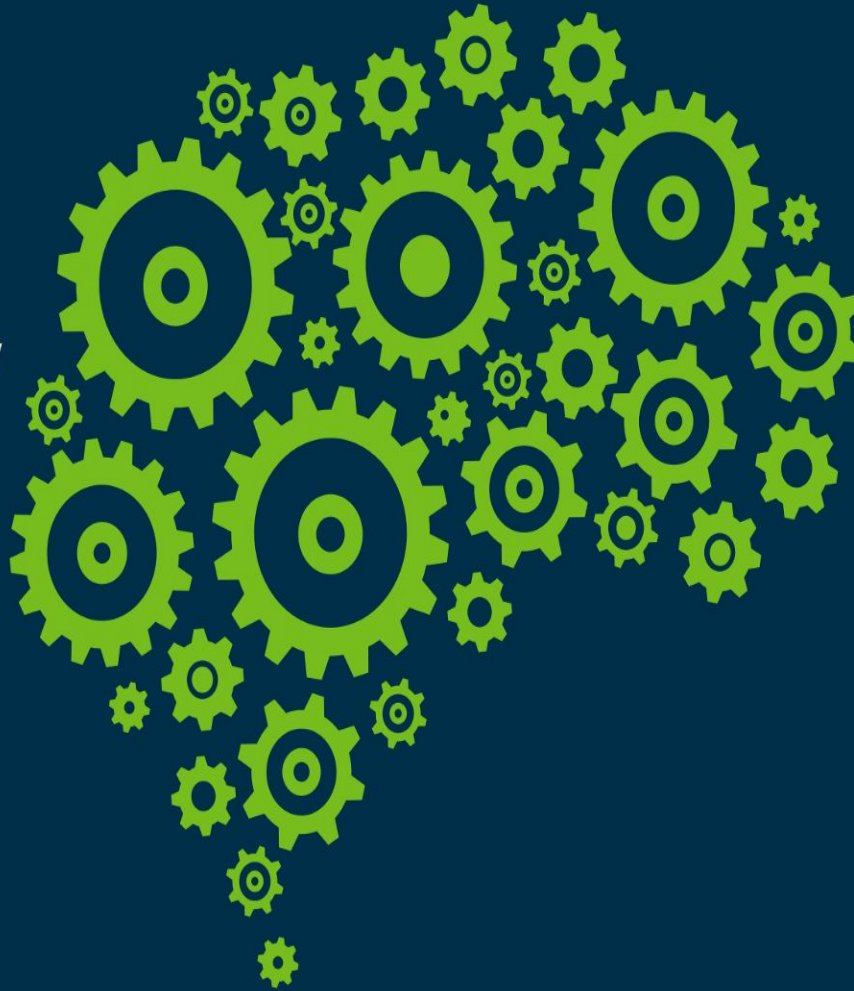


DEV



OPS

PRESENTED BY: Mazhar K

# Agenda:

Why DevOps?

What is DevOps?

Sample Job(s)

