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ASSIGNMENT-2

(1.) Along with its efforts to break down barriers to communication and collaboration between development and IT operations teams, a core value of DevOps is customer satisfaction and the faster delivery of value. It is also designed to propel business innovation and the drive for continuous process improvement.

The practice of DevOps encourages faster, better, more secure delivery of business value to an organization's end customers. This value might take the form of more frequent product releases, features, or updates. It can involve how quickly a product release or new feature gets into customers' hands — all with the proper levels of quality and security. Or, it might focus on how quickly an issue or bug is identified, and then resolved and re-released.

Underlying infrastructure also supports DevOps with seamless performance, availability, and reliability of software as it is first developed and tested then released into production.

Some Benefits of DevOps are as follows:

- faster, better products delivery.
- faster issue resolution and reduced complexity
- greater scalability and availability
- more stable operating environments
- better resource utilization
- greater automation
- greater visibility into system outcomes
- greater innovation.

(2)

slack

Launched in year 2013, slack is still on of the top communication tools used by teams for effective collaboration on projects. This tool in the DevOps arsenal is used by technical organizations across the globe to tear down barriers and offer all team members a clear insight into the workflow. One exciting feature about slack is that it allows developers to collaborate using toolchains in the same environment they are communicating with other maintenance and service members.

Jenkins

An open-source continuous integration server, Jenkins automates the complete build cycle of a software project. The USP of this tool is the pipeline feature it offers, which can be utilized by the developers to automatically commit code into the repository, run test cases, as well as fetch report

obtained after testing.

Docker

It is a tool which is at the centre of containerization, a trend which is quickly gaining momentum in the IT world. It allows secure packaging, deploying and running of applications irrespective of the running environment. Every application container contains the source code, supporting files, run time, system config files, etc. responsible for application execution.

Phantom

security of software is one of the prime concerns of any DevOps team. As such, the Phantom tool comes as a great help to developers who wish to build a ~~feasible~~ defensible infrastructure from the very beginning of SDLC.

Nagios.

Similar to Phantom, Nagios is also a monitoring tool which tends to keep tabs on the applications, servers as well as your overall business infrastructure. The tool comes in as a great help for large organizations which have a countless numbers of circuitry (routers, servers, switches, etc.) in the backend.

Vagrant

It is a tool for managing and working with virtual machines in a single workflow. Using Vagrant, team members can share software running environment and can

test applications faster without wasting time on setting up configurations.

Ansible.

It is one of the most simple yet effective II orchestration and configuration management tools available in the market. Compared to its competitors such as Puppet and Chef, which are loaded with features, Ansible offers a softer outlook and doesn't hog on your device's resources in background.

GitHub

Using this tool, developers can make rapid iterations to the code, the notification of which is sent instantaneously to other team members. In case of any error or fallout, immediate rollbacks can be done to the previous version.

Sentry

It is one of the best tools for bug detection. It supports languages such as Ruby, IOS, Java script etc. and further has inbuilt SDK, which can be customized for supporting most languages and frameworks.

Bit Bucket.

It is also a tool which helps manage project code throughout the SDLC. While GitHub still ranks as the top repository, people are shifting to BitBucket due to its reduced cost as well as the feature of the private repository.