



SPEED UP AGILE DELIVERY USING DEVOPS AS A SERVICE (DOPAAS)

xAQUA[®] Agile DevOps (ADOP)

Abstract

DevOps adoption is gaining rapid adoption to support rapid agile delivery of business values to the customer. Implementing custom DevOps solution is complex and may cause inflated timeline for delivering business values, spiraling cost, and unwanted risks! Use of DevOps automation as a service reduces the time lag and enables business to quickly establish automated DevOps pipelines for rapidly delivering business services. This also reduces cost and risk of DevOps automation and allows to maximize the investment on business value creation. This paper discusses the challenges associated to custom DevOps automation and how xFusion's DevOps automation solution, xAQUA Agile DevOps addresses those challenges.

Introduction

The 21st century digital transformation is focused on **rapid** delivery of **agile business values** to the customers. While the agile development of modern Microservices based applications can develop innovative applications quickly, it also requires a fast and efficient pipeline to build, test and deploy the business application to rapidly deliver to the customers. DevOps automation through end to end automation of delivery pipeline tasks from build to operate is key to enable rapid agile delivery of business services to the customers.

services platform for the success of its digital transformation vision?

Custom DevOps Challenges

Though DevOps adoption is gaining rapid adoption custom DevOps implementation comes with various challenges that adversely impact the successful adoption and value proposition of the DevOps automation.

Custom DevOps Implementation may cause:

- Inflated Timeline
- Spiraling Cost
- Unwanted Risks

Lack of Standardization and Fragmented Toolsets

Implementing custom DevOps automation solution is complex. There are no standards defined for DevOps. The DevOps industry is moving too fast. There are too many fragmented toolsets to choose from, each tool targets a specific type of task. The DevOps automation team requires extensive experience on the DevOps tools to select the right tool for

the specific use case scenarios and ensuring the interoperability of the tools. The DevOps automation team needs to constantly engage in research to find out the tools that are innovating and replacing the existing tool sets that aren't innovating.

Higher Budget Allocation

Custom DevOps implementation requires highly skilled DevOps resources. This requires higher budget allocation for skilled DevOps resources and for continuous research and innovation in DevOps tools and technologies.

Increasing DevOps Complexity with Growing IT Complexity

The IT environment complexity are constantly increasing as the organizations are transitioning from monoliths to microservice based distributed applications, migration from inhouse data centers to multiple cloud environments etc. The DevOps automation needs to constantly evolve with the increasing complexity of the IT environments that adds to cost and risk.

Delayed Outcome

The complexity of implementing DevOps adds substantial time-lag before the business values for the DevOps automation can be demonstrated. This adds the risk of the sponsors losing interest in the DevOps automation projects.

Frontloaded Technical Debt causing delays in Business Services Delivery

Establishing SDLC environments and DevOps automation are often frontloaded for many agile modernization projects. Typically, it takes 12 to 18 months for establishing SDLC environments and DevOps automation platform. This causes substantial delays for the delivery of the Business Services to the customers.

The Solution – DevOps as a Service (DOPaaS)

The challenges faced by the custom DevOps automation can be overcome by DevOps as a Service (DOPaaS) model. The DevOps as a Service model hides all the complexities and risks associated to changing fragmented toolsets, diversified skillset requirements and delayed outcome from the DevOps automation initiative. The DevOps as a Service model allows establishing quick DevOps automation platform that can start showing the business benefits quickly and doesn't add substantial delays for business services delivery to the customers.

The DevOps as a Service (DOPaaS) model allows establishing automated processes for platform deployment, Continuous Integration and Delivery (CI/CD) quickly with substantially reduced cost, complexity and risks.

Forbes 2018 Forecast:

Infrastructure automation platforms and as-a-service models will take root. Despite continued investment in premise infrastructure, we expect this problem to be somewhat reduced in 2018 with a number of tools now straddling brownfield and greenfield deployments. Providing investment protection while introducing new workflows in a non-disruptive manner is key.

The Solution – DevOps as a Service (DOPaaS)

xAQUA® Agile DevOps (ADOP) is part of the xFusion's offerings for General Platform Automation Function as a Service (GPAaaS) over xAQUA.io cloud. It delivers automated DevOps as a Service (DOPaaS). DOPaaS allows automated deployment of the platform software components in various SDLC environments in minutes without writing any custom script. The built in easily customizable automated CI/CD pipeline enables Continuous Integration and Delivery (CI/CD) of Minimum Viable Products (MVP) through the CI/CD pipeline in the cloud, on server racks or directly on virtual machines.

xAQUA® Agile DevOps as a Service (DOPaaS) delivers the following automated functions.

01 Automated Platform Deployment

02 Automated CI/CD

03 Integrated Network and Application Performance Monitoring

04 Technology Management and Governance

Key Benefits of xAQUA[®] Agile DevOps

- 01 Simple, Integrated and Automated
- 02 No DevOps Expertise and Custom Coding Required
- 03 Faster Delivery of Business Software
- 04 Lower Cost (CapEx and OpEx) and Risk
- 05 Maximize Investment on Business Value Creation
- 06 Integrated Governance, Audit Control and Reporting
- 07 Integrated Network and Performance Monitoring
- 08 Integrated Technology Management and Governance



xAQUA ® ADOP 1-2-3-4 Playbook

xAQUA ® ADOP provides web-based user interface to establish automated DevOps platform in few hours without writing any custom scripts. xAQUA ® ADOP abstracts the DevOps tools and technology complexity from the users allowing users to establish automated platform deployment, continuous integration and delivery (CI/CD) and continuous monitoring (CM) processes quickly without any knowledge of DevOps tools and technologies.



- Define 01**
 - Define solution architecture and technology stack
 - Define Source Code Repository
 - Define Infrastructure Providers and Hosts
 - Define SDLC Deployment Architecture
 - Define CI/CD Requirements
- Configure 02**
 - Configure Platform Deployment Templates for the SDLC Environments
 - Configure CI/CD Pipelines Tasks and Workflow
- Deploy 03**
 - Execute the automation templates for automated deployment of platform software on the SDLC environments
 - Execute CI/CD workflow for automated integration and delivery of software components

Monitor
04

- ❑ CI/CD Pipeline Task Performance Monitoring
- ❑ Application Performance Monitoring (APM)
- ❑ Network Performance Monitoring (NPM)

xAQUA® ADOP – Features

01 Platform as a Code

02 No custom coding/ scripting and DevOps expertise needed

03 Containerized Platform Software Repository

04 Technology Management and Governance

05 Open Source Software Security and Licensing Compliance

06 Role based security and access control

07 Complete Audit Control

08 Reporting

About xFusion Technologies, Inc.

xFusion Technologies, Inc. is a State of California Incorporation, head quartered in Rancho Cordova, California, with offshore enters in Kolkata and Pune, India. xFusion is an expertise-based organization that specializes in serving various Public and Private sector organizations. xFusion offers a full spectrum of IT services in the areas of Enterprise Architecture, Legacy Systems Modernization, Custom Product Development, Outsourced Product Development, and Data Engineering. xFusion's xAQUA.io provides Platform Automation Functions as a Service (FaaS).

xAQUA.io

General Platform Automation Functions as a Service (GPAaaS)

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