OpsMx

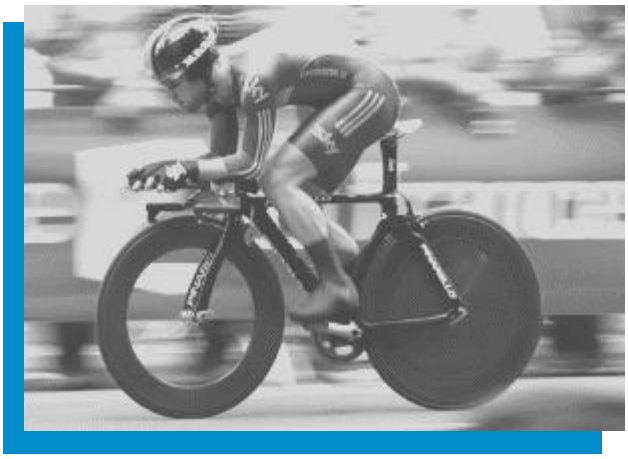
Software Delivery too SLOW?

OpsMx can help you Streamline

Software Delivery Is Too Slow

SPEED

The number one reason that OpsMx customers adopt continuous delivery is to reduce the amount of time from "code complete" to "code in production."



Faster Releases Increase Competitive Advantage

There are two well-known benefits to delivering software quickly: faster responsiveness to customer requirements, and faster response to errors in production. Both contribute to higher customer satisfaction and lower customer churn.

At the same time, organizations have traditionally moved through the deployment process slowly for good reason - how should they minimize the risk that a new update has a significant error? How do they ensure that all policies have been followed?

We have found that organizations have similar problems that result in a slow delivery process. The following four problems are the top priorities for our customers.

Problem

01 Slow manual process

02 Lengthy release verification

03 Difficult policy enforcement

04 Slow approvals

01 Slow manual process

One big challenge that our customers faced was a manual or partially-automated deployment process. Most organizations still rely on a series of manual steps performed by a release team with some scripting that automates the most repetitive tasks.

Over time, teams build more and more scripts, leading to a "scripting nightmare," with complex inter-connected scripts that are difficult to understand and maintain, especially as the complexity of the applications and number of deployment targets increase.

02 Lengthy release verification

Even when an update process is mostly automated, manual steps remain because some activities require the "human touch" - intelligence.

This is especially true when evaluating whether an update should move to the next stage of a delivery pipeline. Teams perform a series of tests that aim to decrease the risk of any error making it to production.

The tests produce mountains of data - metrics, logs and test results - that must be evaluated. The data is collected from many tools, collated, filtered, analyzed and compared to prior releases. Sometimes the release decision is clear - still, the process must be run on all updates, because faulty changes cause production issues.

For high-stakes applications, this process is so critical that our customers usually give verification responsibility to senior members of the team, whose time is especially valuable.

03 Difficult policy enforcement

All organizations have deployment policies that must be followed. These policies are applied at different places in the deployment pipeline and are usually done manually, which slows you down.

Further, because policies change often, organizations must ensure that the most recent policies are followed.

04 Slow approvals

Once a change is validated, moving to the next stage must be formally approved. This handoff introduces another delay, even if the decision itself is clear. When the decision is unclear, things really slow down.

Competing agendas must be balanced. How important is the change? Have all policies been applied? Are any remaining errors serious? Any security implications? What is the potential impact to the business?

Leading Financial SaaS Provider

This customer provides the leading collaboration platform for financial service companies. The industry changes rapidly, and fast time-to-market for new enhancements is a competitive requirement.

The Challenge

Complex environment and process leads to slow delivery

This customer's SaaS offering is comprised of multiple applications. The technical environment is complex and includes monolithic applications and microservices.

The testing, staging and production environments are maintained by a group of SREs.

Because the environments and processes were so intricate, promoting changes was complex - so complex that SREs were required to manually promote any update through the delivery process.

This meant that developers had to wait for SREs to become available and then to approve the change before deploying it. When any issue was detected, the whole process had to be re-examined to determine whether to promote the update. Policy and security checks were done manually, which slowed the process.

The Result

From 2 updates per week to 50 every day

OpsMx Enterprise for Spinnaker automated the entire process, quickly moving updates into production.

The entire development team now uses automated pipelines that run completely independently from the SRE team, and production deployments have skyrocketed.

The team went from 2 updates per week to 50 updates *per day* - a 100x increase in deployments.

At the same time, production reliability has increased, both because the automated process reduces errors and because policy enforcement is done automatically, further speeding the process.

Overall, the change in software delivery practice has generally been credited internally with an acceleration in new customer acquisition.

OpsMx Customers Unlock Speed

A 150-Year-Old Banking Institution

The customer is a multinational banking and financial services company that serves their customers online and in person across 22 countries. Consumers are famously fickle with banks; speed of innovation is critical for success.

SPEED

The Challenge

- Remove downtime for customer facing applications
- Adopt continuous delivery for improved competitiveness

This large multinational bank has a complex technology infrastructure, including many older monolithic applications that service their online and mobile services. Like many banks, they continually compete for every one of their customers, as switching costs are low, and consumer expectations are high.

This bank needed to change their process of infrequent "big bang" releases that caused major planned application outages. They wanted to provide more frequent updates, without any planned downtime.

They decided to utilize Red Hat OpenShift, in an air gapped environment, as their deployment platform. Continuous delivery was the final piece of the puzzle that would enable them to maintain their market-leading low customer churn.