Stages/ Phases

DevOps Tools

DevOps  
Implementation

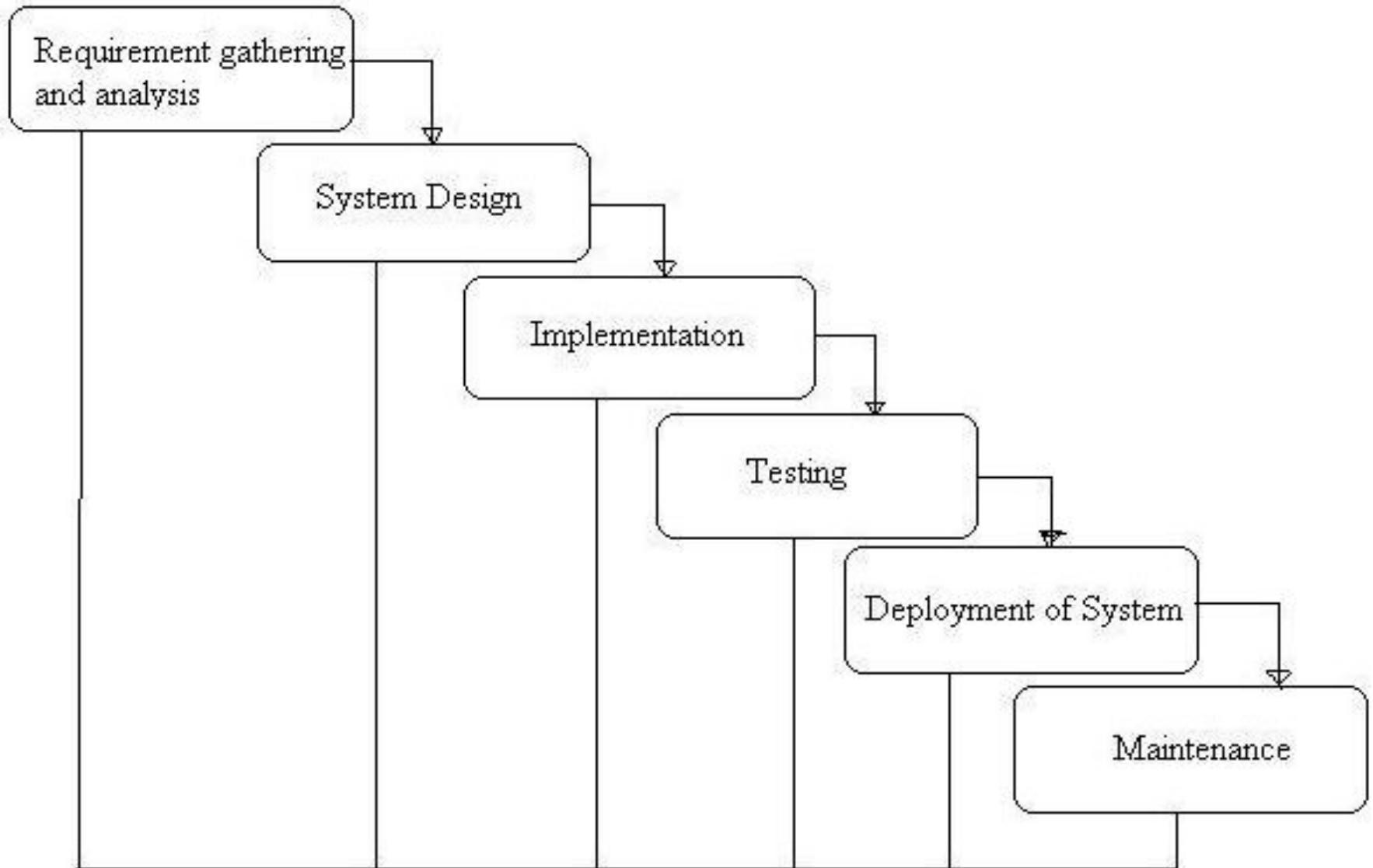


# Waterfall Model:

- Sequential design process where progress is seen as flowing steadily downwards.
- Distinct goals for each phase of development.



# Traditional Waterfall Model:





# Limitations - Waterfall Model

- Requirements should be well understood.
- A phase should not start until the previous is signed-off.
- Iterations are costly and involve significant work.
- Not a good model for complex or object-oriented projects.
- Software is put into use during final phase of study.



# Agile Model:

In the Agile Methodology each project is broken up into several 'Iterations'

All Iterations should be of the same time duration (between 2 to 8 weeks)

