



VISMAYA

DevOps



Objective

Overview of DevOps – how DevOps can help an organization

Principles – governing principles in automation

DevOps approach – how to approach DevOps

Governance – how code moves across environment

Version control

Features

Common tec stack

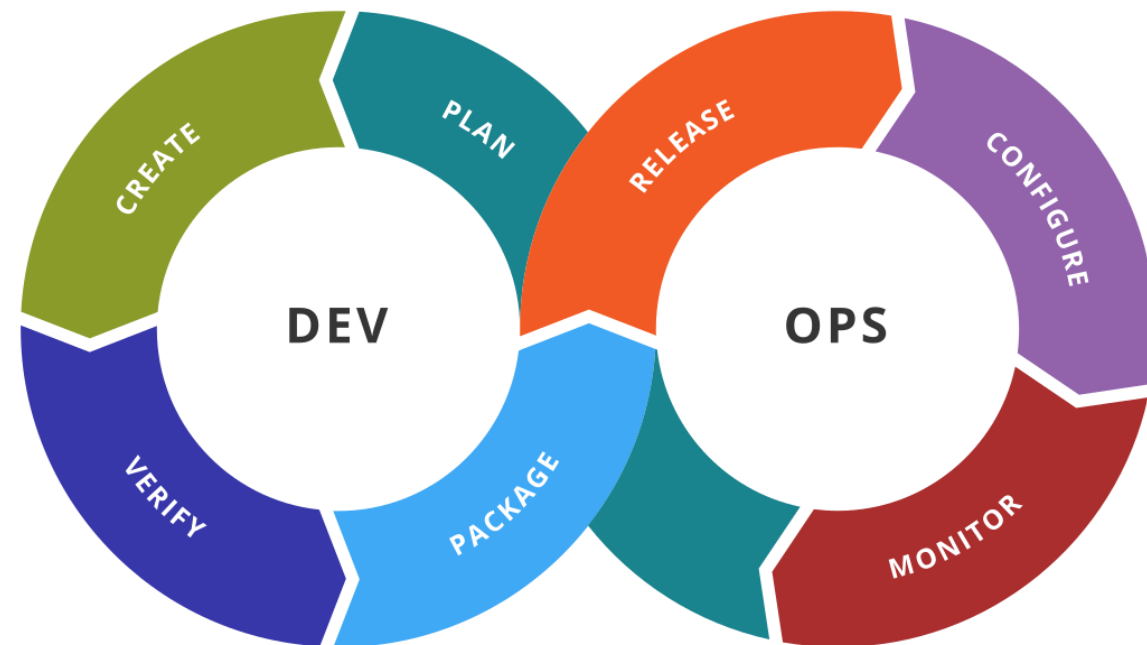


Overview of DevOps

A set of practices that that combines software development and IT Operations.

