Case Study - DevOps Implementation for a Leading Financial Corporation

Our customer is one of the leading financial corporations offering a broad spectrum of financial products and services to consumers, small businesses, and commercial clients.

CHALLENGE:

The customer ecosystem contained multiple CI/CD pipelines that employed several software solutions, causing inconsistent results, variable costs, and no particular learning path for developers and operators. The leadership mandate was that the teams rationalize the CI/CD tools and standardize them across departments. The vision denoted that they would build a standard CI/CD pipeline, which would support a broader range of applications. Also, the project would help the business to obtain economies of scale that would lead to reduced software support costs and lower training expenses, along with more consistent, reliable, and secure deployments. Customer leadership challenged our team to complete the project in nine months.

Technical challenges included:

- Developing a pipeline that would be capable of deploying to the Amazon Web Services (AWS) Cloud
- Deploying a pipeline that would support a broad range of applications including restful API's, batch processing jobs, business applications, and reports.
- Utilizing full-scale automation that would include the provisioning of the infrastructure, code testing, and code deployment

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SOLUTION:

The Idexcel team worked with multiple customer development teams to determine their DevOps maturity level, to review the tools that they use for source code management, along with assisting in code testing, integration testing, and deployment. The team also classified various types of code that the team deployed and the frequency of those implementations.

Idexcel incorporated AWS solutions to support the DevOps pipeline:

- The pipeline creates Auto Scaling Groups (ASG) and associates an Elastic Load Balancer (ELB) with it.
- The Auto Scaling Group requests new Amazon Elastic Compute Clouds (Amazon EC2) and uses Elastic Load Balancers to ensure consistent performance across the Amazon EC2 servers.
- Network traffic flows through Amazon Route 53 to the ELB's; the whole stack is constructed in multiple regions for high availability and fault resiliency.
- Amazon Route 53 is associated with each of the ELBs in different regions.

Idexcel deployed CI/CD Pipeline tools on top of the AWS infrastructure:

- Enterprise GitHub was used for source code management.
- When pull requests are created, web hooks then ping the Jenkins job with the appropriate payload.
- The Jenkins job kicks off a series of groovy scripts which uses custom Ansible playbooks to install all the software and tools on the appropriate Amazon EC2s.
- The infrastructure itself is created using a combination of the AWS SDK and Terraform.
- The system supports multi-region deployment for fault tolerance and high availability.

BENEFITS:

The Idexcel team was able to complete the project in six months. The pipeline was built iteratively, prioritizing business critical components first; this assisted in developing features around use cases for each department. The final solution included a combination of AWS services, along with OpenSource and licensed software.

The overall software and infrastructure costs for the new pipeline were reduced by 15%. Because the CI/CD pipeline was standardized across departments, the customer was able to cut down on the number of labor hours devoted to learning the pipeline tools and individual team processes by 30%. Developers did not require additional training as they moved between departments.

After three months of using the pipeline, the teams were able to increase their monthly deployments by 50%, which allowed them to be more responsive to their customer's requirements.

OUR AWS COMPETENCIES

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PARTNER
Advanced Tier
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- DevOps Services Competency

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Find out how Idexcel solutions can help your business. Contact us today!

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