Introduction to Devops

What is DevOps:

- DevOps is the union of people, process, and product to enable continuous delivery of value to our end users.
- DevOps is a new culture approach to manage a SDLC Project
- DevOps is people following a process enable by products to deliver value to end users
- It follows continuous integration method un like Agile which follows iteration method

History of DevOps:

Year : 2007

● Patrick Debois, a software development consultant
● Over fifteen years, in different roles in IT as a developer, network specialist, system administrator, tester and project manager.
● Patrick had always been bothered by the differences between how Dev and Ops worked.

Year 2009- 2012 (movement)

● Conferences and webinars held on this approach under tag name "DEVOPS" 2012
● Boom started 2014
● Large Companies started to implement

Dev and Ops:

- Developers are included in the dev team
- The main goal of this team is to write the code and test it
- These Dev process includes the stages like coding,Building and testing
- Operations team members are included in ops team
- The main goal of this team is to deploy the code/Application
- These ops process includes the stages like release,deploy and operations

DevOps Definitions:

- "Devops is the practice of Operations, Development engineers, all other stakeholders participating together in the entire service life cycle from design, development process to production support"
- Simply → Dev + Ops = working together → Devops
- Slogan → " From code to Prod"
- This Collaboration is for to deliver software in a continuous manner that enables the business to more quickly seize market opportunities and reduce the time to include customer feedback

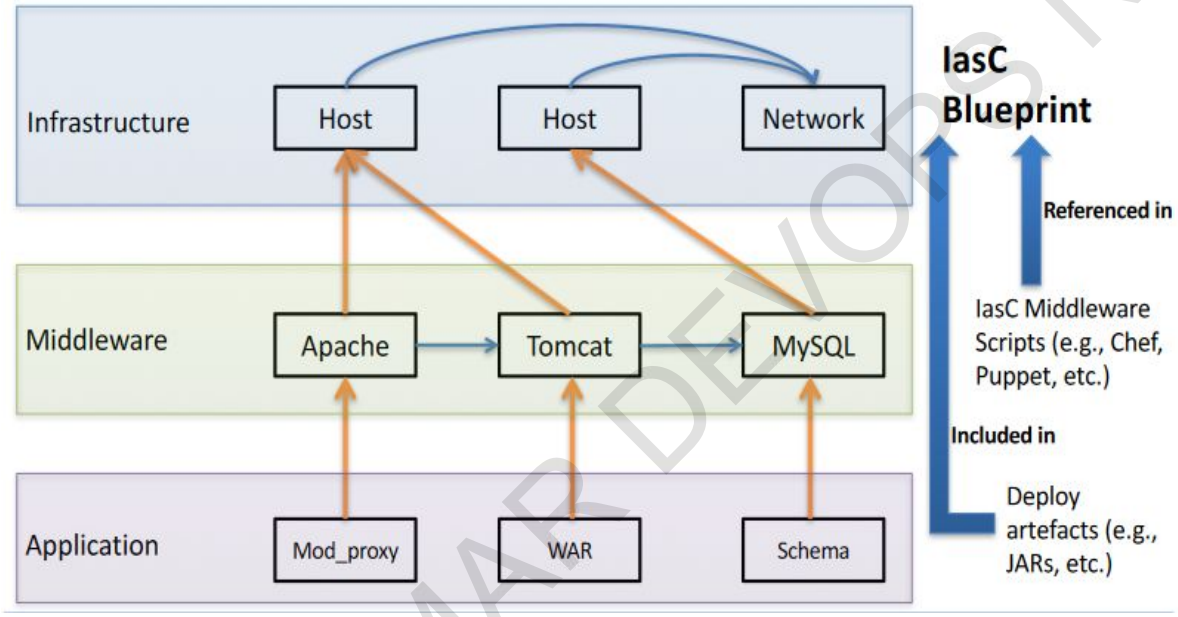
DevOps - software Development life cycle:

DevOps main Objectives:

- Configuration management
- Release management
- Continuous integration
- Continuous deployment
- Infrastructure as Code
- Test automation
- Application performance monitoring

Infrastructure as a code:

- Infrastructure--as--code, i.e., “a blueprint detailing physical artefacts, all scripts for all lifecycle phases and all artefacts needed for deployment”
- An Application Deployment Topology, i.e., “a graph of physical artefacts that need support for several lifecycle phases (e.g., procurement, installation, configuration, deployment, undeployment, teardown, etc.)”



Continuous Integration and Deployment:

- Continuous Integration (CI) can be defined as a software engineering practice, where isolated changes are immediately tested and reported when they are added to a larger code base.
- The goal of CI is to ensure timely detection, addressal and feedback in case of any defect reported during the product life cycle.
- Continuous Delivery (CD) aims to automate the software delivery process to enable easy and assured deployments into production —at any time.
- By using an automatic or manual trigger, CD ensures the frequent release of bug-free software into the production environment and hence into the hands of the customers.
- The main goal of CD is to produce software in short cycles so that new features and changes can be quickly, safely, and reliably released at any time.