What is CI/CD?

In software development , when multiple developers or teams are working on different segments of same web application, we need to perform integration test by integrating all modules. In order to do that an automated process for each piece of code is performed on daily basis so that all your codes get tested.

Explain your CI/CD environments?

In ci/cd we use tool chains like git hub, Jenkins, junit, jfrog, tomcat etc.., we have a jenkins server , Jenkins nodes and those nodes are linux nodes. In our Jenkins we have around 100 jobs in production and in Dev-Qa Jenkins have 200 jobs. As a devops engineer we take care of ci/cd implementation in my project and also I take care of Jenkins administration as well as configuration. In our organisations we have onboard teams on CI/CD and provided environments like Jenkins that has to be configured.

What is Jenkins pipeline?

Pipeline

A Pipeline is a user-defined model of a CD pipeline. A Pipeline’s code defines your entire build process, which typically includes stages for building an application, testing it and then delivering it.

Also, a pipeline block is a key part of Declarative Pipeline syntax.

Node

A node is a machine which is part of the Jenkins environment and is capable of executing a Pipeline.

Also, a node block is a key part of Scripted Pipeline syntax.

Stage

A stage block defines a conceptually distinct subset of tasks performed through the entire Pipeline (e.g. "Build", "Test" and "Deploy" stages), which is used by many plugins to visualize or present Jenkins Pipeline status/progress. [6]

Step

A single task. Fundamentally, a step tells Jenkins what to do at a particular point in time (or "step" in the process). For example, to execute the shell command make use the sh step: sh 'make'. When a plugin extends the Pipeline DSL, [1] that typically means the plugin has implemented a new step.

How build happens in your Jenkins?

Jenkins build job as a particular task or step in your build process. This may involve simply compiling your source code and running your unit tests. Or you might want a build job to do other related tasks, such as running your integration tests, measuring code coverage or code quality metrics, generating technical documentation, or even deploying your application to a web server.

Jenkins supports several different types of build jobs. The two most commonly-used are the freestyle builds and the Maven builds. The freestyle projects allow you to configure just about any sort of build job: they are highly flexible and very configurable. The Maven builds understand the Maven project structure, and can use this to let you set up Maven build jobs with less effort and a few extra features. There are also plugins that provide support for other types of build jobs.

What are the projects in your Jenkins?

Did you write any pipeline scrypt?

What are the plugins you are using in your Jenkins?

How do you get failed build reports?

All builds on the server that are non-successful (aborted, failed, unstable) will be scanned for all failure causes.

If an indication is found, the description will be put directly on the build page, with a link to the matching line in the build log.

What is sonar qube?

SonarQube collects and analyzes source code, measuring quality and providing reports for your projects. It combines static and dynamic analysis tools and enables quality to be measured continuously over time.

How do you check code quality in your project?

By using sonarqube

What are the quality gates in sonar qube?

Which artifactory tool you are using?

Jfrog.

Artifactory can store and manage your binaries, and is transparent to the corresponding packaging client. The client works with Artifactory in exactly the same way it would work with its native repository.

How do you take backup of your Jenkins server/jobs?

By using backup plugins

https://www.tutorialspoint.com/jenkins/jenkins\_backup\_plugin.htm

How do you recover Jenkins server password?

The simplest solution is to completely disable security - change true to false in /var/lib/jenkins/config.xml file.

<useSecurity>true</useSecurity>

Then just restart Jenkins, by

sudo service jenkins restart

And then go to admin panel and set everything once again.

How to give access and authorization in Jenkins?

* Go to Jenkins -> Manage Jenkins -> Configure Global Security.
* Check "Enable security".
* Set "Jenkins own user database" as security realm.
* Check "Allow users to sign up"
* Choose "Matrix based security"
* Check "Overall read" on Anonymous.
* Add your admin account in the matrix, check every box.
* Save configuration and sign up with the admin username to set a password.

How to migrate Jenkins server?

By using aws

How do you make Jenkins high availability?

Auto scaling and load balancing

What are the issues recently you trouble shooted?

What are the frequent issues in your Jenkins?

Which port Jenkins is running?

8080

Can we change Jenkins port number? If yes how?

Yes.

Stop Jenkins

$sudo service jenkins stop

change port number in /etc/sysconfig/jenkins like i did for port 8081

JENKINS\_PORT="8081"

start Jenkins again

$sudo service jenkins start

Which build scripts you are using?

What is the parameterized jobs in Jenkins?

How do you configure build breakers in Jenkins?

What are the terms in dsl groovy pipeline?

Can you write a sample dsl groovy pipeline script?

What are the terms in DSL groovy (pipeline) ?

Can you write a sample DSL groovy ?

How you pass Secrets in your Jenkins job ?

How many Jenkins server and nodes in your environment ?

How many jobs you have in your jenkins ?

I configure 1 project in Jenkins I am trying to configure another project but its not getting added, how can you troubleshoot ?

How to configure Windows agents in Jenkins ?

How to reduce the build time in Jenkins ?

How do we send previous job output as input to next job ?

How to write (run) parallel build in pipeline ?

What is node ?

Q)What are the various ways in which build can be scheduled in jenkins?

Biuld can be scheduled in following ways:

By source code management commits

after completion of other builds

can be scheduled to run specified time(crons)

manual build requests

Q)How will you secure jenkins?

Ensure global security is on.

Ensure that jenkins is integrated with my company's user directory with appropriate pulgin.

Limit physical access to jenkins data/folders.

periodically run security audits on same.

Q)How can you clone a git repository via jenkins?

If you want to clone a git repository via jenkins, you have to enter the email and user name for your jenkins system. Switch into your job directory and execute the "git config" command for that.

Q) How you can deploy a custom build of a core plugin?

Stop jenkins

copy the custom HPI to $jenkins\_HOME/plugins

delete the previously expanded pulgin directory

make an empty file called <plugin>.hpi.pinned

start Jenkins

Q) How you can move or copy jenkins from one server to another?

Slide a job from one installation of jenkins to another by copying the related job directory

Make a copy of an already existing job by making clone of a job directory by a different name.

Renaming an existing job by renaming a directory.

Q)Mention some of the useful plugins in jenkins?

Maven 2 project

Amazon EC2

HTML publisher

copy artifact

join

Green Balls

Q)What are the advantages of jenkins?

At integration stage, build failures are cached

For each code commit changes an automatic build report notification generates.

To notify developers about build report success or failure, it's integrated with LDAP mail server

Achieves continuous integration agile development and test driven development

With simple steps, maven release project is automated.

Easy tracking of bugs at early stage in development environment than production.

Q)What is the requirement for using jenkins?

A source code repository which is accessible, for instance, a Git repository

A working build script, e.g., a Maven script, checked into the repository