**1.how do u start/stop jenkins ?**

**Ans :**

* sh startup.sh : for starting tomcat server
* sh shutdown.sh : for stopping tomcat server.

**2.what challenges u faced while working with jenkins ?**

**Ans :** Usually i face :

* compilation
* deployment
* disk space
* fire wall issue
* master/slave setup
* port change issue

**3.i have 1000 jobs and i want to change jdk version for all my jobs how do u do that ?**

**Ans :**

* jenkins/jobs/job[1.....1000]/config.xml
* find and replace jdk 1.5 to jdk 1.6
* reload config from disk so that jenkins can load config changes

**4.how do u setup build and deployment using jenkins for ur projets ?**

**Ans :**

* we call deploy.sh in post build section of jenkins
* deployment script steps:
* before copying the war file , our script checks for diskspace
* copy war file to all tomcat servers in an environment(copy using scp)
* shutdown the tomcat
* start the tomcat

**5.what is "build periodically" and "poll scm" ? differences which are**

**u are using ? why ?**

**Ans :**

* for compile check , we use **pollscm**
* for daily build , we use **perodic build option**.

**6.what is a plugin ? what plugins u installed ? name the plugins which u have used ?**

**Ans :**

* **Thin Backup** -

Using cron tab style / notion , we can schedule the backups for jenkins . we usually take backup for jenkins home directory . once we install this plugin , it adds "thin backup" section to manage jenkins .

* **Backup plugin** -

Manual backup . it doesnt provide cron tab kind of style for scheduling backups . we have to manually triggel the backup if we use this plugin. we usually take backup for jenkins home directory . once we install this plugin, it adds 'backup manager' to manage jenkins.

**7.Email - ext plugin/Editable Email notification ?**

**Ans** -

* this is advanced plugin for jenkins default email notifications.
* using the plugin, we can create our own email subject, body and also attach log or any file while sending the emails to users.

**8.configure history plugin ?**

**Ans** - check job config history for example who deleted a job or config, who modified jdk, trigger schedule, user addition/deletion..etc . once we install this plugin , we can see who has done what or who made changes. it records the history of all users and modifications .

**9.shelve projects ?**

**Ans -** if we have large size of build log files, un used jenkins jobs, jenkins will become slow (as it has to scan all projects for seperating reports).so, its good idea to archieve any un-used jenkins jobs so that jenkins dont scan that project . since this plugin archieves the projects, we can restore them if we want in the future.

**10.how do u setup distributed builds ? how may slave nodes u have ? what is a label ?**

**Ans** - Label is a virtual name for one or more slave nodes using which we can tie a particular jenkins job to always run on a particular machine.(usually which has jdk6 or jdk8 or windows machine......etc)

**11.what kind of problems u faced with ur jenkins so far ?**

**Ans :**

* Our master server became slow . so to distribute the load , i implemented master/slave concept and today our builds are running in two slave nodes.
* Fire wall issue (contact network engineering team)
* Regular compile/deployment issues.

**12.how much u reach urself in jenkins ?**

**Ans. 4 out of 5**

**13. do u have experience with .net builds ? what CI tools u have used for the same ?**

**Ans :**  cruise control

**14.what is jenkins architecture ?**

**Ans -**

* jenkins is java based web application
* so we need to have an aplication server to run this
* its extensible because its based on plugins.

**15.what is the continous integration ?**

**Ans :** continous integration is nothing but continous compilation testing and deployment and it is a system which monitors for new changes in any version control systems like svn/git , checkout source code, build the changes , tests the changes and deploy it to the given environment as seamlessley without any manuall intervention .

And it is a process which helps to integrate all tools and technologies required to move the code from development to deployment.

**16.what is the importance of CI ? or why we need CI ?**

**Ans :**

* continous integration improves the process of building and deploying the code to give environment efficiently.
* continous integration improves the delivery process.
* continous integration provides fast and feedback about the changes.
* continous integration provides the statistics about the build and test cases
* continous integration reduces time,to market.
* Less manuall efforts,a project can be managed with a very minimal resources .

