Assess. Assure. Accelerate.
The *Everywhere* Network

# Veryx DevOps Framework

Achieving Agility, Productivity and Quality in Software Development

1 Nov 2020

www.veryxtech.com

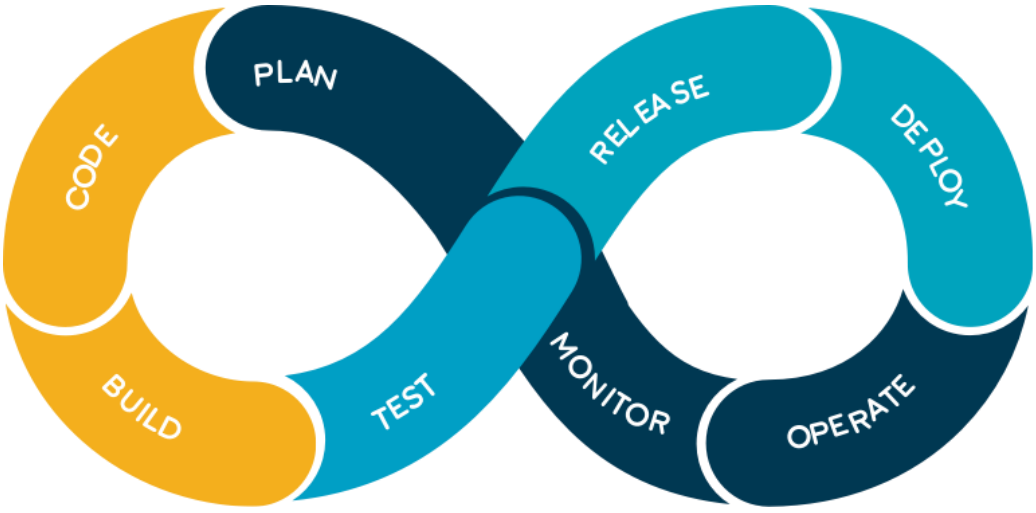
# Introduction

DevOps is an approach to optimize development and operations activities through defined processes, automation, and collaboration. It aims to bridge the gap and have collaboration between the development and operations teams to have more efficient and productive environment.

Successful DevOps implementations generally rely on an integrated set of solutions to remove manual steps, implement continuous integration/continuous delivery (CI/CD), reduce errors, increase team agility, and to scale beyond small, isolated teams. Implementing DevOps has many benefits including:

- Standardization of process which are used for synergy of the development and operations team.
- High Automation resulting in lesser errors and better quality
- Higher and efficient utilization of the infrastructure
- Higher productivity and faster time to market

In this document we provide some of the highlights of Veryx DevOps Framework and its implementation for Veryx customers.



## DevOps goals

Software development processes in most organizations have transitioned from traditional waterfall or V-model to agile development. However, if the development and operational teams are still working in silos, the shorter cycles could quickly become a challenge.

Thus automation of processes and tests in the DevOps model plays an important role in achieving the shorter time to market while improving the quality of the products,

**Shorter Development Cycles, shorter time to market**

With joint effort of development and operations teams, the team's deliverables are ready for use more quickly since the repetitive part of process is automated. CI/CD bridges the gaps between development and operation activities and teams by automation in building, testing and deployment of applications. The teams can focus more on innovating faster than the competitors.

**Early detection of defects**

As soon as the build is ready, the build is deployed and automated tests are executed. As soon as the tests are completed, the concerned people are notified with the test reports. This helps in early identification of defects in the build.

**Better Communication and Cooperation**

DevOps software development culture improves the communication between the team and the teams are more productive. The teams now focus on bringing the product to market or production, and their key performance indicators must be organized accordingly. DevOps ensures that processes do not need to wait for a different team to solve a problem. The process becomes increasingly transparent as all individuals work towards a common goal.

# Veryx DevOps Process

### *Phase 1: Assessment*

This phase focusses on the review and understanding of the current process being followed by the customer team and lays the groundwork to identify challenges and gaps in the build, test and release processes.

Based on the assessment, Veryx would identify areas of improvement, in consultation with the customer. Veryx would help define metrics, process, goals and SLAs and the plan towards continuous improvement. The toolsets needed to be deployed would be recommended and decided after discussions with the customer considering expected outcomes and budgets.

### *Phase 2: Implementation*

In this phase Veryx would develop the necessary automation scripts and integration around the toolsets, in order to achieve continuous integration and continuous deployment (CI-CD).

