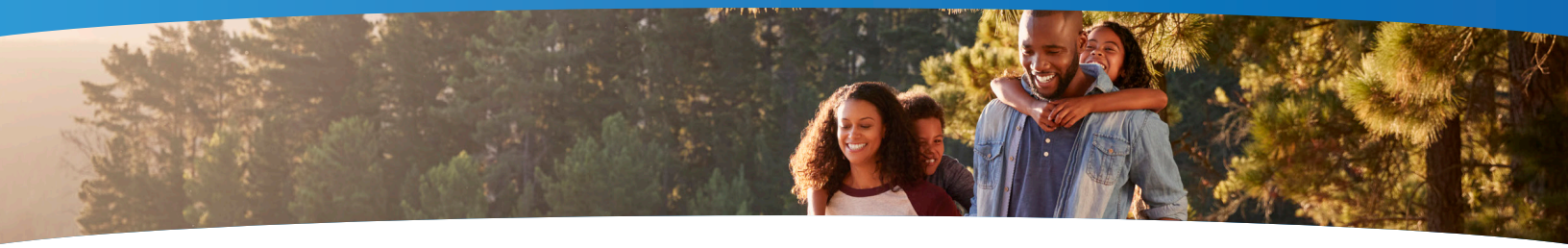
CloudBees

Case Study



Industry:
Healthcare

Geography:
North America

Summary:
Fortune 100 healthcare services company improved the efficiency and scalability of software development with DevOps powered by CloudBees Core

Challenge:
Ramp up software development efforts cost-effectively, improve quality and compliance, and increase developer productivity

Solution:
Adopted CloudBees Core to support the implementation of CI and CD process automation and manage pipelines more efficiently

Results:
- Increased developer efficiency
- Avoided cost of adding staff
- Enabled building of more applications internally
- Increased velocity
- Enabled self-service enhancement of environments
- Enabled faster reaction to changing customer demands
- Improved application security and compliance

Product:
- CloudBees Core
- CloudBees Professional Services

Fortune 100 Healthcare Services Company Innovates Faster with DevOps

Providing affordable healthcare is one of the biggest challenges facing the U.S. today, this healthcare services company has emerged as a leader in helping under-insured and uninsured individuals get access to high-quality health services. The company has been growing rapidly in recent years, offering an expanding portfolio of services to government-sponsored and commercial healthcare programs.

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>
> Project Lead Systems Engineer

Technology is at the core of what they do. The company is constantly developing sophisticated software that connects people to healthcare services, processes claims and constantly communicates with patients to improve health outcomes. Competition is stiff, margins are tight and compliance requirements are high, so the company relies on technology advances to capture efficiencies and maintain a loyal following of customers. Consequently, efficient and innovative software development has become increasingly critical to the ongoing success of this fast-growing enterprise.

Challenge

Scale Software Development to Match Business Growth

For years, this healthcare services company used to purchase most of its software from outside vendors. But when the company recently tried to scale out one if it's most valuable customer-facing applications the vendor announced that it couldn't grow the capabilities of the app any further.

That's when this company decided to switch to building most of its applications in-house. It was a smart decision, but one that would put more pressure on the company's development organization, which had been relying on a patchwork of open source Jenkins platforms and other methods to build many of its applications.

"At the time, we only had a few masters and hundreds of teams using them," says the project lead systems engineer. "We had to manage the CI/CD (continuous integration/continuous delivery) process for every application team in the company." It's no surprise that the infrastructure and middleware team, which had a long list of other tasks on its plate, struggled to keep up.

"Application development teams were constantly coming to us with simple changes to their CI/CD workflows and pipelines, and it would take three or four weeks to do them," he says. Basic modifications like changing the path to deploy applications to a different server could take a month. Increasingly teams voiced their frustration, saying they wanted more control of their own development environments. "They wanted the ability to spin up new masters dynamically, make changes to them and install tools and plugins as needed," he says. "They didn't want to wait on another team."

When development teams got tired of waiting, some of them "went rogue" and set up their own CI/CD engines using a mix of open source Jenkins setups. This came with a downside, though: the various open source environments weren't being properly monitored or updated, creating quality control, security and compliance risks.