**17.have u created jenkins jobs from scratch ? how u create a new jenkins job ?**

**Ans :**

* Select New item from the menu
* After that enter a name for the job and select free style job.
* Then click ok to create a new job in Jenkins.
* Then in new job enter the svn url , build triggers , build file , post build. Or

NewItem-->job name --> description-->select project type(free style, maven, external script, multi configurable job) --> svn url --> triggers --> Build file --> post build(emial and trigger deployment scirpt)

**18.how do u install jenkins ? what are the different ways of installing jenkins ?**

**Ans :** there are three ways for installing Jenkins :

* Java –jar Jenkins.war
* Yum installation
* Deploy Jenkins.war in any application server like tomcat.

**19.how do u migrate/move jenkins from one server to another ?**

**Ans :**

* install jenkins in new machine
* copy , jenkins in new server
* reload configurations from the disk
* restart jenkins

**20.how do u deploy an application in tomcat ? can u explain how the deployment happens for ur project ?**

**Ans :**

* Build war files
* Check if tomcat machine is up and running , has enough free disk space
* Copy war files to web apps location
* Shutdown the server
* Start the server

**21.can u name few Jenkins features ?**

**Ans :**

* Jekins is java based web application and it is a procees improvement tool
* - It's extensible because it's based on plug-ins and rich in features so we mostly get everything which solves our requiremnet
* - it generates graphs statics for our builds and test cases
* - it provides faster feedback when something goes wrong
* - never get bored doing builds and tests
* - by integrating jenkins with ant maven and other build automation tools the possibilities are limitles

**22.what is the default port no. for jenkins how do u change the port number ?**

**Ans :** THE default port number for jenkins is 8080, to change the port number we have 2 enter into apache-tomcat installation folder inside this there is a conf folder and u find server.xml, in server.xml we can change connector port = 8080 to req port number \*\*\*\*

**23.where do u find jenkins log or app log ?**

**Ans.** If application throws any error affter the deployment, issues like unable connect to the database, then we have to find jenkinslog. In tomcat there will be logs folder we enter into the logs folder and there we search for the error.

**24.how do find if jenkins is running ?**

**Ans. Ps -ef | grep java**

**25.what is the best way or how do u stop jenkins clearly without interrupting running jobs ?**

**Ans.** Go to manage jenkins--- there is an option “preparing for shoutdown”. It will shutdown after the completion of runnnig jobs

**26.where does jenkins store global and job released configuration ?**

**Ans. Jenkins store** global and job related configurations in .jenkins/jobs/config.xml

**27.how to clone jenkins job ?**

**Ans.** By selecting copy existing item in new item

Clone is one type of plugin ....it is used like recycle bin ...when our jenkins is slow we will keep our old builds in clone...whenever we want again means we will take from there....

**28.how many builds u store or how do u rotate logs ? what strategy u follow for achiving jenkins data ?**

**Ans.** It depends to store build strategy and rotate logs is used to keep the how many days and no of builds,for archiving the data we shelve the builds.

**29.what is parameterised build job ?**

**Ans.** In parameterised build we send values dynamically and when we select this option we have options like boolean, choice, string etc by using this we can deploy the war file into respective environment and we can check true or false statement

Go to project -----> go to configure page ----> there we will see the option "this build is

parameterised" check it that box---> we have to click on dropdown list "add parameter"--

--> here we have different modules.....based on our need we will select one....i.e.,

boolean, cvs, parameter etc....

Whenever the user configures a parameterised build in Jenkins, the parameter name is taken as an environment varia**ble**

ex- name=package type value = war, $ packagetype

When you are using file Parameter, the uploaded file will be placed into the working directory

**30.how do u configure different jenkins jobs to run with different jdks ?**

**ANS.** There are 3 ways: 1. system configuration settings

2.backend-- .jenkins/jobs/config.xml

3.master and slave

**31.how do u configure security for ur jenkins ? are using Ldap for authentication ? if not why ? whats the difference ?**

**Ans.** Go to the Configure Global Security screen and choose "enable security"

Select "Jenkins's own user database" as the security realm

Place a check mark next to "Allow users to sign up"

Select "Matrix-based security" as the authorization

Give anonymous user the read access

In the text box below the table, type in your user name (you'd be creating this later) and

click "add"

Give yourself a full access by checking the entire row for your user name

Scroll all the way to the bottom, click "save"

At this point, you'll be taken back to the top page, and Jenkins is successfully secured.

Now you need to create an user account for yourself.

1.Click "login" link at the top right portion of the page

2.Choose "create an account"

3.Use the user name you've used in the above step, and fill in the rest.