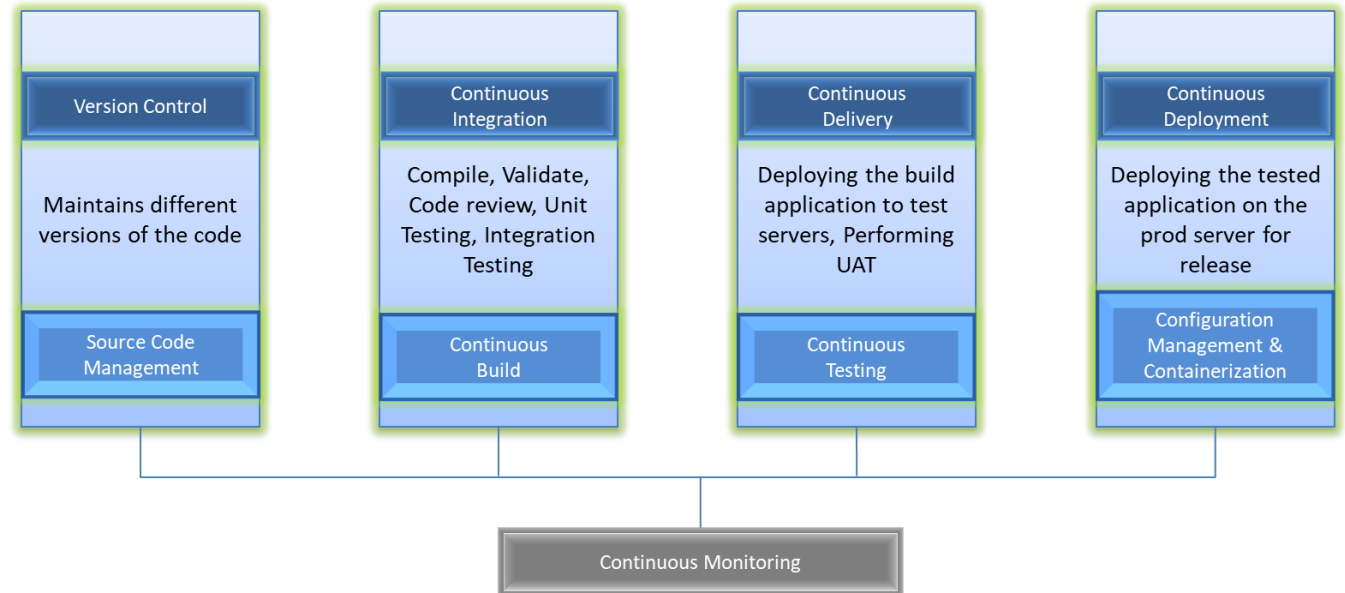
Main goals :

- Reduce development cycle
- Minimize deployment failure
- Quicker rollback and time to recover
- Improved collaboration
- Efficient way of working
- Challenges - Change in org culture, un learning current process



Key Principle of DevOps

- Version Control
- Continuous integration
- Automated testing
- Continuous delivery
- Continuous deployment
- Continuous monitoring



Approach - Version Strategy

Having a version management strategy is very key for DevOps.

Most important component of this is a centralized source code control system.

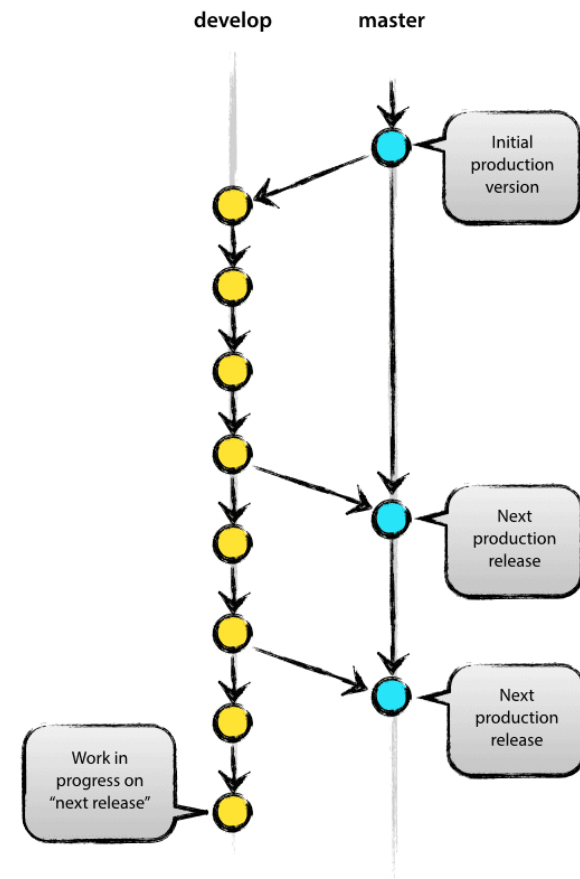
Core model :

Master – Source code in production ready state

Develop – latest delivered development changes for next release

There are many other possible branches like feature branch , release branch, hot fixes branch etc

Tools used – GitHub, bitbucket etc



Approach - Continuous Integration

Continuous Integration , referred as CD pipeline, is a DevOps practice of delivering code in a consistent manner

At a high level, here is what a CI Pipeline looks like

Pipeline picks the code from version control repository

Code quality and test coverage verifications are done.