At the end of each iteration, a working product should be delivered

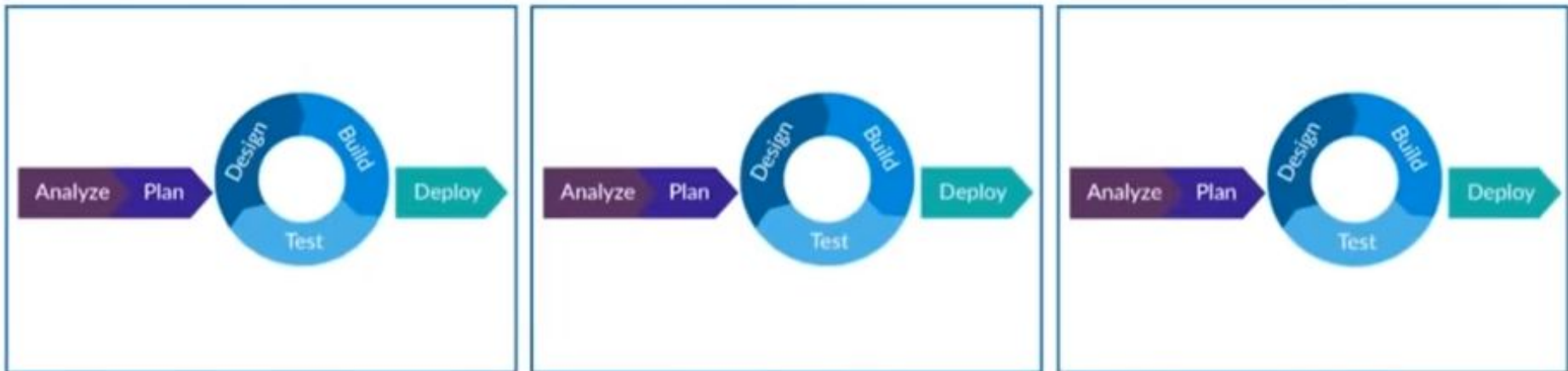


# Waterfall vs Agile

## Waterfall



## Agile



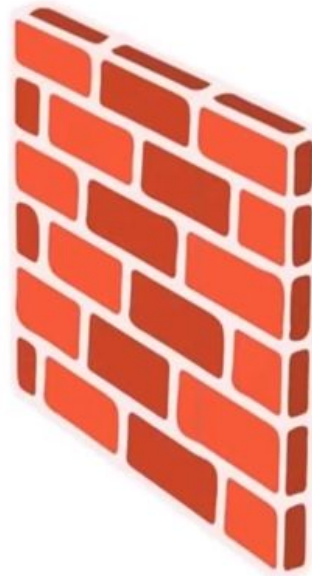
# Limitations - Agile Model

Code works fine  
in my laptop



DEVELOP TEAM

Wants Change



OPERATION TEAM

Wants Stability

There is some  
problem with the  
code, it does not  
work in  
production\*

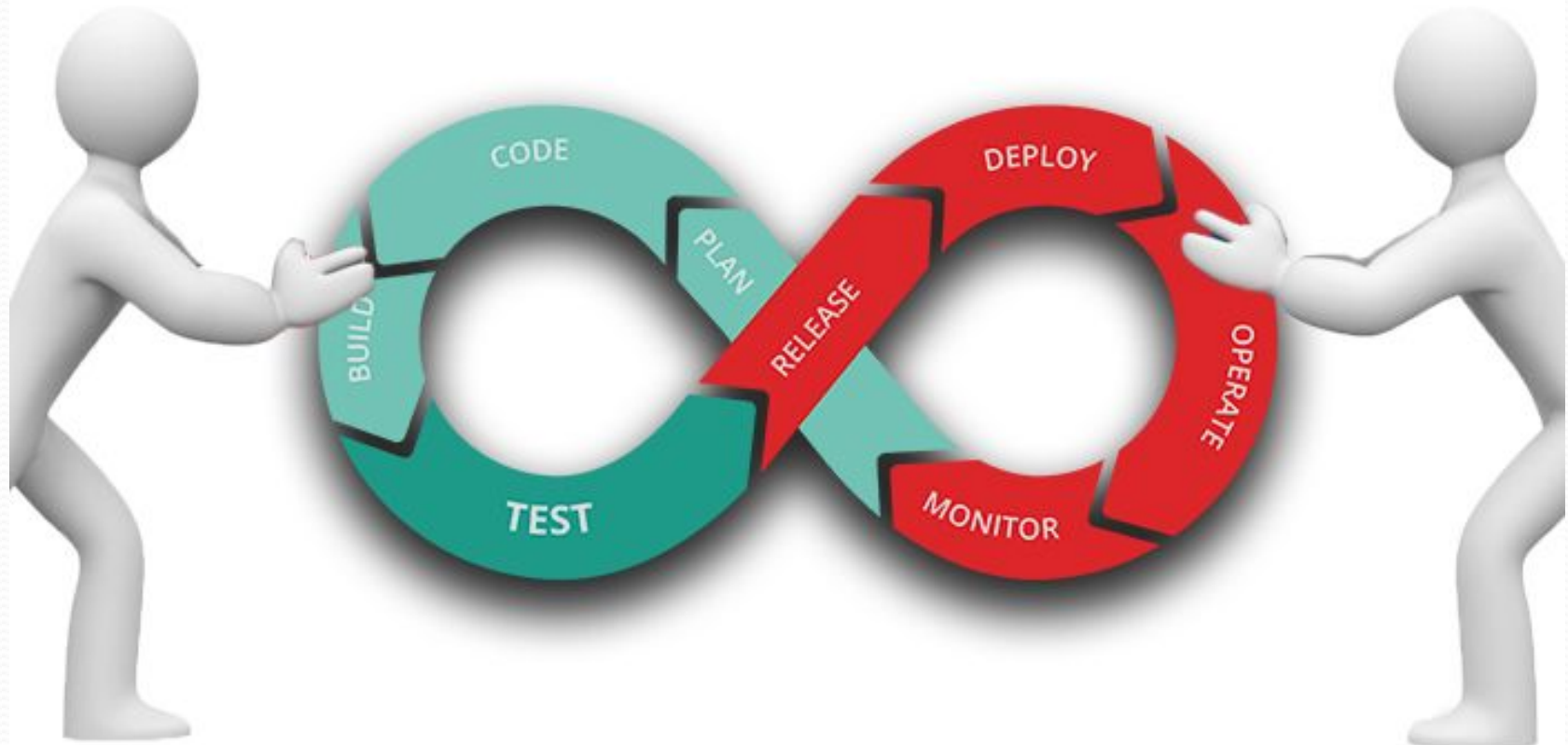


Solution is...