If everything works smoothly, you are now logged on as yourself with full permissions.

No i had never used ldap. We are using jenkins own user database to configure security.But we have plans for migrating to ldap.{ if we r using jenkins own user database we need 2 give permissions for every new developer if we r using ldap, all the permissions in the ldap are applicable for the developers }

**32.what is matrix based security ?**

Actually this comes under security purpose means granting access permissions to

specific users and groups for specific sections before that we also have to provide

authentication access also for that we will go for

managejenkins---and go for configure global security page-----and there will be option called enable security Once we check it ..it will show us page like security realm and authorization section...in security realm we will give the authentication permissions like --

-hudson own user data base...and

Allow users to sign up options....

Once authentication provides to users we will also provide some authorization

permissions......and in authorization section we always use matrix based security....means it looks like table we have to select the checkbox for specific sections...there is a section

like-----> overall permissions like and some more permissions like slave,

job,view

**33.how do u install/uninstall plugins ? manual** p**lugin installation?**

**Ans.** By entering into manage jenkins and manage plugins there will have updates, availiable, installed plugins, advanced. And their we can select whatever plugin we want in availiable section and we install and uninstall there only.

**34.do u backup ur jenkins ? How?**

**Ans. Yes, we take backup of jenkins daily,** By copying .jenkins and deploying into the another server or machine.

**35.what is "reload config from other disk" ? when do u use this ?**

**Ans.** If we want to change settings manually for something we want to use reload configuration.

**36.how do u take backup for only jobs ? excluding ws ?**

**Ans.** By copying jobs directory from .jenkins and deploying into the new server or machine

**37.what are the diff ways to shutdown jenkins ?**

**Ans.**  sh.shutdown.sh is used in command line

preparing for shutdown is used in jenkins

**38.have u configured junit , cobertura , sonar for ur builds ?**

**Ans.** Yes i had configured these tools

**39.have u integrated junit test cases ?**

**Ans.**yes, i had integrated junit test cases i just install plugin and run the test cases written by the developers.

**40.do u know how to integrate jira with jenkins ?**

**Ans.** First we have install jira plugin and then in post build section we get an option there we have to integrate jira in jenkins

**41.what is build pipeline ?**

**Ans.**it interlinks the jobs or it connects the different jobs. Mostly used for complex situations

**42.what is CI/CD model ?**

**Ans. Check for changes**

Checkout the changes

build

testcases

deployment

E-mail notifications

**43.how do u setup email ? Have u used advanced email configuration plugin ?**

**Ans.** In system configure, we have an option e-mail server there we configure e-mail details and i used editable email plugin in this we can text our own body subject and we can attach outputs also so i used editable email plugin

**44.how do u upgrade jenkins ?**

**Ans.** Take some test machine

install the same version

copy .jenkins and bring the jenkins up

test if everything works well as old jenkins machine

download new jenkins machine

install in tomcat/webapps

run reload configurations from disk

run few jenkins jobs randomly to check if everything is in place

finally do the same in production/original servers

**45.what is node , how do u manage nodes ?**

**Ans.** Node is nothing but a machine where we can run build. Usually aministrators manage, and we have separate team for administration.

**46.how/have do u setup jenkins job from scratch ?**

**Ans. ye**s.....Before creating a job i will do some system configuration bcz i have to configure the jdk subversion ant version details and path of that tools in the related sessions and i also configured the E-mail notification session and so on......and i will also install if any new plugins needed and after that i will create the job and i configured that job session and i trigger a build and i view console output and i send the status of the builds to the dev team.....

All the configurations of jenkins server will store in config.xml file

**47.what are the prerequisites to start jenkins ?**

**Ans.**we should have a project with your buildscript it might be written in ant or it can be a

maven too...

And we have to maintain a source repository...like svn, git, etc...........

**48.how do u create slave node/connect slave ?**

**Ans.** By entering into manage jenkins/manage nodes, there we create a new node by giving label expression. At the time of configure a job we activate restrict where this project can be run and we give the label expression and we save

**49.how do u discard old builds ?**

**Ans.** We discard old builds by age and numbers. This controls the disk consumption of jenkins by managing how long you would like to keep records of the builds(such as console output, build artifacts and so on)

**50.On what reason Build fails ?**   
There are different reasons like class path not setting properly that is the common issue and the issues related to dependence the JAR files if the buil.xml is depended on the some of the jar files, if we don't copy the depended the jar files it will fail and the folder is doesn't exit and we are trying to create a folder or copy the files to the folders and all then it will fails.

