Jenkins Interview questions

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1. which tool have you used for implement CI/CD ? --> jenkins

2. Any alternate tool do you know for CI/CD ? -->

bamboo/udeploy/teamcity/tfs/github actions/circleci

3. what is Continuous Integration?

get scm --> compile -->test -->build -->static code analysis -->nexus --> build failure send notification (CI)

This is a software development practice which is used to merge the code changes into the central repository regularly. After merging, automated Build and Tests are run.

Continuous integration is mainly used to find and address bugs quicker, improve software qualify, reduce validation time and new release updates.

4. what type of jobs have you configured in jenkins?

Freestyle Job, Pipeline Job, Multibranch Pipeline

5. what are the types of jobs are available in jenkins?

Freestyle Job, Pipeline Job, Multibranch Pipeline, Maven

6. what is difference b/w freestyle and pipeline?

Freestyle job is a general purpose and highly flexible job which is created by using the available builtin steps/actions in the job.

Pipeline Job is the one which is created using the pipeline as a script. This can be used to run the entire software development workflow steps as one unit.

7. what is pipeline?

Pipeline is a group of events or jobs which are interlinked with one another in a sequence. Pipeline is a set of plugins that supports CI and CD using Jenkins. Pipeline uses Domain Specific Language (DSL) to accomplish the sequence of jobs.

Pipeline uses Jenkinsfile which can have the pipeline script and can be stored in the SCM repository.

This is a job which executes the development workflow in multiple steps. This uses Pipeline as a script which is either Script based or Declarative.

--> 8. what is declarative pipeline?

Declarative pipeline is a pipeline script which is used to implement the development workflow in step wise manner. This script is advancement for script-based pipeline.

This contains pipeline as a code and is written in Jenkinsfile which can be pushed into a SCM such as GIT.

9. what is difference between declarative pipeline and script based pipeline?

Declarative pipeline starts with Pipeline keyword and script based starts with node.

10. write the pipeline syntax?

Script based:

Node{

Stage(){

---

---

}

}

Declarative:

Pipeline{

Agent any

Stages{

Stage(‘Build’){

Steps{

…….

…….

}

}

}

}

11. what is master/slave architecture? what is the use of master/slave?

Master/Slave architecture is used to manage distributed builds. This architecture uses TCP/IP protocol.

The main Jenkins server in this distributed architecture is the master server.

The masters job is to pull the SCM repositories which could be from git/svc etc..to

Schedule build jobs

Dispatch builds to the slaves for the actual execution

Monitor the slaves online/offline as required

Record and present the build results.

So, primarily the masters job is to orchestrate the builds and jobs across the whole cluster, including performing these jobs b itself directly.

A slave Jenkins instance is a java executable that runs on a remote machine.

The slave Jenkins instances accept the request from Jenkins master instance, execute the job and report back the status to the master. Slaves can run on variety of OS.

12. How many ways we can connect the slaves?

13. How many ways we can provide security for your jenkins server?

14. what is sonarqube ? have you configure ? How you configure ?

SonarQube is a tool for continuous inspection of code quality to perform automatic review of static analysis of code to detect bugs and security vulnerabilities on programming language.

SonarQube offer reports on duplicate code, coding standards, unit test, code coverage, code complexity, comments, bugs and security vulnerabilities.

SonarQube provides fully automated analysis and integration with maven, ant, gradle, msbuild and continuous integration tools like bamboo, circleci, github actions etc.

15. what type of artifactory repository tool have you used? --> nexus/jfrog/s3 oss -- pro

16. what is the use of artifactory tools?

Artifactory tools are used to take the backup of the Artifacts. Eg. Nexus, jfrog, s3

17. How you declare a variables in pipeline?

Variables in a Jenkinsfile can be defined by using the def keyword. These variables should be defined before the pipeline block starts. When variable is defined, it can be called from the Jenkins declarative pipeline using ${...} syntax.

// Define variable

def myVariable = "foo"

// Print variable

pipeline {

agent any

stages {

stage ("Print variable") {

steps {

echo "My variable is ${myVariable}"

}

}

}

}

18. what is DSL language? domain spcific language?

19. what is upstream/downstream projects? what is the use of it? which scenario you configure?

Upstream/downstream projects are used to run the jobs as a sequence set. Or if there is any dependency between jobs then we use up/down stream jobs.

Configuration for Upstream:

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Congigure 🡪 build Triggers 🡪 Build only after other projects are built 🡪 projects to watch

Configuration for downstream:

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Configure 🡪 post build actions 🡪 build other projects 🡪 projects to build

20. If a have 10 repositories in github how many jobs you can configure?

21. Dou you have experience to install jenkins?

22. How you configure jdk,maven,gradle...etc?

23. in my environment i have different version for java implementation projects is there ? How you configure multiple jdk's?

sudo update-alternatives --config java

24. what are the plugins have you used in your project?

25. How to take backup my jenkins? thin backup plugin

26. what is jenkins Home directory? .jenkins

27. how to deleted old builds automatically?

Discard old builds checkbox

28. how to configure multiple environment deployment?