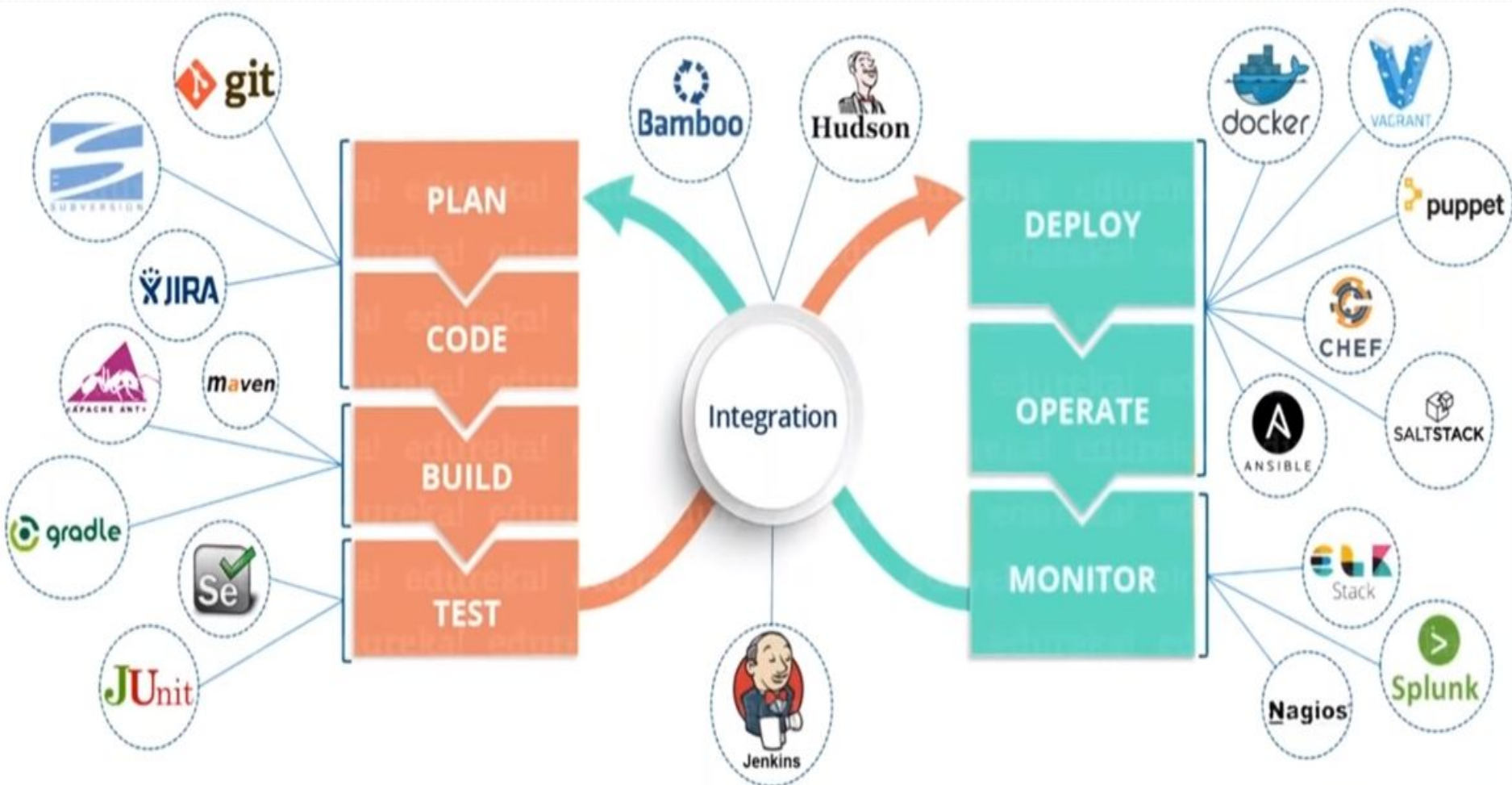
**DEVELOPMENT**

**OPERATIONS**

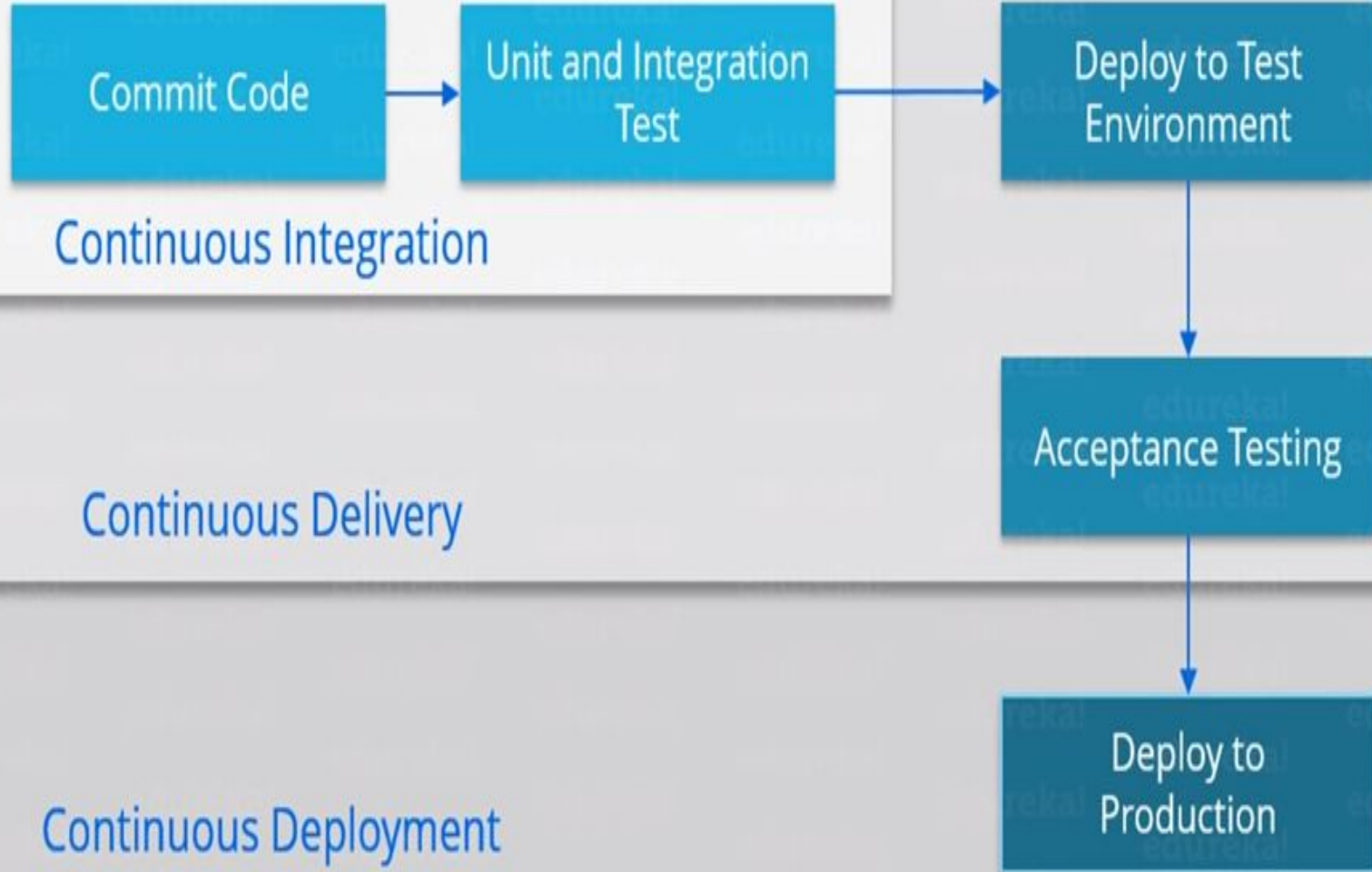


# What is DevOps?

Set of practices that automates the processes b/w software DEV & IT teams → build, test, and release software faster and more reliably.