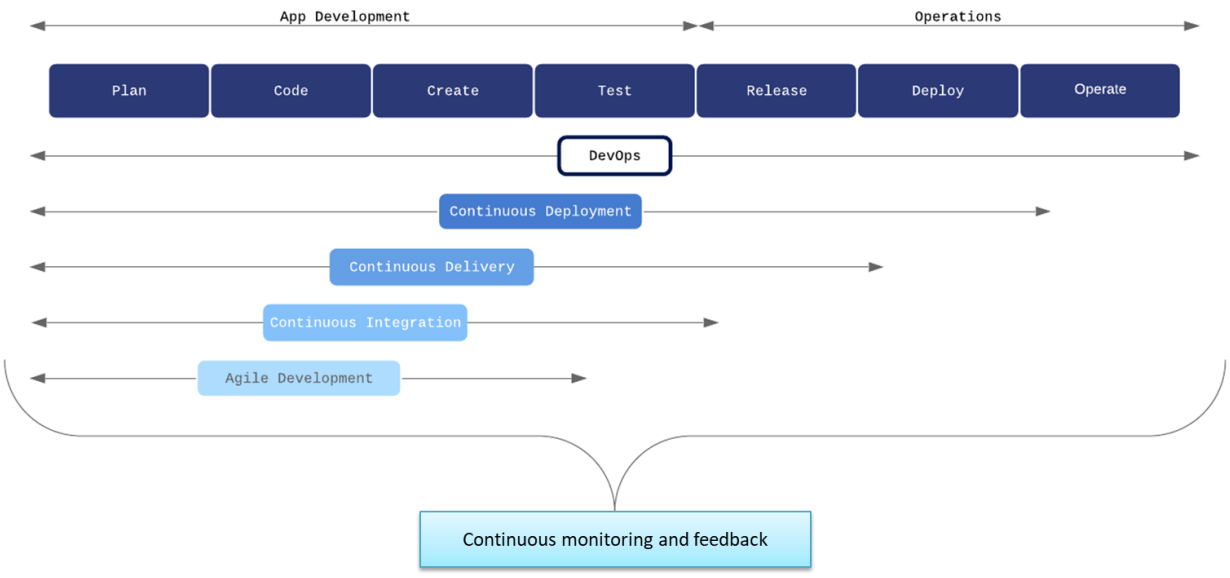
Once the automation has been done, a proof of concept (POC) utilizing the framework would be attempted with the requisite dashboards and reporting to demonstrate the effectiveness of the framework and model.

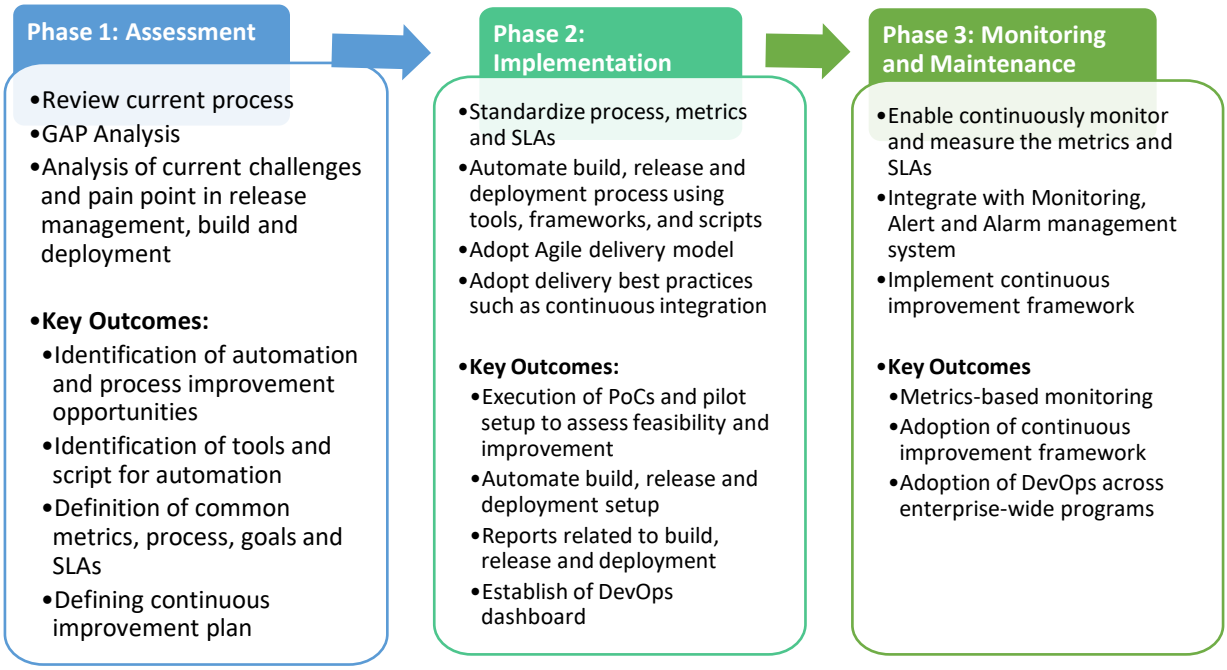
### *Phase 3: Monitoring and Maintenance*

In this phase, the goal is to continuously monitor and measure the metrics and SLAs. Where necessary, further integration with monitoring, alert and alarm management system will be completed.