Initiates the build of the code

Initiates the Unit testing of the code

Repeat in case of failure



Approach - Continuous Deployment

Continuous Deployment , referred as CD pipeline, is a DevOps practice for deploying code in various environments

At a high level, here is what a CD Pipeline looks like

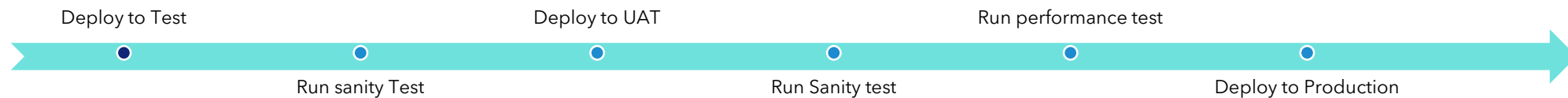
- Pipeline picks the build from artefact repository

- Applies any Environment specific setting to the build

- Deploys the code to respective environment

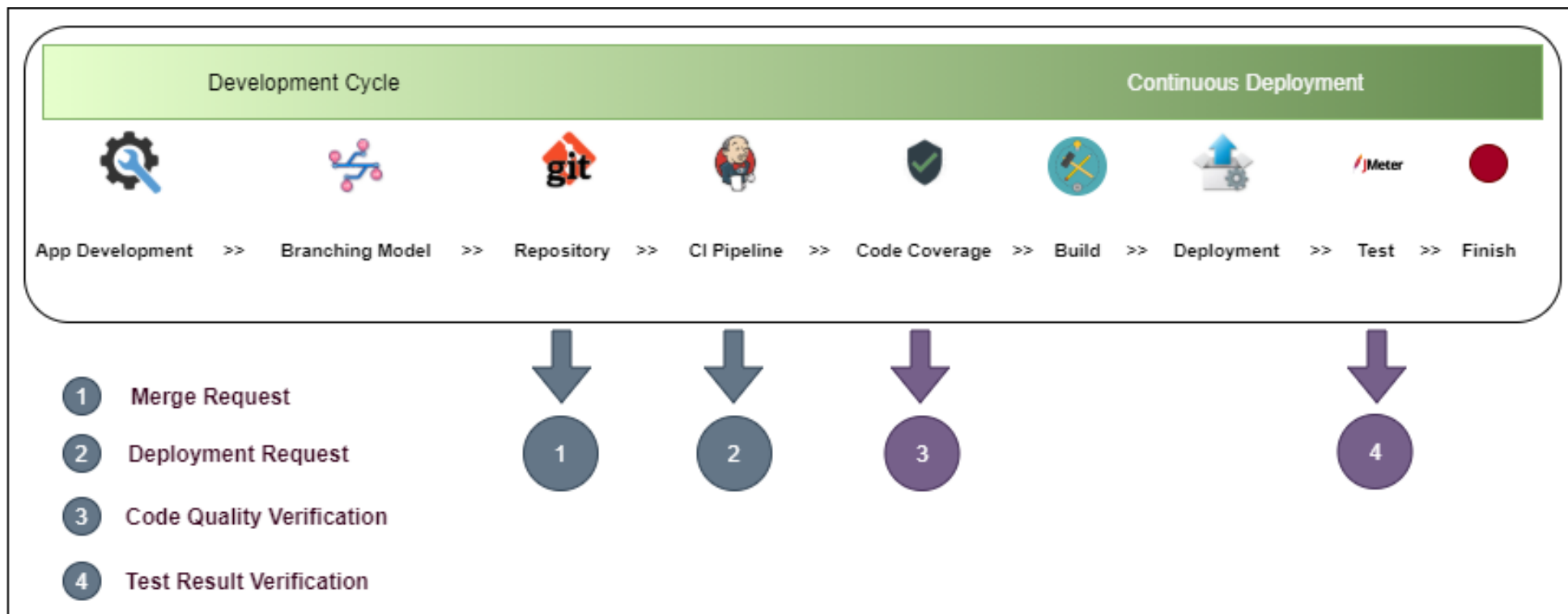
- Runs basic sanity testing to check the deployment works