**51.How do you configure Nightly Builds ?**

Go on click on a new job and after clicking on the new job we give a job name in the source code control management you give the sub version and then we give the sub version URL where you want to do the deployment in the sub version we have the source code and then we have like build triggers category which contains pole scm and build periodically. pole scm means  if you want to do a build for every check in then we have to use pole scm, if you want to use build periodically or run a build on a particular time and all then we have to use build periodically  and we give crone job syntax and then it contains build and build contains execute shell  and invoke ant and invoke maven, and if you want an invoke can ant sprit select invoke ant and then pass the corresponding target to there and then post bill actions will contain email notificatons and all  if your build fails and you will automatically get an email notifications for post build activities.

**52. suddenly my jenkins becomes slow what steps do u take to improve the performance.**

Ans. Clean old jobs by using sheleve project

implement master/slave distributed concept

may improving the computing power for ex-ram cpu etc

if we have enough slave nodes remove the builds from master server if it is performing something

**53. diff btwn webserver and application server**

ans.Webserver serves only static data like html,pdf,images

app server it serves static data as well as dynamic data like flipkart application

**54.What do mean by Build?**

Build is nothing but compiling of sources in to distributed artifacts. So developers will be writing the source code...and it needs to be compiled and packaged so then it can be distributed to the customers or users for using it..... So this build might be happening so after development....it can happen during development or it can happen in a periodic basis like every week or every month...

**57.What is a plugin? What plugins you installed? Name few plugins which you have use**d?

Ans. Plugin is nothing but a extra feature which increase capability of jenkins.

====

1. Thin Backup -

Using Cron tab style/notion, we can schedule the backups for jenkins. We usually take backup for Jenkins home directory. Once we install this plugin, It adds "ThinBackup" section to manage jenkins.

2. Backup Plugin -

Manual backup. It doesn't provide crontab kind of style for scheduling backups. we have to manually trigger the backup if we use this plugin. We usually take backup for Jenkins home directory. Once we install this plugin, It adds ‘Backup manager ‘ to Manage Jenkins.

3. Parameterised Trigger Plugin:

Trigger other build job on the same master by passing some env variables.

5. Email-ext plugin/Editable Email notification:

This is advanced plugin for Jenkins default email notifications.

Using this plugin, we can create out own email subject, body and

alos attach log or any file while sending the emails to users.

6. Configure History plugin:

Check job configuration history like delete, configuration changes, user addition/deletion..etc. Once we install this plugin, we can see who has done what or who made what changes. It records the history of all users and modifications.

7. Shelve project:

If we have large size of build log files, un-used jenkins jobs, Jenkins will become slow(as it has to scan all projects for generating reports). So, It's good idea to archive any un-used jenkins jobs so that jenkins don't scan the project. since this plugin archives the projects, we can restore them if we want in the future.

**58.How do you set up distributed builds? How many slave nodes you have? What is a label?**

**Ans.** I will introduce master and slave concept and i wil distribute builds to paricular nodes, we have 5 nodes

Label is a virtual name for one or more slave nodes using which we can tie a particular jenkins job to always run on a pariticular machine(Usually which has jdk6 or jdk8 or windows machine...etc.)

**59.What is CI/CD model**

Ideal Build and deployment workflow:

check for changes

checkout

Build

Run Test cases

Deploy

Notification/Email

**60.What are the bestpractise do u follow in jenkins**

Always secure Jenkins.

**61.How do you manage USER authentication and authorization**?

By------

 Creating users

 Authenticating users with LDAP

 Setting permissions to user actions

 Enabling project level security

Authentication is nothing but providing access to the users and setting permissionsto the user actions.........It has a project level security also....means you can docertain actions on project or u can not do certain actions....so we can configure a

project level authorization....

