Taking Advantage of Pipeline Automation to Deliver Software Quickly and Reliably with the Help of Stelligent

Learn how a large insurance company worked with Stelligent to automate the deployment and configuration of AWS infrastructure and business-critical applications to shorten developer feedback loops and increase its speed-to-market.

Adapting Not Only to Survive But to Thrive

It's no secret the insurance industry has been slower to take advantage of cloud technology and automation strategies than many other sectors. But that doesn't mean customers seek to interact with an insurance company differently than other retailers and service providers. Just as individuals are increasingly using mobile phones to conduct banking transactions, they are also turning to digital channels to address everyday insurance needs quickly.

Legacy insurers realize the need to transform their approach to digitalization to relieve internal development constraints that limit a developer's ability to build, test, and deploy new products rapidly and provide customers the insurance experience they expect. Stelligent helped one such insurance company achieve faster feedback loops for developers by creating an automated Continuous Integration and Delivery (CI/CD) pipeline running on AWS.

Using Manual Development Processes at the Expense of Rapid Innovation

This particular insurance company provides private mortgage insurance to U.S.-based mortgage lenders; it protects lenders from default-related losses and enables homebuyers to purchase homes more quickly with down payments less than 20 percent. Before engaging with Stelligent, the company began heavily using AWS to support their suite of mortgage processing applications. However, the company's build and deployment processes included many manual steps, leading to inconsistent deployment and slow feedback loops on system changes for developers.

Lacking a consistent and automated build and deployment process led to slow release times and left a lot of the potential benefits of running on AWS unrealized. Stelligent began working side-by-side with the company's development teams to help the company speed up its feedback loops for developers and ensure consistency across deployments through automation.

Turning to Stelligent to Build an Automated CI/CD Pipeline on AWS

Stelligent, a Premier AWS Consulting Partner AWS DevOps and Financial Services Competency Partner, began by evaluating the steps of the build and development process the company already had automated, and manual steps in place. To develop the CI/CD pipeline on AWS, Stelligent took advantage of many AWS services, including:

AWS Services Used

- AWS CloudFormation
- Amazon Elastic Compute Cloud (Amazon EC2)
- Amazon Simple Storage Service (Amazon S3)
- AWS Identity and Access Management (IAM) and
- AWS Security Token Service (STS)
- Amazon DynamoDB
- Amazon Simple Workflow (SWF)

- <u>AWS CloudFormation</u> to script and provision AWS resources and node configuration in a consistent and repeatable fashion
- <u>Amazon Elastic Compute Cloud (Amazon EC2)</u> for on-demand compute power and scalability
- <u>Amazon Simple Storage Service (Amazon S3)</u> for large-scale data storing capabilities
- <u>AWS Identity and Access Management (IAM) and AWS Security Token Service (STS)</u> for secure controls over user access to AWS services and resources
- <u>Amazon DynamoDB</u> for access to a fast, flexible, and fully-managed NoSQL database
- <u>Amazon Simple Workflow (SWF)</u> to provision workflows and tasks in an automated and repeatable manner

The fully automated solution uses many open source tools including Checkstyle, Chef, Cobertura, AWS Software Development Kits (SDKs), Jenkins, Jenkins Job DSL, JUnit, Maven, Ruby, and Serverspec.

Every step of the build and deployment process, including the provisioning of AWS infrastructure, node configuration, and application code deployment are committed as code to a version-control repository. Every change to the system can be automatically built, analyzed, and tested. And the fully automated pipeline provides fast feedback by applying static analysis tooling and automated tests to each change.

The fully automated pipeline first provides fast feedback by applying static analysis tooling and automated tests to each change. The testing can measure the quality of the change and whether it will cause a regression in a matter of minutes. Second, the pipeline provides realistic feedback per commit. It builds a production-like environment from code in a repeatable, reproducible way and affords developers the opportunity to run automated tests against it in a relatively short amount of time.

Exceeding Customer Expectations by Moving Quickly

Taking advantage of a fully automated pipeline helps the company's developers gain the confidence they need to focus on adding and releasing new and improved software features to market rather than spending months pushing out one software release. This, in turn, enables the company to drive additional business value to its customers and respond rapidly to customer requests. Additionally, the company has realized significant cost savings through its newfound ability to experiment, test, and push code to production in a consistent and automated fashion. Instead of each launch becoming a substantial time investment, the deployment of software happens with the confident click of a button.

About Stelligent

Stelligent, a professional services and consulting firm with deep expertise in DevOps automation services on Amazon Web Services (AWS), enables security-conscious enterprises to focus on developing software users love by leveraging automation on AWS. Our goal is to work closely with customers to develop fundamentally secure infrastructure automation code, deployment pipelines, and feedback mechanisms for faster, more consistent software and infrastructure deployments. By embedding with our customer's engineering teams, we empower customers through education and knowledge transfer of our expertise while developing the automation to make them self-sufficient on AWS. As a Premier AWS Consulting Partner, AWS Public Sector Partner, and AWS DevOps and Financial Services Competency holder, we use our demonstrated expertise to help customers benefit from continuous AWS innovation.