Based on the progress and satisfaction of the process, continuous improvement would also be performed. Finally, adoption of DevOps across enterprise-wide programs would be implemented.

**DevOps process flow**






# Veryx DevOps Framework

Veryx DevOps Framework comes pre-integrated with many of the industry standard open-source tool sets. Veryx has done the hard work of integrating them and providing the necessary dashboard and reporting capabilities that delivers a well-tested ready to deploy framework.

Veryx DevOps Framework enables customers to quickly kick start their DevOps initiatives and accelerate the DevOps implementation with pre-built pipelines. It uses standard open-source tools

Veryx works with its customers to further customize the framework.

Veryx meanwhile is also driving further improvements and support for tools, environments and capabilities:

- Adding more pipelines
- Adding tools for static code analysis like SonarQube
- Adding test tools like Cucumber
- Adding support for Kubernetes
- Adding visualization tools like Grafana

## *Tools supported*

### *Orchestration*

- Jenkins

### *Code Management*

- Git, CVS, SVN, Gitlab

### *Continuous Deployment*

- Chef, Maven, Ansible

### *Environments*

- Docker, AWS

### *Testing*

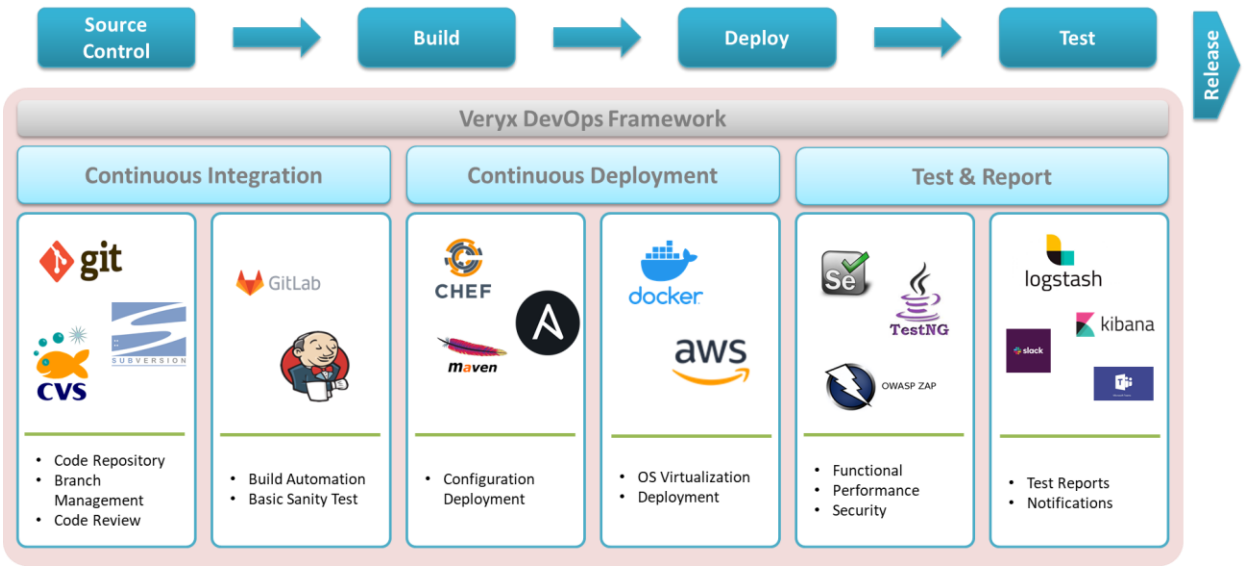
- OWASP ZAP, Selenium, TestNG

### *Notification*

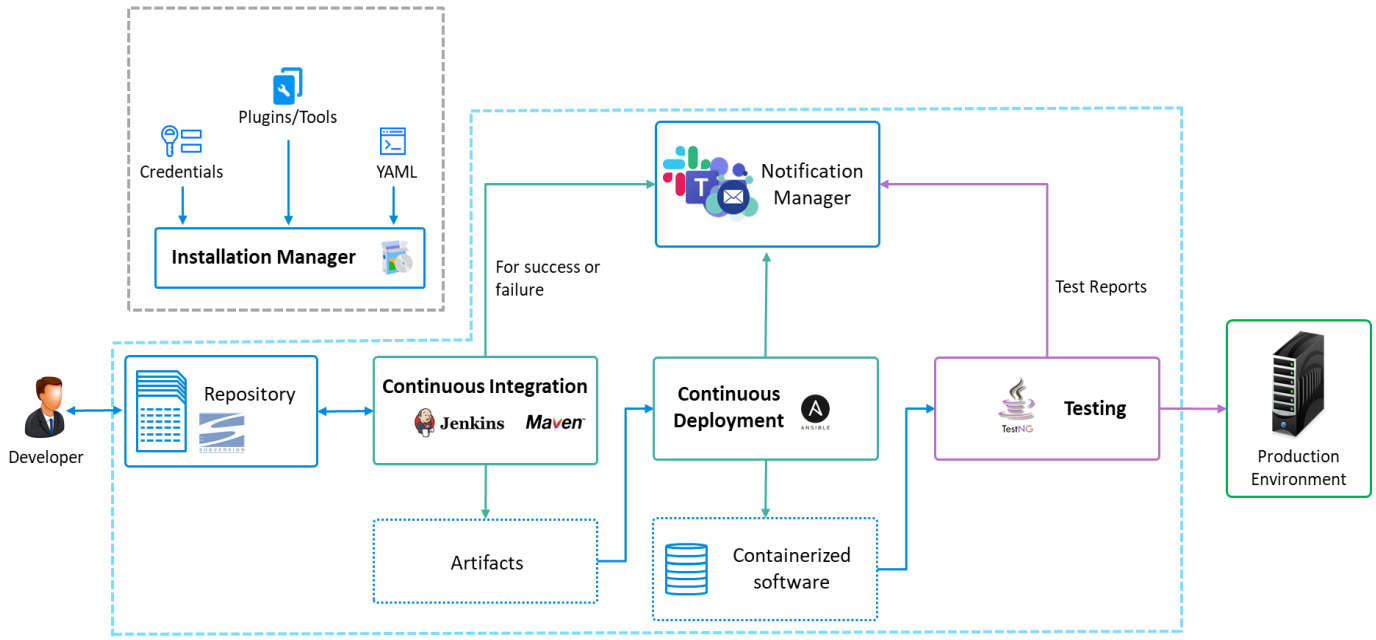
- Teams, Slack

### *Reports*

- Logstash and Kibana




## Veryx DevOps Framework Workflow



# Case Study

## Challenge:

The  project involved the software development for one of Veryx products. The team faced the following challenges in traditional delivery model:

- Defects identified in much later stages of development
- Building test setup environment
- Simultaneous deployment across different platform

## Solution:

The team decided to follow the agile development model and incorporated Veryx DevOps Framework as part of its process in order to achieve the following goals:

- Continuous integration and build
- Automated test setup building process
- Automated deployment process

## Outcomes:

- 20% Defects identified at earlier lifecycle during continuous integration which helped to reduce the effort by 18%