**62.How do you manage plugins?**

By-----

 Installing plugins

 Updating plugins

 Uninstalling plugins

how do you manage builds

Running builds

Viewing changes

Download artifacts from dash board

Build trends---(means what are the builds failed / succedded)

Tagging builds --(it is the build ready to release...we will create the

**63.How have you used Jenkins in your current environmen**t ?

I have used jenkins from the scratch....installing and configuring jenkins and creating and configuring new jobs....trigger a build automaticcalyy....installing plugins....providing accesss permissions to the users and groups.....taking backup.....moving jenkins job from one server to anotherr ....and many more i have used jenkins in our current environment.....

**64.How do you do troubleshooting of build failures ?**

Ans : common issues i faced was:

1. When we didnot install dependency plugin then it will show the error : Build failed

:Required goal not found

TS: install the dependency plugin and configure it and then we trigger a build then build will be successful.

2. Missing artifact: build failed ....it will show the error like failed to resolve artifact...one required artifact is missing...

such type of issue will come while we removed artifact from the cache(it happens every

few months)--->

TS: rebuild that versiion of that module to get it reinstalled.

3. ....it's not a file : The error shows like : build error: failed to create assembly

It happens when the

when a module is build but one of its dependencies is built at the same time (so its jar is already 'deleted') -> waiting until the dependency build had finished, then re-triggering the module build fixed it

4.

Invalid java version:

It happens when we didnt configure correct version we are usually using then this error willl occur

TS:

Each hudson job has a jdk to be used - if this is e.g. set to 1.5 but the build would actually require 1.6 you'll see the above error -> get the job properly configured

5. Mail notification failure: if any password changes this type of issue will come....

If the issue is related to me ....i will resolve it by my side and if not i will send mail attaching the printscreen to perticular team / person...

**65.What is Scrum way of working or what is the development methodology you use**

We use Agile methodology in my current organisation.....

There will be product backlog ---> pull some requirements/stories in to a sprint backlog

and we will plan and divide the requirements.... Now Every one have there ownresponsibilty...by the end of the day there will be a standup meeting there we will tell the status of job done..furture what jobs we have to do.....before demo/review session there will be a restrospective meeting with our scrum master /project manager personally reg the status of requirements.... And then at the end of the sprint they have the review / demo session...(its very imp qa will tests and produces demo in front of po if he approves ok fine....this process will be iterated till

we reach the goal of project....

**66.How do you trigger builds on remote servers [ master-slave concept]**

**67.How do you setup distributed builds**

Jenkins supports the "master/slave" mode, where the workload of building projects are delegated to multiple "slave" nodes, allowing a single Jenkins installation to host a large number of projects, or to provide different environments needed for builds/tests. This document describes this mode and how to use it.

**68.How do start the jenkins in command line interface?**

java -jar jenkins-cli.jar

**69.How do you install jenkinpluggin manually?**

Save the downloaded \*.hpi / \*.jpi file into the $JENKINS\_HOME/plugins directory. You will then need to restart Jenkins (many containers let you do this without restarting the container)

**70.What is reload configuration in your disk**

Discard all the loaded data in memory and reload everything from the file system

7**1.How do you install plugins?**

The simplest way is by going to manage jenkins screen and clicking Manage Plugins and go to the Available tab. You'll find the plugin you'd like to install, select the checkbox, and then either attempt to Install without restart or Download now and install after restart. The web interface will then download \*.hpi files from here. If you Install without restart the interface will show you progress and provide the results of the install.

Sometimes when you install, you will notice that the list of available plugins is empty. If that is the case, from Advanced tab on the Manage Plugins page, click on Check now(button available in the bottom right of the page) to forcefully check for new updates. Once that is done, you should see the list of plugin

**72.Are you using LDAP for build organistation?**

No but i have an idea on LDAP....

If Jenkins is running on a Windows server then it is better to install the Active Directory plugin.

On a Linux host you have an option to either use the Active Directory plugin or an LDAP based authentication. To configure the LDAP to work with Active Directory, provide the

following:

Server mydomaincontroller.mycompnay.com:389

Root DN dc=mycompnay,dc=com

User Search

Filter sAMAccountName={0}

Manager DN cn=mymanageruser,ou=users,ou=na,ou=mycompany,dc=mycompany,dc=com

Manager

Password \*\*\*\*\*

Note that the correct Manager DN value can vary greatly depending on your Active

Directory set up.

**73.Can u use jenkins for non java applications**

Ans: Yes, but jenkins is mostly used for java applications

**74.How do you run different jenkins jobs with different jdk's?**

We will give different jdk versions in system configuration page and then we run jobs for different versions...