# CI/CD Pipelines:



# DevOps Stages:

Version Control

Continuous  
Integration

Continuous  
Delivery

Continuous  
Deployment

Maintains  
different  
versions of the  
code

Compile,  
Validate, Code  
Review, Unit  
Testing,  
Integration  
Testing

Deploying the  
build  
application to  
test servers,  
Performing  
UAT

Deploying the  
tested  
application on  
the Production  
Server for release

Source Code  
Management

Continuous  
Build

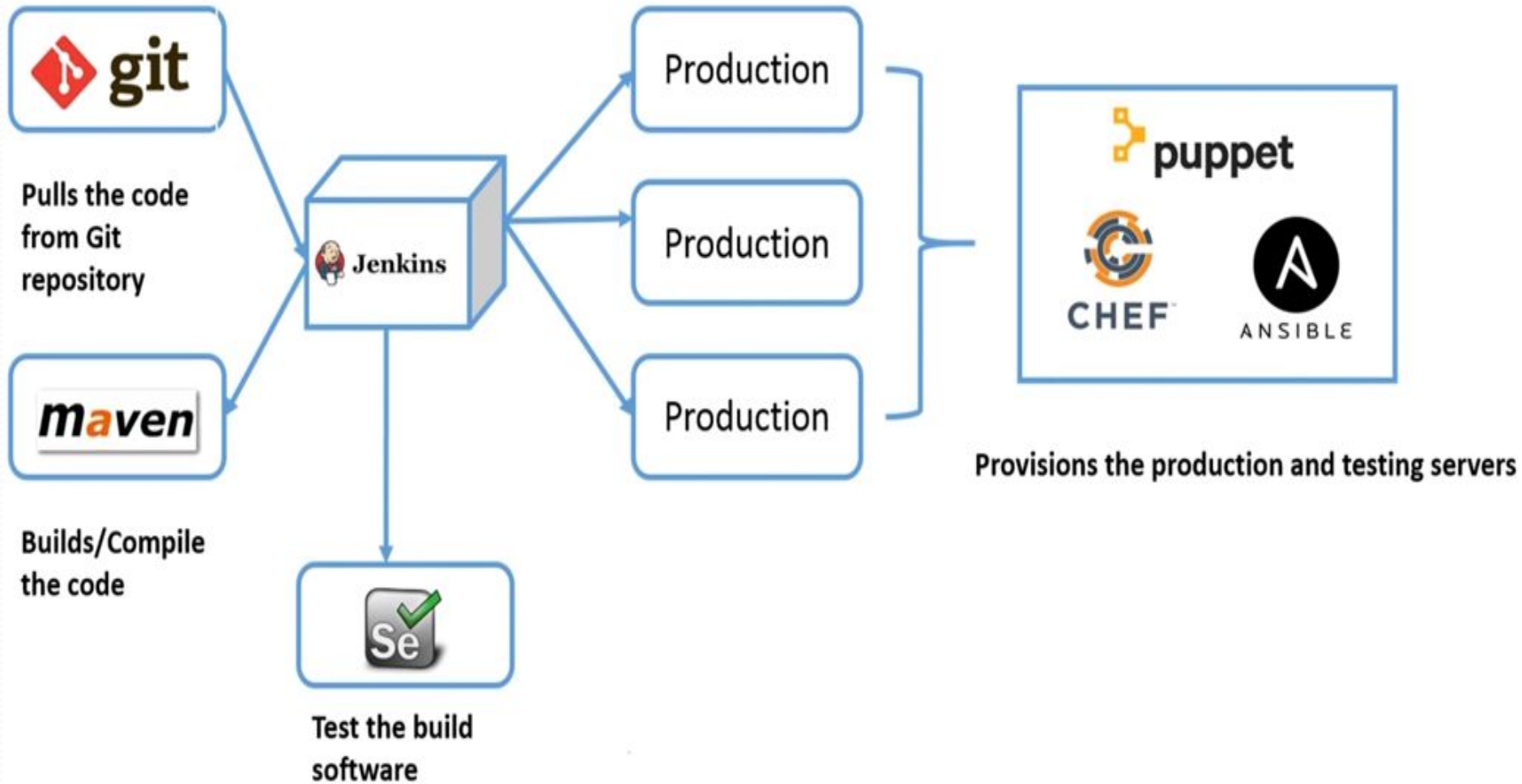
Continuous  
Testing

Config Mgmt &  
Containerization

Continuous Monitoring

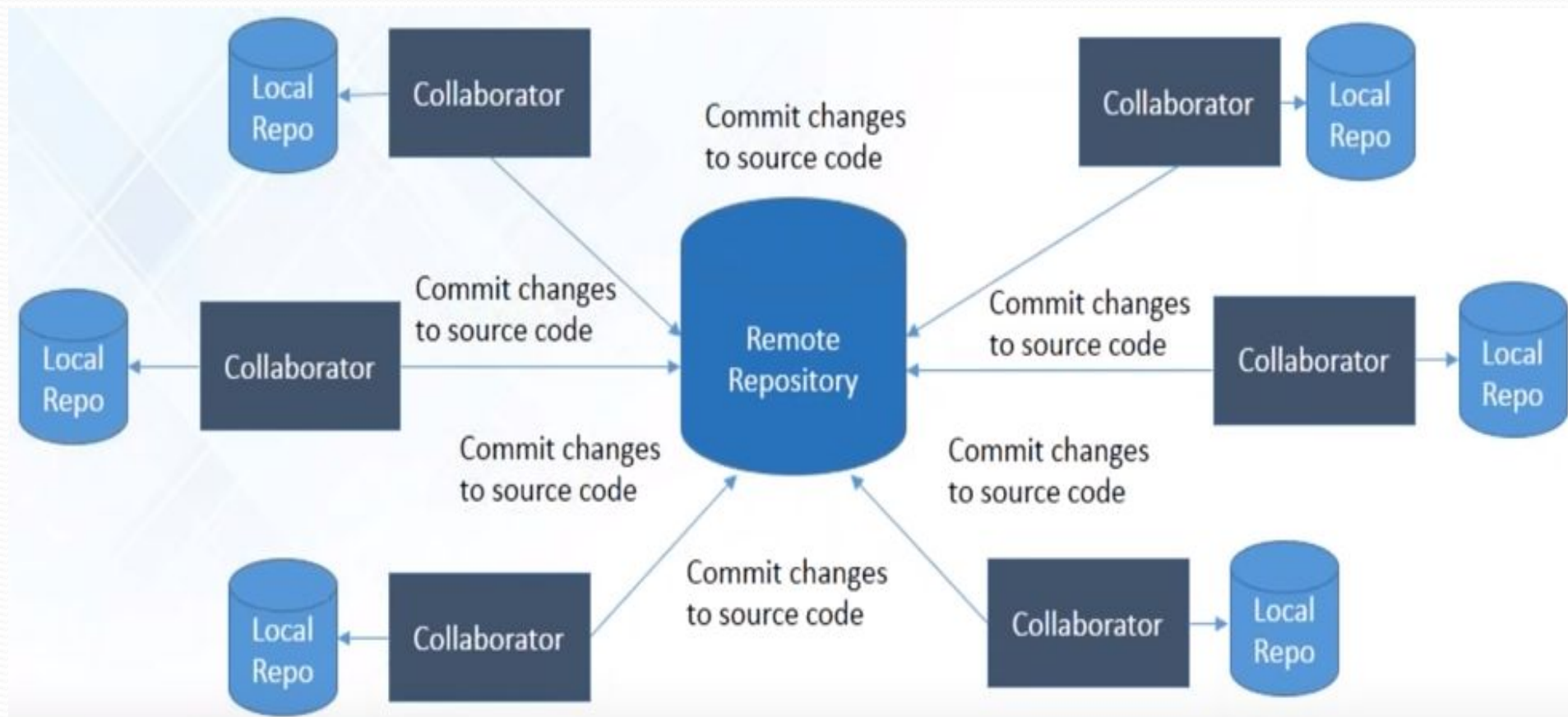


# DevOps Implementation:





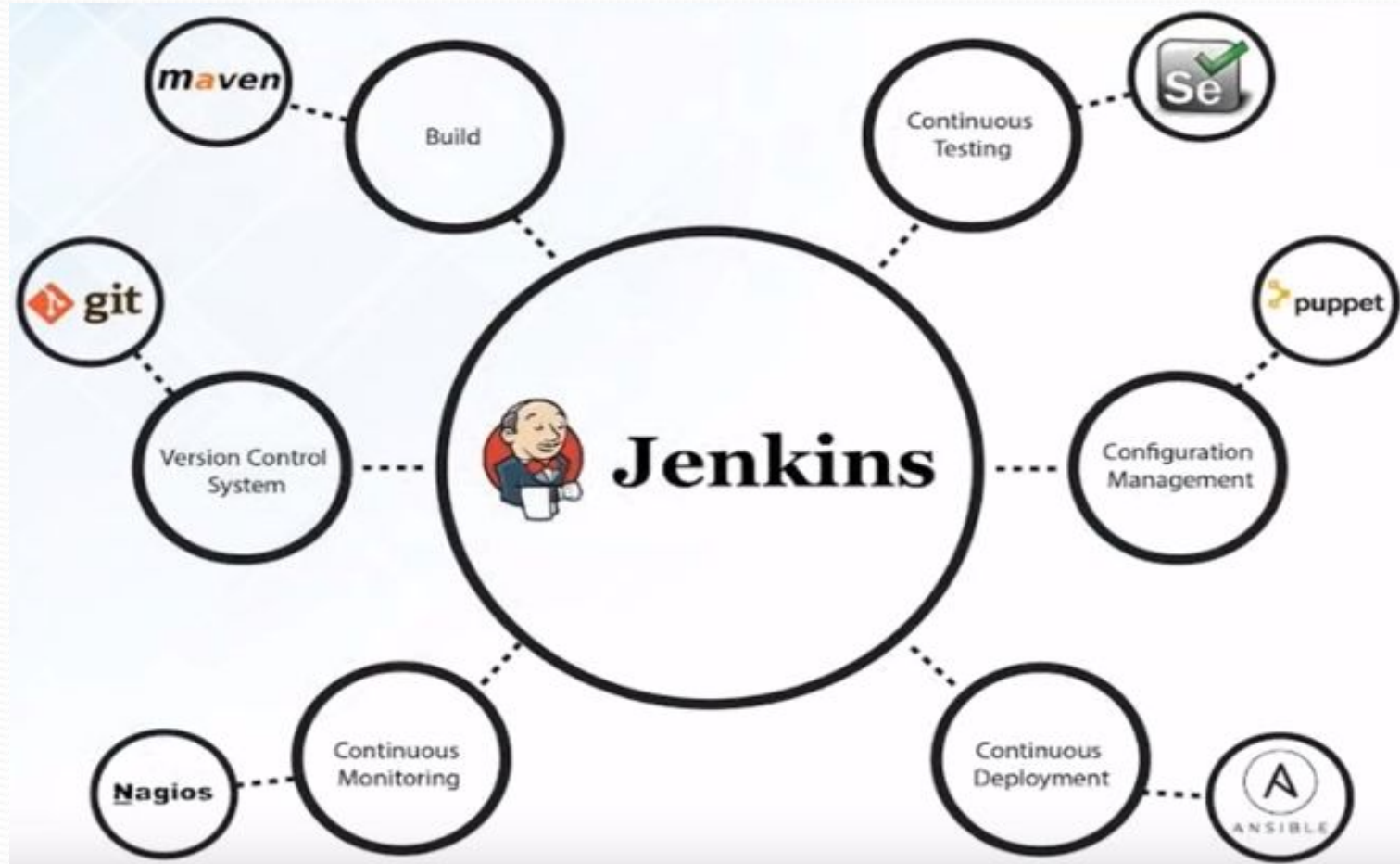
Git is a distributed Control Version tool that supports distributed non-linear workflows by providing data assurance for developing quality software.