- High availability of test setup resulting  in reduction of set-up time by 8%
- Parallel deployment helped in reducing the deployment time by 5%
- In span of 6-month project (12 sprints, overall, we had saved 30% of effort by practicing DevOps.

# Veryx automation experience for DevOps

Implementation of DevOps Framework involves identification of the right tools and integrating them in the pipelines. We found that each time while implementing the pipelines there was a repeated effort of installing these tools. In an effort to reduce this and to have a jumpstart while implementing the DevOps pipelines, Veryx decided to have framework pre-integrated with some of the open-source tools.

Over the last two decades Veryx has developed industry proven automated solutions for testing, performance monitoring, diagnostics and visibility. This establishes effectiveness of the Veryx process driven delivery that is scalable. Veryx delivery processes ensure increased efficiency and repeatability in development while reducing client risk.

Veryx started as automated test solution Vendor. This speaks about the immense and vast knowledge in field of automation. Veryx has more 500+ man years' experience in automation. Although the DevOps developments has been rising rapidly in the industry, automation practices have been part of the Veryx's ethos from its inception, even before DevOps became popular.

# Veryx Technologies

## For more information contact:


General : info@veryxtech.com
Sales : sales@veryxtech.com
Support : support@veryxtech.com


## USA


Veryx Technologies Inc.
1 International Plaza, Suite 550
Philadelphia, PA 19113 USA
Phone: 267-440-0140
International: +44 20 33 71 86 91


## India


Veryx Technologies Pvt. Ltd.
Ground Floor, RR Towers 3, Super B1/B2
Thiru Vi-Ka Industrial Estate, Guindy
Chennai 600032 INDIA
Phone: +91 (44) 6677 2200
Fax: +91 (44) 2250 0372



Copyright © 2020 Veryx Technologies Private Limited
Veryx®, Veryx ATTEST , PktBlaster®, SAMTEST®, Veryx vProbe, Veryx vTAP,
Veryx FlowAnalyzer, Cloudmon™ and BrightVue™ are trademarks of Veryx Technologies.
All other trademarks of respective owners are acknowledged.