**76.If you want to change jdk for all your 1000 jenkins jobs or any other configurations? How do you do it?**

Go to masters nodes and change theirs lables

How many job files in jenkins

**77.There are four types of jobs we can create....**

1. Free style project

2. Maven project

3. Build multi configuration project

4. External jobs

Mostly we will create a job iin free style projects....bcz it support all kinds of tools..

**78.How do you create jenkins job ii) How did you setup build and deployment using jenkins for your project?**

Ans: i) in jenkins dashboard---> in left side panel ----> there will be an option called "new job" click on it and create the job.....

Ii) go to manage jenkins ----> configure system----> there we have to configure svn path and ant path and save it and now go to project and click on configure and there we invoke ant for build and for deployment we copy the artifacts in to tomcat server...

How do you restore the system configuration and all the jobs?

----->So if you want to restore the system configuration and all the jobs without the build history, you'll need to copy:

$JENKINS\_HOME/.xml $JENKINS\_HOME/jobs/\*/config.xml (using Antglob notation,

\*\* denotes all subdirectories under $JENKINS\_HOME/jobs)

---->You'll also need $JENKINS\_HOME/plugins/\* if you installed any extra plugins.

If you want to restore all the build history, copy $JENKINS\_HOME/jobs/\* instead of just the config.xml files

**79.What is the default jenkins home directory?How do you change it?**

Dot jenkins is the default home directory.... To change the jenkins home directory go to vi.bashrc export jenkins\_home=path...

**80.How do you stop jenkins when some build jobs are in progres**s

To restart Jenkins manually, you can use either of the following commands:

There is one option in jenkins; i.e., "preparing for shutdown" if any

jobs are running in jenkins first it will complete the process and then it will shutdownjenkins....

(Or)

(jenkins\_url)/safeRestart - Allows all running jobs to complete.

New jobs will remain in the queue to run after the restart is

complete.

(jenkins\_url)/restart - Forces a restart without waiting for

builds to complete.

How do you start jenkins as a service? Windows or linux

Install yum---->install jenkins.war

**81.Which tool do you use for CI? And how it wor**ks?

We use Jenkins as a CI tool.....and coming to work process............multiple developers are working on the project.....svn is the source repository which keeps the versioning of our files and maintaining our files data.......and jenkins is the CI system which pole the source repository and starts the build...so the build script is provided in AnT.....so, it will execute the build script and it will generates the artifact......

Artifact is nothing but the output of our source code... So after compiling and packaging our source code the artifact will be generated...So once the artifact is generated from the given build script.....and we deploy the artifactsin to the tomcat server and then QA guys will go for testing and validate it...and if there are any automated tests they can run and reports will be published from the jenkins dashboard or CI system dashboard........So, this is the process how jenkins works....

**82.What do mean by Build**?

Build is nothing but compiling of sources in to distributed artifacts. So developers will be writing the source code...and it needs to be compiled and packaged so then it can be distributed to the customers or users for using it..... So this build might be happening so after development....it can happen during development or it can happen in a periodic basis like every week or every month... 1

**83.What is CI?**

CI is nothing but a software development practise where members of each team integrate their work daily....by integrating their work daily, they can test it every day andit reduces the problems and it can identify the problems earlier and they can fix it earlier...then we can make product more stable... That is the main use of CI ....If we start the building at the end of the project we will identify so many issues, those are integration issues because code will be developed by the multiple developers.....if we start integrating them daily so you identify issues earlier and we can fix them earlier.... So that our code quality will get increased and will not see any integration issues during release time.....

**84.How CI works? How day to day people work?**

For any CI there will be a-----VCS where it keeps tracking of source code, and Build script where we have give instructions to build, to deploy, and to test and CI server to manageall these things , and developers who is writing/modifying the source code.......

 Developers do they work and send changes to their VCS repository.....thats their job

 And CI server will continuously checks is their any change to VCS

 If their is a change pull that change .....& calls the build script...........build it, deploy it and test it....and gives the feedback

 Developers will made a change ............

 Feedback is generated by CI server about the quality of code change.........something bad he has done its available for him right away.....that is why continuous integration is so powerful....

It integrates VCS ......It integrates build and deployment systems......and consolidate whole things & give a feedback on the quality of change............it brings all systems together.....