1. What is Continuous Integration?

Continuous integration is a software practice to integrate the code developed by developers daily and each check-in is then verified by an automated build, allowing teams to detect problems early.

1. What is Jenkins?

Jenkins is an open source continuous integration tool which is written in java.

1. What is the difference between Jenkins, Maven & Ant?

* Jenkins – Continuous integration tool
* Maven – is a build tool and contains formal conventions and life cycle
* ANT – is a build tool with no formal conventions and no life cycle.

1. SCM that Jenkins supports?

GIT & SVN

1. What is relation between Hudson & Jenkins?

Hudson is a proprietary tool & Jenkins is an open source tool which is forked from Hudson

1. What are advantages of using Jenkins?

It is an open source tool & easy to install

It has much more plug-ins to make the work easier ( More than 900+ )

Easy to create plug-ins if not available

1. What are plug-ins in Jenkins?

Plug-ins are extension for functionality of Jenkins

1. Mention all the plug-ins you used in Jenkins and its purpose?

* ZEN TIMESTAMP – Used for versioning the successful build artifacts.
* Build pipeline – Used to view the status of upstream & downstream jobs
* Copy Artifact – Used to copy the generated artifacts from one job to another job.
* Deploy To Container – Used to deploy to the servers like Tomcat, Jboss
* Ansible – Used to run ansible playbook
* GIT – Used to get the source code from the Github repository
* Maven – Used to build the source code & generate artifacts.
* Deploy to Beanstalk ( AWS ) - Used to deploy the artifacts to beanstalk environments.
* Nexus – it is used to store the generated artifacts in nexus repository.
* Checkstyle – Used to generate the trend report of an open source static code analysis program.

1. How do you clone git repo in jenkins job?

By using git repository URL in Source code management

1. How do you build java code with Maven in Jenkins?

By using Invoke Top Level Maven targets plug-in and specifying your goal like Install.

1. What is static code analysis and what plug-in you used for it?

Static code analysis is analysing the code without executing it and it helps to maintain the code quality.

1. What is downstream and upstream job?

Downstream job starts when the current job completed

Upstream job - current job will starts when other jobs are built

1. What is Nexus repository manager?

Nexus repository manager is a hosted repository to store the artifacts by versioning them.

1. How can you version and upload artifacts in Nexus repo?

By using Zen-timestamp plug-in and Nexus artifact up loader plug-in we can upload artifacts to Nexus repository.

1. How can you deploy artifact to tomcat server from Jenkins job?

By using Deploy to Container plugin we can deploy by providing tomcats URL and artifacts to deploy.

1. What is workspace in jenkins?

A disposable directory on the file system of a node where work can be done by a pipeline or project and Jenkins project files like artifacts can be stored.

1. Copying artifacts to another job?

Using copy artifacts plugin we can copy the artifacts from one job to another job.

17.1 What is build pipeline This plugin provides a Build Pipeline View of upstream and downstream connected jobs that typically form a build pipeline. In addition, it offers the ability to define manual triggers for jobs that require manual intervention prior to execution.

1. How to create users in Jenkins?

Manage Jenkins-->Manage Users-->Create User

1. How to add/remove/disconnect nodes in Jenkins?

Manage Jenkins-->Manage Nodes-->Add/Remove Nodes

1. How to restrict jenkins job to execute on a particular node?

select Restrict where the project can be run and mention the node name.

1. How to setup multiple Java or Maven or Git versions in Jenkins server?

Manage Jenkins-->Global Tool Configuration

1. How to set Environmental Variables in Jenkins?

Manage Jenkins-->Configuration System

1. How to install/update/remove Plugins in Jenkins?

Manage Jenkins-->Manage Plugins--> Available/Installed/Updates

1. How to execute ansible playbooks from Jenkins?

By using invoke Ansible Plugin

1. How to pass variables to ansible playbooks from Jenkins job?

Invoke Ansible Playbook --> Advanced-->Extra Variables

1. Build id variable name?

Build

1. What is console output?

Shows the status of the job that has built

1. What is build history?

Record of past builds

1. How to store credentials in Jenkins?

Credentials-->Add Credentials

1. How to deploy older versions of artifacts from Jenkins job?

Using build Timestamps and build ids

1. Name different Phases in Maven and its purpose?

* Validate – Validating the project is correct or not & check all necessary information is available
* Compile – Compile the source code of the project
* Test – Test the compiled source code using a suitable unit testing framework
* Package – take the compiled code and package it in distributable format
* Verify- run any checks on results of integration tests
* Install- install the package into the local repository
* deploy- copies the final package to the remote repository which is sharable for developers

1. How to restart Jenkins from browser?

URL:8080/restart

1. How to start/stop/restart Jenkins from command line?

Service jenkins start/stop/restart

1. What is the location of workspace of jobs in Jenkins server?

/var/lib/jenkins/workspace

1. Benefits of using Nodes in Jenkins?

Distribute the load and run builds parallel in different platforms.

1. How to execute Bash script from Jenkins job?

Configure job--> Execute shell

1. Have you configured Jenkins’s job? If yes, Tell me the process

New item--> Enter name in Freestyle

1. What is continuous integration why we need it?

Integrating the source code deployed by the Developers.

