



Development & DevOps Environment Transformation

Development of a CI/CD life cycle involving cloud and micro-services with DevOps Orchestration Tool

CONTEXT

CLIENT

- A global technology company

KEY DRIVER

- Ease the activities of building environments and managing releases
- Setup the DevOps orchestration environment for continuous development/integration of multiple products in the organization
- Operation dashboard of environment, service, release, and tools

CHALLENGES TO BE ADDRESSED

- Longer time and higher effort in building quality environments and composing relevant services for releases due to the multiplicity & complexity of scripts & configurations
- Duplication of tasks and higher potential of errors as the teams are operating in silos and building multiple one-off solutions
- User dissatisfaction due to delayed release of product features or not meeting the planned product release schedules



SOLUTION – OUR ROLE

End-to-end responsibility that includes conceptualizing a self-organizing development process, portal design, system architecture and development

Leveraged our deep understanding & experience of cloud, modern DevOps practices, micro-services, and CI/CD orchestration tools



SOLUTION – APPROACH & KEY CONSIDERATIONS

COMMON TOOL FOR ALL PRODUCTS & TEAMS



A user-friendly web application and scripts accessible by all teams to manage deployed applications, environments, releases, and services

PROCESS STANDARDIZATION & SIMPLIFICATION



A standardized process that support the day-to-day process of teams to simplify their activities across the development life cycle

TEMPLATE-DRIVEN & REUSABILITY



A framework that leverages the constructs of orchestration through scripting, configurable keys, and composition techniques

EXTENSIBILITY & CLOUD AGNOSTIC



A design mechanism that can be easily extended for a micro-services based application to support leading cloud providers

SOLUTION MODULES – KEY INFO

DEPLOYED DASHBOARD

- Environments
- Applications
- Services
- Code Repository Links
- Documentation Links
- API Doc/Portal Links

ENVIRONMENT MANAGER

- Products > Environments > Blue/Green > Templates
- Profiles > Secure Key Storage & Management

SERVICE MANAGER

- Services Port Mapping
- Services Count Mapping for an environment

RELEASE MANAGER

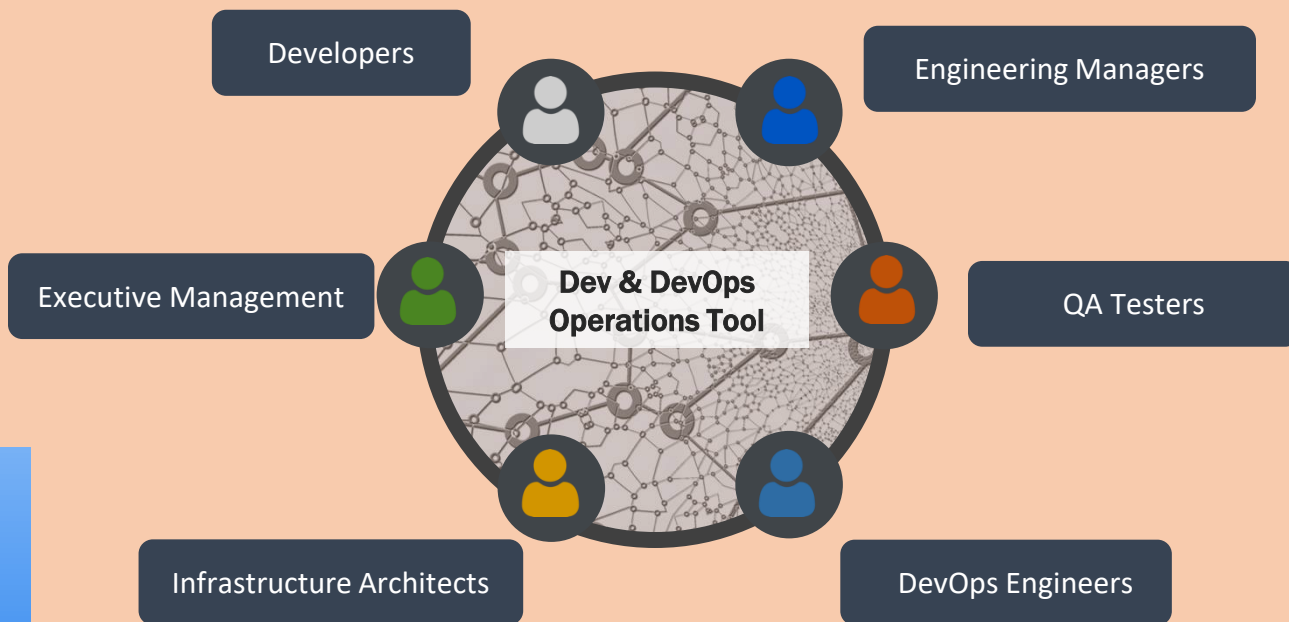
- Products > Releases (versions)
- Releases > Services (versions)


DEPLOYMENT TOOL

- Deployment-Runs and Status
- Terraform Details
- Deployment History

SOLUTION – PARTICIPANTS & KEY TECHNOLOGIES

A common solution that helps all involved in the Continuous Development & Integration



KEY TOOLS & TECHNOLOGIES 	
Languages TypeScript, JavaScript	UI Framework Angular
Micro-Service NodeJS	Orchestration Terraform
Deployment Cloud AWS (extendible to other cloud providers)	Data Store MongoDB

RESULTS – KEY BENEFITS



ELMINATED SILOS & DUPLICATION

By providing a common tool for all participants with a framework that enables high re-usability



REDUCED TIME & EFFORT

By removing the need to build one-off tools and by providing configurable templates for all Dev & DevOps activities



INCREASED TEAM SATISFACTION

By reducing problems, ensuring that the tool mimics the day-to-day activities of the teams, and accelerating releases



OUTCOMES – KEY INFO

RELEASE TIME

**HOURS TO
MINUTES**



RELEASE CYCLE

**BI-WEEKLY
TO DAILY**

Customer Success Briefs

THANK YOU



DevOps & Cloud