Solution

Use CloudBees Core to Drive High-Efficiency DevOps Program

Luckily, the project lead systems engineer discovered a diamond in the rough: an unused CloudBees Core subscription that this company had previously purchased. The find gave a boost to their nascent DevOps program, enabling the company to scale its development efforts to meet the growing demand for internally built applications. He promptly took over the CloudBees resource and made it available to all of the development teams.

This company's larger applications teams gladly seized on the opportunity. "I was able to give them a CloudBees Core instance and they've been able to move forward without any roadblocks or waiting from somebody in a central team."

To date, the development teams have spun up more than 50 Jenkins masters, compared to just three or four before. The project lead systems engineer says most of the larger application teams have now embraced the DevOps model. "I never have to hear from some of those teams anymore because they're self-sufficient now," he says.

Although this company started with the on-premise version of CloudBees Core, it soon transitioned to the cloud-based version, which made it cost-effective to spin up masters on demand and gave each team the freedom to customize their development environments as needed. "Having this user-based model means we're not limited to certain tools," he says. "For example, if they want to move to Kubernetes right now, they can."

Some challenges remain, though, especially for the infrastructure teams, many of which still follow the older design-build-run model. "A lot of my fellow infrastructure staff don't fully understand the principles of CI/CD, so their code is very manual, and testing is limited," he says. That can be a potentially risky situation, he explains, since code changes to infrastructure software can impact all of this healthcare service company's applications companywide. "That's why I'm trying to get the infrastructure teams to start using CloudBees too."

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> Project Lead Systems Engineer

Thanks to timely engagements with CloudBees professional services and support teams, this company quickly learned how to get the most out of its move to DevOps. "Professional services got us up and running faster," he says. "CloudBees came onsite and showed us how to work through challenges that would have taken me weeks to figure out." CloudBees professionals also demonstrated the value of CloudBees DevOptics, a product that can help this company diagnose bottlenecks, fine-tune team practices and maintain its CI/CD infrastructure.

"The CloudBees professional services organization is one of the best I've worked with," he says. "They've stayed with us from the start and provided solid guidance – about the tools, DevOps best practices and how to mature that model." Since everyone in the organization has access to CloudBees services and support – not just a small select group – the company

can scale its CI/CD initiative even faster. “It makes my team feel like more than one person,” he says. “That’s been a huge benefit to us.”

Looking ahead, the project lead systems engineer is eager to explore the potential of the next release of CloudBees Core, which will feature new security and risk management capabilities that will help companies like this one meet tightening industry regulations, including Sarbanes-Oxley Act (SOX) rules and other requirements for protecting patient and customer data. “I want to get us as close to the bleeding edge as possible, where we’re constantly being upgraded and updated, and people can use the newest functionality as soon as it comes out,” says the project lead systems engineer.

Results

Greater efficiency.

“With CloudBees, I’ve been able to support 50 different application teams with just me, which is huge,” says the project lead systems engineer.

“When app teams scaled their applications and wanted to deploy to a third server, it would often take a month to add that path,” he says. “Now with CloudBees Core, they can go in and add the path, submit it and have it done in minutes instead of months.”

More cost effective.

“If we had tried to manage 50 teams using the open source version of Jenkins, it would have been extremely costly. We’d easily need five to 10 more engineers to manage the scale we’re doing today, and the security model would have been a nightmare.”

Better scalability.

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>
> Project Lead Systems Engineer

Faster time to market.

“CloudBees has definitely helped increase the velocity of our application development teams,” he says.

Streamlined self-service.

“Although some of the infrastructure teams are still following a design-build-run model, most of the bigger application teams have embraced the DevOps model and they’re very self-sufficient,” he says. “I never hear from some of those teams anymore because they’re self-sufficient now.”

“Teams kept telling us, ‘We want control of our master. We want to be able to install plugins when we want. We want to be able to make changes when we want.’ Now with CloudBees Core, they can,” he says.

More agility.

“With CloudBees Core, we’re now using agile development principles that allow teams to react quickly and get new features out there fast,” he says. “Having this user-based model means we’re not limited to certain tools. If we want to move to Kubernetes right now, we can.”

Improved security and compliance.

“We are a highly-regulated company and have a lot of industry security and compliance requirements,” he says. “I’ve been telling the app teams that they need to make sure they conform with SOX, and CloudBees Core will help with that.”

CloudBees Core is built on top of Jenkins, an independent community project. Read more about Jenkins at: www.cloudbees.com/jenkins/about

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