- Rolls back to previous version if required

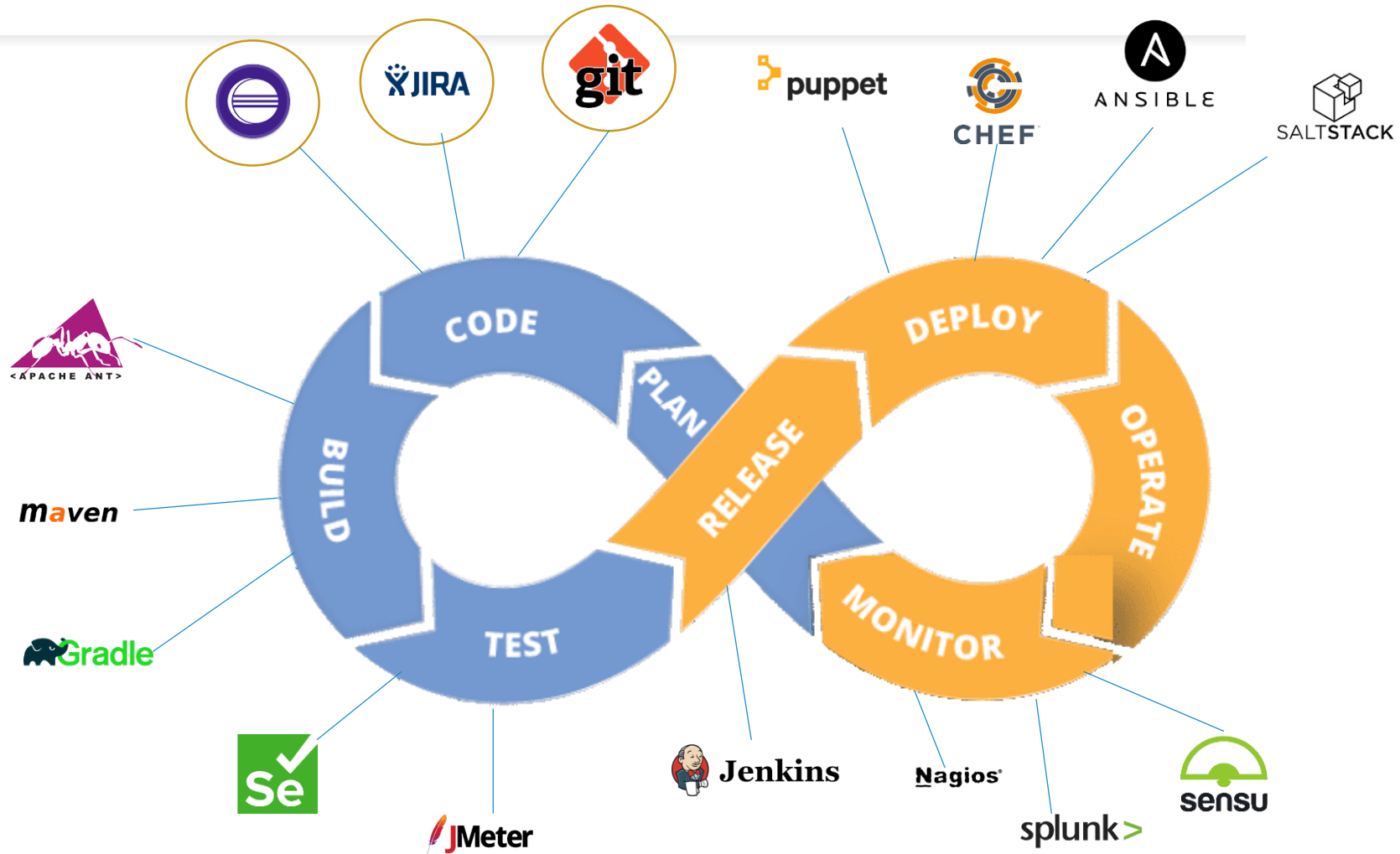


Approach - Governance

Governance ensures certain checks are completed before code and build are moved from each stage



DevOps - Techstacks





DevOps - Strategy

Our strategy for pipeline starts with understanding organizations existing process

