**Jenkins**

**What is Jenkins?**

Jenkins is an open-source server that is written entirely in Java. It lets you execute a series of actions to achieve the continuous integration process, that too in an automated fashion.

**What can Jenkins do?**

* Software build using build systems such as Gradle, Maven, and more.
* Automation testing using test frameworks such as Nose2, PyTest, Robot, Selenium, and more.
* Execute test scripts (using Windows terminal, Linux shell, etc.)
* Achieve test results and perform post actions such as printing test reports, and more.
* Execute test scenarios against different input combinations for obtaining improved test coverage.
* Continuous Integration (CI) where the artifacts are automatically created and tested. This aids in identification of issues in the product at an early stage of development.

**What is Jenkins Pipeline?**

* Pipeline in Jenkins is a group of jobs (or events) that are interlinked in a particular sequence. Jenkins Pipeline is a set or suite of plugins that provides support for implementation and integration of Continuous Delivery pipelines into Jenkins.
* The Pipeline also provides a set of tools that are useful for modelling simple as well as complex delivery pipelines ‘as code’ through ‘Pipeline Domain-Specific Language (DSL)’ syntax.

**Advantages of Jenkins**

* Jenkins is open-source and free to use. It is a preferred CI/CD tool by early-stage start-ups as well as large corporations since it has been under development since a long time.
* It is a rich plugin ecosystem. There were close to 1500+ plugins available for use.
* Jenkins can be integrated with popular cloud platforms such as Amazon EC2, Google Cloud, VMWare vSphere, Digital Ocean, and more.
* Jenkins Pipelines can be extremely useful for realizing CD requirements for large-scale projects.