

SEPM : Experiment - 1

Aim : To understand DevOps, principles, practices, roles & responsibilities of DevOps.

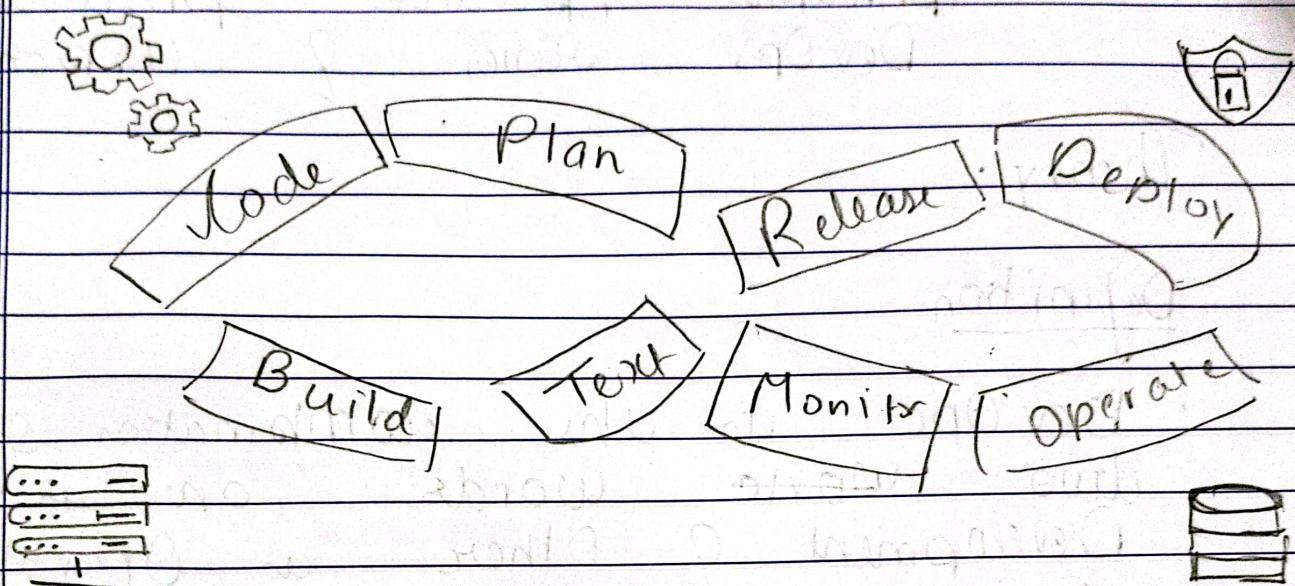
Theory :

Definition

- DevOps is the combination of two words, one in Development & other in Operations process collectively.
- DevOps helps to increase organisation to serve their customers better & compete more strongly in the market.
- DevOps can be defined as sequence of development & IT operations with better communication & collaboration.
- DevOps has become one of the most valuable business disciplines for enterprises & organisations.

Architecture

DevOps Architecture



1] Build - Without DevOps, the cost of the consumption of the resources were evaluated based on the pre-defined individual usage of cloud sharing of resources. Comes into the picture.

2] Code - Many good practices such as Git enable the code to be used which ensures writing the code for business, helps to track changes, getting notified at the creation behind the difference in the actual & expected output.

3] Test - The application will be ready for production after testing. In the case of manual testing & moving the code to the output. The test can be automated, which decreases the time for testing so that the time to deploy the code to production can be reduced as automating the running of the scripts will remove many manual steps.

4] Plan - DevOps use Agile methodology to plan the development with the operations & development in sync. It helps in organising the work by plan accordingly to increase productivity.

5] Monitor - Continuous monitoring is used to identify any risk of failure. Also it helps in tracking the system accurately so that the health of the application can be checked.

6] Deploy - Many systems can support the scheduler for automated deployment. The cloud management platform enables users to capture accurate insights.

7) Operate - DevOps changes the traditional approach of developing & testing separately. It's teams operate in a collaborative way where both the teams actively participate throughout the service lifecycle.

8) Release - Deployment to an environment can be done by automation. But when the deployment is made to the production environment, it is done by manual triggering.

Principles

- Collaboration
- Data Based decision making
- Customer - centric Decision Making
- Constant Improvement
- Responsibility Through Life cycle
- Automation
- Failure as a Learning Opportunity

7] Operations - DevOps changes the traditional approach of developing & testing independently. It's a team operation in a collaborative way where both the teams actively participate throughout the service lifecycle.

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Advantages →

- DevOps is an excellent approach for the quick development & deployment of application.
- It responds faster to the market changes to improve business growth.
- DevOps escalate business profit by decreasing software delivery time & transportation cost.
- DevOps unclear the descriptive process which given clarity on product development & delivery.
- It improves customer experience & satisfaction.
- DevOps simplifies collaboration & planning all tools in the cloud for customers to access.
- DevOps mean collective responsibility which leads to better team management & productivity.

Disadvantages :

- DevOps is unprofessional or experts in development are less available.
- Developing with DevOps is so expensive.
- Adding new technology into the industries is hard to manage in short time.
- Lack of DevOps knowledge can be a problem in the continuous integration and automation projects.

Conclusion: Here we have known what DevOps is & its Disadvantages.