Consult the customer on improvements

Analyze any tooling in the existing landscape can be used

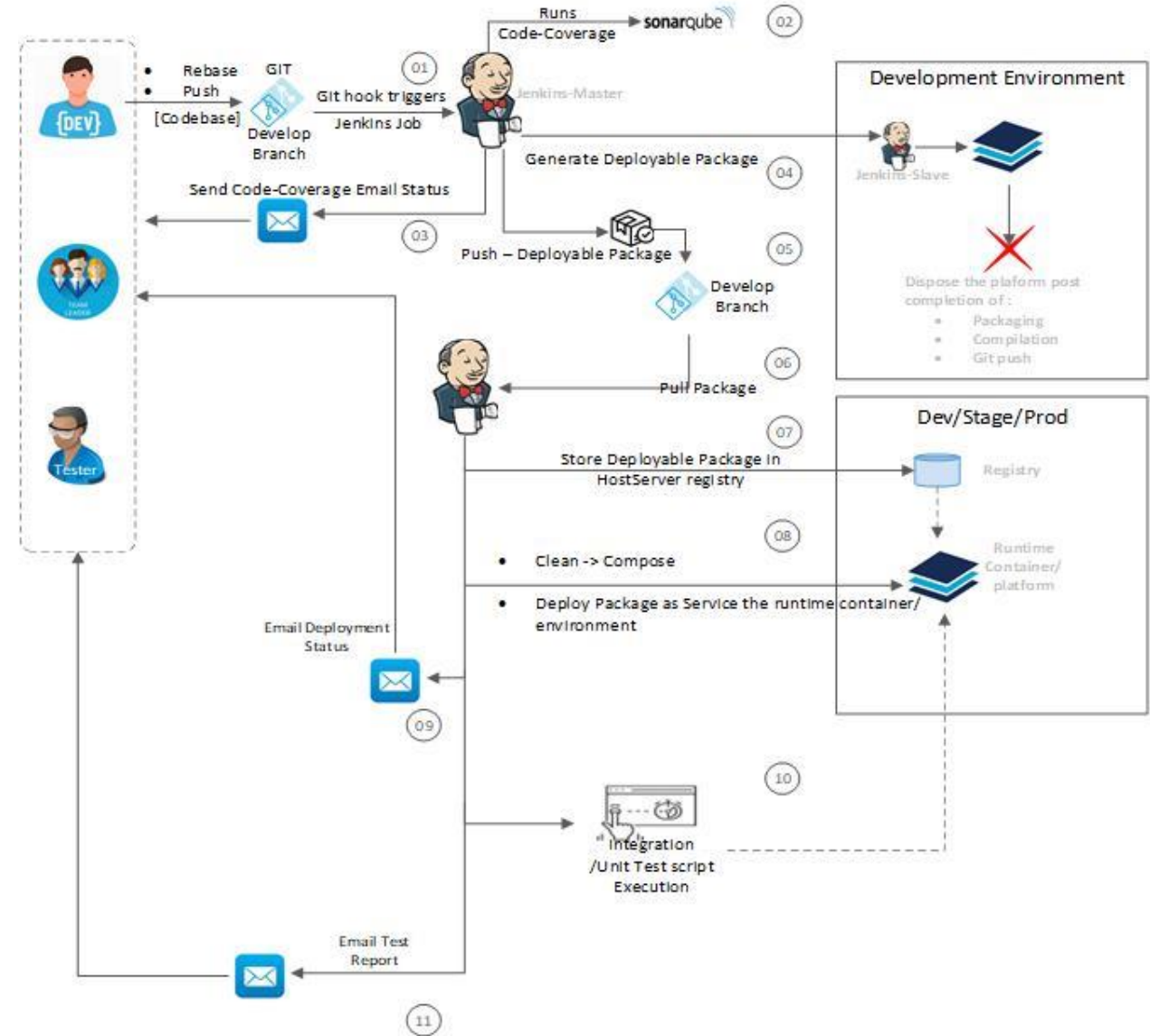
Else evaluate and recommend tooling as per organizations standards

Develop pipeline for CI for technology in scope

Develop pipeline for CD for various environments

DevOps - Sample scenario

- Push codebase after development
- Git hook will trigger the pipeline
- Notify the status after code-coverage
- Build & deploy the codebase
- Notify the result of test scenarios



Q & A