When new feature is added that will integrated automatically with the use of continuous integration

1. How your CI & CD pipelines are configured.

* Fetch Code
* Build Code
* Unit Tests
* Generate artifacts
* Copy Artifacts
* Deploy Artifacts

1. Have you worked on maven?

Yes, i have used the plugin to build a java project in Jenkins.

1. How many slaves are there in your Jenkins. How many executable are there in each slave?

Depends on project, I have used 2 nodes and 4 executable in each slave.

1. Where you can store the build zip file(artifact). And how you deploy this to your environments?

/var/lib/jenkins/workspace, by giving the path of the artifacts i can deploy.

i can also version the artifacts and store in the nexus repository. From nexus repository i can deploy any version by URL & version.

1. How to roll back the project from current version to previous versions?

By passing timestamp, build id.

1. What plugins are used in your project?

* ZEN TIMESTAMP
* Build pipeline
* Copy Artifact
* Deploy To Container
* Ansible
* GIT
* Maven
* Nexus – Used to store the generated artifacts to the Nexus Repositiry
* Checkstyle – Used to generate the trend report of an opensource static code analysis program
* publish checkstyle results.

1. How to write custom scripts in Maven?
2. How to setup jenkins server and nodes using ec2 instances?

Install Jenkins server in EC2 instance, create another ec2 instance as node, create the user and pass the credentials to the jenkins server.

1. how to deploy application by using git and Jenkins

Fetch the code from GIT, build it and use artifacts to deploy by deploy to container plugin in jenkins to deploy the application

1. For java app what are the best tools which is used for CI and CD tools.-

Jenkins, Bamboo, Go CD

1. What problem CI solves, advantage of CI.

CI performs tests on code which is fetched from SCM for spotting the bugs in code by performing unit tests and notifies it to developer.

1. Maven and Ant

Maven – is a build tool and contains formal conventions and life cycle.

ANT – is a build tool with no formal conventions and no life cycle.

1. What is maven from where we get the pom.xml for the jobs?

Maven is a build tool that contains formal conventions and life cycle, we get pom.xml file from the developers. They provide it along with the source code.

1. Maven is a build tool?

Yes it is a build tool.

1. **mvn archetype:generate**

it is a command which will display all the maven archetypes, there you have to select one of the listed archetypes in order to generate a project structure for your project.Archetype is a maven template for java projects which provides predefined structural templates to help the users quickly start java projects.

1. what is pom.xml?

project object model, It contains the information about that particular project and configuration details used by maven to build the project.

1. maven and ant difference and what are the different scenario where it is used----

Ant and Maven both are build tools provided by Apache and the main purpose of these technologies is to ease the build process of a project. Ant doesn't has formal conventions, so we need to provide information of the project structure in build.xml file.

I had used maven build tool in our project and earlier I use to build the projects using ANT with the older build.xml files.

1. what is ant and from where we get the build.xml for the jobs.---

Ant is a build tool which doesn’t have formal conventions and I use to build the projects using Execute Apache ANT plugin and write script source.

1. how pom.xml will read the variables which you have used in the jenkins like version?

The variables will be declared globally in jenkins or can be configured in invoke top-level maven tagrets.

1. what is dependency in pom.xml---

Depending on the project requisites we will be creating the dependencies in the dependencies directory

1. Invoke maven task is there in post build option.

No

1. Are you in admin part of jenkins like installation of jenkins

Yes

1. Different ways to install a plugin's in jenkins -

Using manage plugins

Download the plugin and go to Manage Jenkins-->Manage Plugins-->Advanced and upload plugin.

1. how you create jobs in jenkins other than the GUI like new item option.. other option is using job dsl plug-in, which allows programmatic creation of projects using a DSL.
2. Why jenkin is required if we can do the same thing with script like automatic.

Easy to install, Scripting is complex, it provides Continuous Integration and offers great functionality by its plug-in feature.

1. How many jobs are there in jenkins (for eg – ant , maven) -

Freestyle Project, Maven Project, External Job, Pipeline project.

1. steps for the installation of jenkins tomcat server ( for tomcat server install command is different ) - see our copy.yml.
2. yum install Jenkins will run on which server ?

Centos

1. How do you do a deployment.

Using Ansible Playbook, plugins,shell scripts

1. Are you doing the deployment in an application server -

Yes

1. What is Sonarqube and How to Integrate sonarqube with Jenkins?

sonarqube is an open source platform for continuous inspection of code quality. By using sonarqube plugin we can integrate with jenkins.

1. How to Safe restart the jenkins

Restart when no jobs are running.

1. How to create a backup in jenkins, what is the plugin name complete process. From which directory it will take the back up ( jenkin\_home) directory.

Backup Plugin. Manage Jenkins-->Backup Manager--> Setup--> Configure as per the requirements

1. Step to setup a job in jenkins and how to create a new job -

New item-> Frees style.

1. How to deploy a Custom build in jenkins

Using build tools such as ant and maven.

1. Where we store the artifacts which gets generated from jenkins

local ( /var/lib/jenkins/workspace ) and nexus Repository

1. How to bypass the github like directly using the code and put it in jenkins--- t
2. Jenkins used a entriprised or a open source u used

Open source.