



DevOps automation and process optimization for world's leading AD management company





Challenge:

- Complex .net framework application running for over 15 years containing all programming languages in the source code repository
- Hardcoded credentials like passwords, secret keys, DB connections also in the source code repository
- Faced issues with security attacks
- Build and deployment in manual mode making the process unreliable, error-prone and complicated
- Heavy time consumption in building and deploying the code
- Most configurations stored in the source code repository causing additional security risk

Solution:

- We created automated CI/CD pipelines for all environments, enabled one-click deployments and fixed security vulnerabilities.

About the Customer

Our client is the market leader in the premium broadcast and digital telecast industry. The 3 Bs that the company follows are Broader capabilities, Bigger insights and Better connections. It's a platform that ties everything from pitch to payment, digital ads to cash-in-advance together. They have been in the market for over 20 years with groundbreaking innovations in media operations. The organization manages about 89% of the US local TV broadcasters' revenue resulting in about \$37 billion of total AD revenue management annually. Our client has 6000+ stations network running on their platform. Moreover, they also have over 400+ million digital AD impressions generated monthly along with over 2 billion AD avails.

The Need

Our client has been in the business for over 20 years and their .net framework contained almost all programming language files in the source code repository. This also contained hardcoded credentials like passwords, secret keys, DB connections, etc. The customer had experienced security attacks as the system wasn't a 100% secured. The use of Team City and manual steps in the build and deployment steps make them complicated, unreliable, error-prone, time-consuming, and insecure. Moreover, nearly all configurations were stored within the source code making it additionally risky from the security perspective.



Results:

- Complex manual deployments replaced with one click auto deployments
- Application deployment time reduced from 4 hours to 10 minutes
- 2X increase in release frequency
- Zero deployment failures in production environment due to guided failure implementation
- Implemented industry best practices across development and workflow, resulting in a proper DevOps process and culture
- Implementation of automated CI/CD helped reduce manual efforts and increase productivity

Aspire's Solution

Our experts used Octopus Deploy to automate the CI/CD pipeline in all environments. We have also used the Octopus library to store artifacts. The hardcoded values were removed from the source code and placed in the Octopus Deploy. Sensitive data has been encrypted and secured by using Octopus variable substitution in the pipeline. We have enabled one-click deployment for all environments as well as guided failure for complex services. With our assistance the client could convert complex manual deployments that took 4 hours into one-click auto deployments requiring approximately 10 minutes. Moreover, the client also saw zero deployment failures in the production environment due to a guided failure implementation.

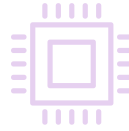
This has been helpful to fix a deployment issue while deploying to any environment. Aspire has also implemented MySQL password rotation policy for the entire application. The reduced deployment time has allowed the development team to test and roll out their changes easily with a 2X increase in release frequency. The end-to-end flow was completely secured and we gained the customer's trust.

Best practices followed:

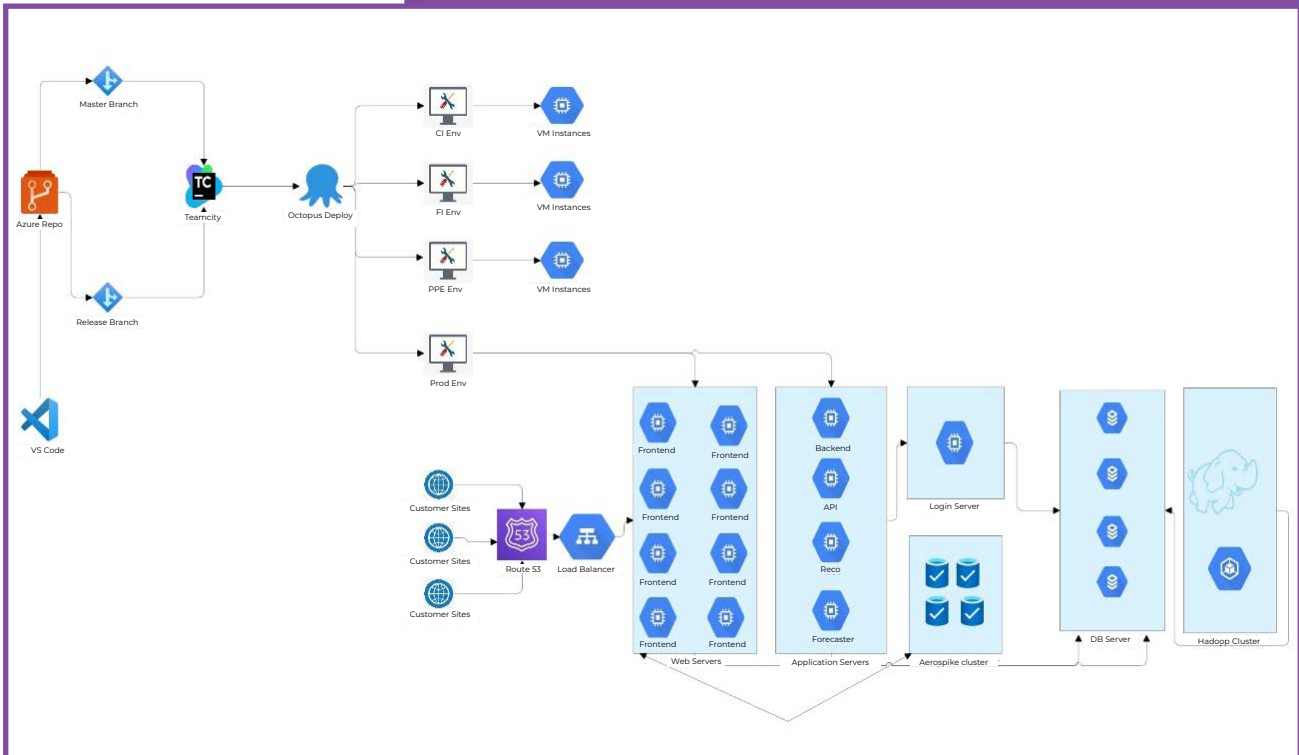
- Best industry practices across development and workflow
- Proper DevOps process and culture was established
- Durable design was ensured with an increase in number of requests and user count
- Easy adaptation of flow was ensured to meet industry standards
- CI/CD pipeline automation with the help of Octopus Deploy



Technology Snapshot:



- » Source code Repo : Azure Repos
- » CI: Teamcity, Azure Pipelines
- » CD: Octopus Deploy
- » Secret management: GCP secret manager & Octopus variable set
- » Artifact/Image: Azure, GCR,
- » Domain: Route 53/ GCP Cloud DNS
- » Languages: .net framework
- » Cloud Environment: GCP, Azure, AWS





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