# Jenkins

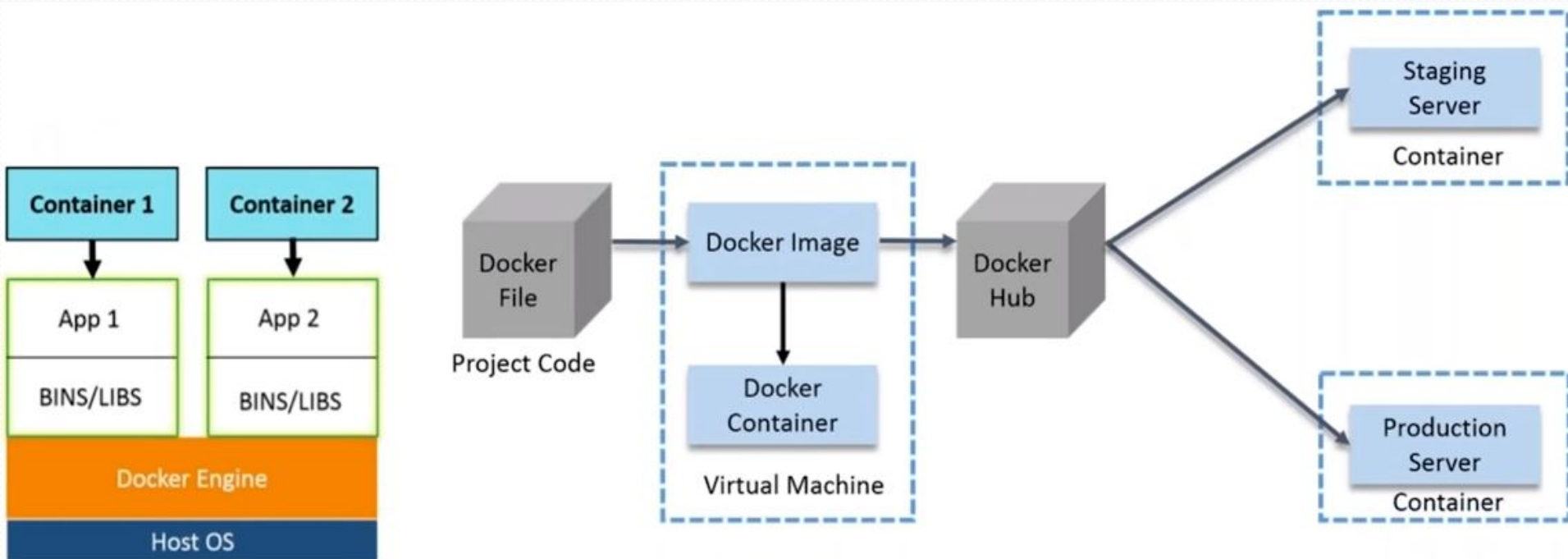
- Jenkins is an open source automation tool written in Java with plugins for CI purpose.
- Plugins allow integration of various DevOps stages.





# Introduction to docker

- Docker is a computer program that performs OS level virtualization, also known as "containerization".
- So visualize "Container" as a box in which your application is present with all its dependencies.





# Jobs to discuss

## DevOps Engineer (Linux & AWS)

- Required Skills & Experience
  - 3+ years of experience with **systems administration experience, Linux or Unix focused**
  - In depth knowledge of core **AWS services** such as IAM, Route53, SES, VPC, EC2, S3, and CloudFormation
  - Experience using a **configuration management tool like Ansible, Puppet or Chef**

\*\*NOTE: pls focus on the **bold** ones

# Jobs to discuss ...contd

## Site Reliability Engineer (Java focussed)

- Required Skills & Experience
  - **Configuration Management** proficiency (**Ansible**)
  - **Advanced Coding/Scripting** competence with **Java**
  - Extensive experience with **Docker**
- Desired Skills & Experience
  - Any background in cyber-security a major plus
  - Ability to work independently as well as collaborate
  - A vibrant **GitHub** account shows you like what you do

\*\*NOTE: pls focus on the bold ones