CASE STUDY: INCREASING DELIVERY SPEED WITH CLOUD DEVOPS

CLIENT OVERVIEW:

Southwestern based company that markets sports equipment and student achievement accessories, including spirit awards, class rings and jewelry, and yearbook products.

PROFILE:

LOCATION: Dallas. TX
EMPLOYEES: 9000
INDUSTRY: School Services and Recognition
SOLUTIONS: Cloud Services
GO LIVE DATE: June 2019

BACKGROUND:

Our client was facing Product Delivery challenges. Product deadlines were missed because build and deployment issues were creating bottlenecks for delivery. CleanSlate was engaged to address the issues by creating an automated Product Delivery.

CHALLENGE:

While the client had established some tools and Agile delivery practices, the delivery teams were not realizing the full potential that pipeline automation and Continuous Integration/Continuous Delivery (CI/CD) practices can provide. Some specific challenges were the following:

- Specific configuration was required for each application and environment. Variances and human intervention introduced errors.
- Standard application Build, Deploy, and Promotion flows had not been established, making automation difficult.
- Build and deployment processes lacked standard validation steps for code quality and deployment success.

Overall, the challenges created a significant hindrance to delivery and an overreliance on tribal knowledge and scarce resources.

CleanSlate was tasked to overhaul the CI/CD process to address these issues.

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SOLUTION:

CleanSlate introduced a modern, streamlined CI/CD process that aligned with the needs of the business:

- All applications were refactored to leverage configurable, lightweight, standardized Docker containers. The new design ensured the legacy applications hardcoded configurations were removed allowing portability from desktop to cloud.
- Build and Deploy processes were defined and integrated with appropriate tools. This included standard flows and nonstandard flows (such as "Hotfix").
- Automated build processes were created for each application type. The build processes introduced quality controls, including static code analysis for code quality and security compliance.
- Automated deployment processes were implemented for each application suite. This included post deployment validation, monitoring and alerts to ensure applications were deployed and functional.
- A self-service website was provided so development teams could launch code builds and deployments on demand and troubleshoot build issues.

> **"The entire implementation was built leveraging Jenkins to run within AWS. Additional CI/CD tools were migrated to AWS to centralize services and ensure high availability. The new container-based applications ran within AWS Elastic Container Service (ECS) which enabled the CI/CD process. All containers were registered with Elastic Container Registry (ECR) to make it easy for developers to store, manage, and deploy container images."**

RESULTS:

CleanSlate successfully implemented the new AWS enabled DevOps pipeline to provide the following benefits:

- The standard application container model allowed developers to run applications on their local systems and the cloud without concern for installing all of the needed dependencies. Deployment issues that stemmed from environment differences were virtually eliminated. As a result, developer ramp up time improved while also increasing productivity.
- The standardized and automated CI/CD processes made Build and Deployment status transparent. Metrics on productivity provided insight into continued process improvement.
- Automated deployment validation ensured issues with deployments were identified immediately.
- Self service provided development teams the means to build and deploy according to their schedule. With atonomy from infrastructure teams, deployments took minutes instead of waiting for hours and also ensured the infrastructure teams that the environments were protected from unauthorized activities.