Introduction to DevOps

DevOps is a combination of Development and Operations.

1. What is DevOps? .

DevOps is not a technology or tool, it is a concept of behavior, and It is an extension of Agile Methodology... . The DevOps is a set of practices designed to overcome the gap between development, QA and Operations by effective communication and collaboration, incorporating continuous integration process with automated deployment. . DevOps helps to increase an organization's speed to deliver applications and services. It allows organizations to serve their customers better and compete more strongly in the market. .

There are four basic continuous processes in DevOps: Continuous Integration, Continuous Delivery, Continuous Testing and Continuous Monitoring

1. Relationship Between Agile and DevOps .

Agile Development is an umbrella term for several iterative and incremental software development methodologies. .

The most popular agile methodologies include Extreme Programming (XP), Scrum, Crystal, Lean Development, and Feature-Driven Development (FDD). .

On the other hand, DevOps is about a culture where development, and operations collaborate to give maximum throughput and high-end outcomes. .

Similar to Agile, there are ways through which DevOps can be implemented such as deep communication and automated deployment. .

Agile is all about software development while DevOps deals with software development and operations.

Note: Therefore one thing is clear that DevOps is an extension of Agile methodology and it is always fruitful to integrate these two rather than replacing with one another.

1. DevOps Lifecycle .

DevOps is deep integration between development and operations. Understanding DevOps is not possible without knowing DevOps lifecycle. Here is a brief information about the Continuous DevOps life-cycle: . Development, Testing, Integration, Deployment, Monitoring,

1. Software Tools for DevOps .

As DevOps is the collaboration of Development, QA and Operations, it is obvious that a single tool cannot be adequate for all the needs. So there are multiple tools required in each stage to perform all the operations successfully.

Popular Tool for DevOps Automation .

Git : Version Control System tool .

Jenkins : Continuous Integration tool .

Selenium : Continuous Testing tool . Puppet, Chef,

Ansible : Configuration Management and Deployment tools .

Nagios : Continuous Monitoring tool .

Docker : Containerization tool

5. DevOps and Software Testing . Software Testing is one of the Process in four basic processes of DevOps...