Devops is a set of practices that combines software development and IT operations which aims to reduce system dev. lifecycle and provide CI and CD deployment pipelines to deploy software to production.

Devops approach is to bring developers close to IT operations. Continuous and improved collaboration is needed between business, developers and IT operations.

Process improvement plays a tremendous role in achieving CI and Deployment by utilizing iterative development approach like agile development lifecycle.

New technology is always be required to support automation of deployments, organizational change is critical to the success of devops transformation, it requires a transformational leadership approach understanding the impact it will have on people, processes and systems.

Main objective of implementation of devops practice is to achieve full automation from code to production without human intervention.

CI is a practice that focuses on developers integrating code regularly into a shared environment

CD on the other hand deploys changes automatically after passing all the stages in the production pipeline.

A general consensus exists in the IT community on the devops processes by following steps like plan, build, CD, deploy, operate and continuous feedback.

During this process continuous communication is encouraged, plan starts with users and business planning the requirements and plan, create solution architecture and design

Build is where the implementation starts beginning with coding, configuration, unit testing, source control code check in

CI pipeline combines project components of different parts of the solution together in one integrated builds executing automated tests like code quality check, security vulnerability checks, unit testing etc.

Deploy consists of configuration management – configure server/services/security and any other config settings like , artifact management is to store config files like build, deployment scripts and any other files needs to be shared within the team, deployment environments, package deploy and smoke test to ensure deployment is done successfully.

Operate – Monitor any possible failures like security intrusion, server failures, application exceptions, performance monitoring.

Continuous feedback – reporting failures, bug fix reporting

Diagram

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A screenshot of a computer

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Graphical user interface, text, application

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UAT: <https://networkingcauat.azurewebsites.net/>

Staging: <https://networkingcastaging.azurewebsites.net/>

Production: <https://networkingcaproduction.azurewebsites.net/>

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