Jenkins Interview Questions

**Q1. What is Jenkins?**

Jenkins is an open source automation tool written in Java with plugins built for Continuous Integration purpose. Jenkins is used to build and test your software projects continuously making it easier for developers to integrate changes to the project

**Use Case**

 First, a developer commits the code to the source code repository. Meanwhile, the Jenkins server checks the repository at regular intervals for changes.

 Soon after a commit occurs, the Jenkins server detects the changes that have occurred in the source code repository. Jenkins will pull those changes and will start preparing a new build.

 If the build fails, then the concerned team will be notified.

 If built is successful, then Jenkins deploys the built in the test server.

 After testing, Jenkins generates a feedback and then notifies the developers about the build and test results.

 It will continue to check the  source code repository for changes made in the source code and the whole process keeps on repeating

**Q2. What are the benefits of using Jenkins?**

 At integration stage, build failures are cached.

 For each change in the source code an automatic build report notification is generated.

 To notify developers about build report success or failure, it is 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

**Q3.** **What are the pre-requisites 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

**Q4.** **Mention some of the useful plugins in Jenkins?**

* Maven 2 project
* Git
* Amazon EC2
* HTML publisher
* Copy artifact
* Join
* Green Balls

**Q5.** **Mention what are the commands you can use to start Jenkins manually?**

systemctl status Jenkins

**Q6. Explain how to create a backup and copy files in Jenkins?**

Answer to this question is really direct.

To create a backup all you need to do is to periodically back up your JENKINS\_HOME directory. This contains all of your build jobs configurations, your slave node configurations, and your build history. To create a back-up of your Jenkins setup, just copy this directory. You can also copy a job directory to clone or replicate a job or rename the directory

**Q7** **Explain how you can deploy a custom build of a core plugin?**

Below are the steps to deploy a custom build of a core plugin:

* Stop Jenkins.
* Copy the custom HPI to **$Jenkins\_Home/plugins**.
* Delete the previously expanded plugin directory.
* Make an empty file called **<plugin>.hpi.pinned**.
* Start Jenkins

**Q8.** **What are the various ways in which build can be scheduled in Jenkins ?**

You can schedule a build in Jenkins in the following ways:

* By source code management commits
* After completion of other builds
* Can be scheduled to run at specified time ( crons )
* Manual Build Requests

**Q9.** **What is the difference between Maven, Ant and Jenkins?**

Maven and Ant are Build Technologies whereas Jenkins is a continuous integration tool.

**Q10. What are the two components Jenkins is mainly integrated with?**

According to me Jenkins is mainly integrated with the following:

* Version Control system like GIT,SVN.
* Build tools like Apache Maven.

**Explain what is continuous integration?**

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 bases so that all your code get tested.

**How can you setup Jenkins jobs?**

Follow these steps:

* Select new item from the menu.
* After that enter a name for the job and select free-style job.
* Then click OK to create new job in Jenkins.
* The next page enables you to configure your job.

**Aamir’s interview Questions**

**Interview script for jenkins.**

I have used jenkins in my previous projects as my main Deployment tool. I have used it with Maven , Anisble, and my custom scripts with Jenkins. A typical example of a jenkins build would be that the code would get checked out to a common workspace directory. THe next step in the build would be to compile the code using the maven command line interface. Finally the artifact which was created used to be deployed to the target machines. I have also then written custom jenkisn jobs in shell to do database refreshes across envionments, adhoc nodejs builds, and pipeline creation for deployments. I have got good experience running master slave jenkins servers and configuing build executors in the jenkins front. I have also done rolling upgrades to jekins with proper backup and rollback stratergy.

**Q1-What kind of CI-CD have you done in Jenkins tell me about it?**

A1- I have configured multiple jobs in jenkins and connected with the build pipeline plugin. I have done this for java and web apps (html).I have used both plugins and conf management tools like ansible and chef for deployment.

We had freestyle builds which used to trigger downstream builds in sequence and also send out notifications to various stake holders for respective build status messages. Artifacts were pushed to a nexus/central repository. Final deplyment was achieved using ansible in most cases.

**Q2- How did u configure authentication in jenkins?**

A1 - So if the team size is less than 10 we would ideally use the jenkins own database with matrix authentication plugin . If the team size is more than 10 then i would integrate it with LDAP so that we can manage roles easily.

**Q3- How do you scale up jenkins**

A3:- you can scale jenkins using two ways. The first one is vertical scaling wherein you can increase the machine size lets say from t2.medium to m4.large.

You can also add jenkins slaves to the master so that they can share the load of the master by runnign some builds.

**Q4-how to backup jenkins?**

A4- You can have a python boto3 script which takes a backup of the machine daily and removed last 7 days image once todays image is success fully created.

Second method is to take daily rsync backup of the jenkins workspace and copy it to some other server ,preferably in a different region or availabilty zone

**Q5- What version of jenkins are you using.?**

Jenkins ver. 2.60.3

**Q6:- What all plugin have you used in jenkins**

git plugin

github plugin

PMD

Cobertura

jUnit

maven

Build pipeline view plugin

HTML plugin

Archive artifacts plugin

Publish PMD reports plugin

Email extension plugin

Matrix base authentication plugin

Matrix based project authentication plugin

Git plugin

jUnit real time tester plugin