One of their significant challenges was that they did not have expertise in the tools or processes involved. They needed a great CD platform; they also needed a guide to help them modernize their approach.

The Result

- Run in an air gapped environment
- Self-service onboarding for new applications
- HA environment for scalability and performance of Spinnaker itself

Using OpsMx Enterprise for Spinnaker, the company went from "big bang" releases that happened once a quarter to being able to complete an update in just a few hours. They are now able to deploy updates on-demand, with no customer downtime.

With OpsMx Enterprise for Spinnaker they were able to deploy more than 120 pipelines. The new CD solution enables the rapid introduction of unique services that are available across the bank's 22 different countries, improving profitability and customer satisfaction.

A Leading Online Destination Website

This customer provides a well-known site, serving more than 200M unique monthly users. As in many internet-based businesses, competition is high and switching costs are low; fast response to customer input is critical.

The Challenge

- Increase speed of deployments
- Decrease errors in production

This customer needed to defend its leadership position against competitors. They already had a semi-automated deployment process and were delivering approximately 100 changes into production each month. Still, they needed to go more quickly.

After investigating their pipelines, they determined that their update verification process was a bottleneck. The verification process was critical to them, as production reliability is a make-or-break aspect of online businesses. They could not take chances when moving updates to production, so they assigned had three engineers to verify that an update was ok to move to production.

This manual inspection and approval process took approximately an hour, since the engineers needed to analyze a mountain of data from their hundreds of thousands of concurrent users. Thousands of lines of logs and hundreds of metrics had to be considered for every update.

Essentially, this company wanted to replicate the knowledge of the senior engineers and automate the verification process to improve speed. OpsMx Autopilot's ML-based system was a perfect fit.

The Result

10X increase in release velocity

After implementing Autopilot to increase verification speed, release cadence skyrocketed, going from 100 application updates per month to more than 1000. Accuracy of the promotion decision also grew fewer errors are now pushed to production, and fewer false negatives stop good updates from moving ahead.

A Multinational Technology Conglomerate

This customer develops, manufactures and sells complete networking hardware, software and solutions. They pride themselves on innovation and so naturally they focus on speed in software delivery.

The Challenge

Adopt continuous delivery to increase release velocity

This large organization needed to modernize their application architecture to better serve their customers. They chose to move to a new microservices based architecture, based on Red Hat OpenShift. To be able to deliver updates quickly to the end user, the existing update process, which was based on a legacy tool, needed an overhaul.

The provisioning of test environments was an important part of the update process. Unfortunately, provisioning was being done manually, which led to updates that were unreliable and slower than desired. Correcting errors was slow and frustrating.

The customer chose OpsMx Enterprise for Spinnaker (OES) as the backbone of their new automated software delivery process.

The Result

A centralized software delivery service, used by nearly 2000 developers, helps deliver fast updates daily

OES fits perfectly into this architecture of monoliths and microservices. Releases that previously took a week or more are now automated and are deployed "on demand" - completing in minutes. Provisioning and de-provisioning of infrastructure, previously a slow and manual process, has been automated and included into all the relevant pipelines.

Over time, as the use of OES grew, it became a standard part of the "innovation framework" and now supports continuous delivery for nearly 2000 developers across all major geographies.

Release speed continues to be a major benefit; some of their crucial applications now receiving more than 20 updates per day.

A Leading Telecommunication Provider

This telecommunication company serves consumers and businesses. With the dramatic innovations in the telecom space, competition is high and continual innovation is vital.

The Challenge

Enable rapid updates on customer facing web applications

This telecommunications company depends on their "storefront" - their web site - to attract new customers and to swiftly service returning users.

Nimble and accurate website updates are crucial. The group responsible for maintaining and enhancing the key applications - billing, new customer sign ups, new package ordering, and others - previously used a complex set of scripts that extended their Continuous Integration (CI) tool, Bamboo CI from Atlassian. CI tools are a crucial part of the development tool chain, but they were never intended to deploy applications.

The previous collection of scripts, plug-ins, and the CI tool was fragile and included many manual steps. One of the most time-consuming steps was a required manual verification of each release.

The team chose OpsMx Enterprise for Spinnaker to modernize their software delivery. The process of bringing the system online and moving to a continuous delivery process took just 10 days, far exceeding even the most optimistic expectations.

The Result

Release speed increased by 99%

Release speed improved more than 99%; updates that previously took a week are now completed in 45 minutes. Superior automation reduces the number of manual steps and improves overall reliability.

The verification process is now also automated, with logs and metric analysis performed without human intervention.

OpsMx Enterprise for Spinnaker uses its built-in machine learning models to analyze mountains of data and assign a risk score to each update, so that the decision on whether to move it to production is clear.

OpsMx

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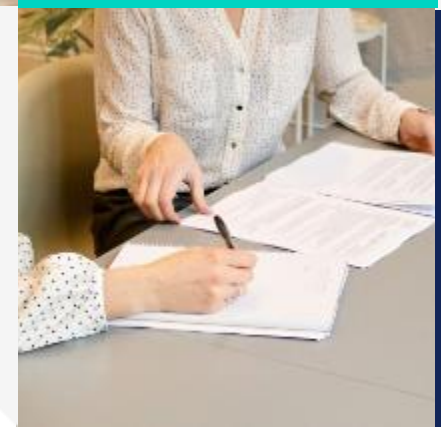

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