Flux7

Case Study

Global Retailer Standardizes Hybrid Cloud with DevOps Dashboard

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Profile

With stores located all over the world, this household name retailer licenses, franchises and operates nearly 70,000 stores. According to the National Retail Federation, this retail chain is one of the Top 50 Global Retailers and a Top 50 US Retailer.

Challenge

As the company continues to expand geographically, it also seeks to expand its digital innovation and technology leadership. To do so, the company has embraced digital transformation, starting with a migration to the cloud. Doing so required the move of hundreds of applications from different on-premises platforms, a task that required the retailer's IT teams to consistently ensure that operational, security and regulatory standards were maintained.

Moreover, while the retailer's teams were implementing CI/CD, the projects were disjointed and inconsistent. The firm, therefore, sought to standardize its CI/CD efforts as well, looking to accelerate these efforts through DevOps automation.

Solution

To standardize and accelerate its development efforts on AWS, the retailer reached out to the DevOps consulting team at Flux7. Working together the teams identified a solution: a DevOps Dashboard that would automatically apply the company's various standards as cloud infrastructure was deployed. And, to optimize its CI/CD practices, the company would use automated cloud-based continuous deployment and integration pipelines, application deployments on containers, and serverless applications.

The DevOps Dashboard

Flux7 built a modernized User Interface tool, called the DevOps Dashboard; it standardizes infrastructure creation and streamlines the process of developing applications on AWS. Developers can quickly start and/or continue development of their applications on AWS using the dashboard.

Case Study

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Developers simply enter their parameters into the UI and behind the scenes, the dashboard triggers pipelines to deploy infrastructure, connects to a repository, deploys code and sets up the environment for them. Sample parameters include details like Task Definition, Minimum and Maximum, Instance Type, the ability to create or use an existing repository like GitLab or Azure DevOps as well as the option to select a data store component such as No SQL or RDS datastores when provisioning infrastructure.

The DevOps Dashboard also features:

- Infrastructure provisioning defined and implemented as code
- The ability to create ECS, EKS, and Serverless infrastructure in AWS
- Jenkins automation to provision infrastructure and deploy sample apps to new and/or existing repositories
- The ability to create a repository or use an existing one and implement a Webhook for continuous deployment
- A standard repository structure
- The ability to automatically update/push the code of new sample applications to the appropriate environment (Dev/QA/Production once placed in the repository.

The Flux7 team, working with its Development counterparts, started the retailer off with a set of sample applications that developers can modify for any specific requirements they might have, serving as yet another means to quickly deploy to AWS.

Serverless CI/CD Pipelines on Azure and AWS

To address CI/CD inconsistencies, Flux7 helped the organization create a CI/CD tool interface and pipelines for its hybrid cloud deployments. The tool facilitated the build of custom pipelines for infrastructure provisioning, and application and service deployments. The pipelines were made as cloud agnostic as possible and supported rolling deployments. For example, through these pipelines, ECS and EKS infrastructure could be deployed to AWS in support of rolling deployments with the option to automatically scale up or scale down nodes in the cluster.

Case Study

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Benefits

Using the DevOps Dashboard allows developers to work on the code repository while their code or application is automatically deployed to the selected environment. This allows the engineer to focus only on editing applications rather than worrying about infrastructure standard compliance. The result of this advanced automation is that developers are able to create higher quality code faster, which means that they can quickly experiment and get winning ideas to market faster.

Moreover, the DevOps Dashboard has increased the retailer's development agility while simultaneously increasing its consistency and standardization. Standardization of cloud builds has, in turn, resulted in less risk, greater security, and compliance as code. According to the project manager, "Now we can create a new serverless project with a new repository and sample applications in different programming languages with a datastore all in less than fifteen minutes."

LEARN MORE ABOUT FLUX7

As DevOps and AWS experts, Flux7 offers a suite of solutions that help organizations design, build, own and manage IT modernization projects. Focused on architecting and optimizing their clients' AWS infrastructure and training internal IT teams to manage their own infrastructure, Flux7 solutions are rooted in DevOps best practices. Flux7 has delivered hundreds of agile, right-sized projects to satisfied customers across industries, creating a well-architected core from which these business can own and expand their IT modernization.

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