A Government Agency: Accelerate Development with AWS DevOps

CAPABILITIES SHOWN

- Advisory Services
- Cloud Migration
- Digital Transformation
- Cloud Engineering
- Observability & Monitoring

ABOUT THE COMPANY

We are an ISO 9001:2008, 9001:27001, 20000-1:2018, CMMI Level 3, EDWOSB providing superior, affordable and innovative business management and information technology services to federal and private sector clients nation-wide. We specialize in Software Development, Business Intelligence (BI), Data Management, Data Governance, Cyber Security, Data Quality, Master Data Management, Advanced Data Analytics and Cloud Services.

13241 Woodland Park Rd. Suite 200, Herndon, VA 20171 +1-571-222-4646 info@navitastech.com

ABOUT THE CUSTOMER – A Government Agency

A Government agency faced challenges in keeping pace with the ever-growing demand for new features and functionalities for their software product. Their traditional development process was siloed, with development and operations teams working independently, leading to slow deployments and difficulty in troubleshooting issues.

CHALLENGES

- **Slow-Release Cycles:** Manual infrastructure provisioning and configuration resulted in lengthy deployment times, hindering the ability to deliver new features quickly.
- **Limited Scalability:** The existing infrastructure lacked the ability to scale up or down dynamically to meet fluctuating user demands.
- **Inefficient Troubleshooting:** Debugging issues across complex infrastructure was time-consuming and resource intensive.
- **Lack of Collaboration:** Disconnected development and operations teams hampered communication and hindered a cohesive development process.

SOLUTION

A Government agency adopted a DevOps approach that emphasized collaboration and automation. They utilized AWS CodeCommit for centralized code storage, enabling developers to work seamlessly on different parts of the codebase. AWS CodeBuild and CodePipeline automated the build, test, and deployment process, significantly reducing deployment times.

CloudFormation allowed for infrastructure provisioning as code, ensuring consistency and repeatability across environments. Containerization with EKS enabled efficient scaling and simplified application management. Finally, CloudWatch provided comprehensive monitoring and logging capabilities for proactive problem identification and resolution.

SERVICES USED

To address these challenges, A government agency implemented a comprehensive AWS DevOps solution that leveraged several key services:

- AWS CodeCommit: Securely store and manage code repositories for version control and collaboration between development teams.
- AWS CodeBuild: Build, test, and package code automatically, ensuring consistent and reliable application builds.
- AWS CodePipeline: Create and manage continuous integration and continuous delivery (CI/CD) pipelines for automated deployments.
- AWS CloudFormation: Manage and provision infrastructure as code (IaC) in a repeatable and consistent manner.
- Amazon Elastic Kubernetes Service (EKS): Deploy and manage containerized applications with high scalability and flexibility.
- Amazon CloudWatch: Monitor application performance and infrastructure health for proactive issue identification.

THE BENEFITS

By adopting AWS DevOps, A Government agency achieved significant improvements in their development and deployment processes:

- **Code Commit to Deployment Time:** Code commit to deployment time has reduced by 60% due to DevOPS implementation.
- **Deployment Success Rate:** Deployment success rate has increased by 90% due to automated deployments.
- **Infrastructure Provisioning Time:** Infrastructure Provisioning Time has reduced by more than 80% , with IaC implementations , the infrastructure on AWS was provisioned in days when compared to weeks onprem.
- **Faster Release Cycles:** Automated deployments through CI/CD pipelines drastically reduced time to market for new features. Sprint releases were possible post CI/CD implementation.
- **Enhanced Scalability:** The ability to scale cloud infrastructure dynamically allowed Company X to meet fluctuating user demands efficiently.
- **Improved Troubleshooting:** Centralized monitoring and logging facilitated faster issue identification and resolution.
- **Increased Collaboration:** DevOps practices fostered closer collaboration between development and operations teams, leading to a more efficient development process.

Conclusion

Agency's successful implementation of AWS DevOps demonstrates the transformative power of cloud-based development tools. By fostering automation, collaboration, and scalability, AWS DevOps enabled to deliver new features faster, improve operational efficiency, and achieve a competitive advantage in the marketplace.