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EXPERIMENT NO. 1

AIM To understand DevOps, principles, practices, and DevOps roles and responsibility

Theory

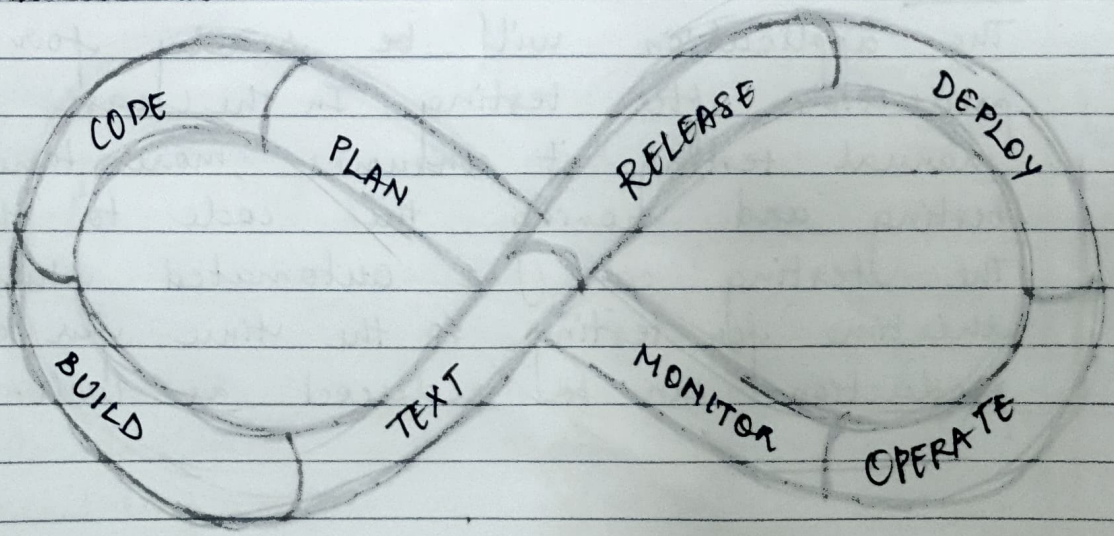
Definition

DevOps is a combination of two words one is development and other is operation process collectively Devops helps to increase organisation speed to deliver application an services. It also allows organisation to serve their customes better and compete more strongly in the market.

Devops can also be defined as a sequence of development and IT operation with better communication and collaboration.

Devops has become one of the most valuable business disciplines for enterpris e of organisation.

ARCHITECTURE



1 BUILD

Without devops the cost of consumption of resources was evaluated on the basis of predefined individual uses with fixed hardware allocation. And withe Devops the usage of cloud sharing of resources comes into picture and the budd is dependent on user needs which is a mechanism to control usage of resource

2 CODE

Many good practices such as Git enables the code to be used, which ensures writing the code for bussiness, helps to track changes getting notified about the reason behind the difference in the actual and expected output and if necessary reverting to the original code developed

3 TEST

The application will be ready for production after testing. In the case of manual testing it consumes more time in testing and moving the code to the output The testing can be automated which decrease the time for testing so the time for code production can be reduced as well.

4. PLAN

Devops uses agile methodology to plan the development. With the operation and development team in sync it helps organising the work

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. The monitor becomes more comfortable - with services where the log data may get monitored.

6. DEPLOY

Many system can support the scheduler for automated deployment. The cloud management platform enables users to capture accurate insights and view the optimization scenario analytics on trends by the development of dashboards

7. OPERATE

Devops changes the traditional approach of developing and testing seperately. The teams operate in a collaborative way where both the teams actively participate through the service lifecycle. The operation team interacts with developers and they come up with a monitoring plan.

5. 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 throughout lifecycle
- Automation
- Failure as Learning Opportunity

ADVANTAGES

- It responds faster to market change to improve business growth
- It escalates business profit by decreasing software delivery time and transportation costs
- It improves customer experience and satisfaction
- It simplifies collaboration and places all tools in cloud for easier access
- It is an excellent approach for quick development and deployment of application

DISADVANTAGE

- Devops proffesional or experts are less available
- Developing with Devops is expensive
- Adopting new technology is hard to manage in short time
- Lack of devops knowledge can be a problem in the continous integration of automation project

CONCLUSION

Hence we know what Devops is and its advantage and disadvantage