Devops Interview Questions

Jenkins Interview Questions

What is the system requirements for jenkins server?

we build a Jenkins master using the m4.large, which comes with 2 vCPUs and 8 GB of memory. A general purpose solid-state drive (SSD) EBS volume of 40 GB is provisioned and attached to the instance. We're dividing the loads within the jenkins nodes.

What is Continuous Integration?
What is Jenkins?
What is the difference between Jenkins, Maven & Ant?
What are maven components and phases ?
What are the SCM that Jenkins supports?
What is relation between Hudson & Jenkins?
What are advantages of using Jenkins?
What are plugins in Jenkins?
Mention all the plugins you used in Jenkins and its purpose?
How do you clone git repo in Jenkins job?
How do you build java code with Maven in Jenkins?
What is static code analysis and what plug-in you used for it?
What is downstream and upstream job?
What is workspace in Jenkins?
Copying artefacts to another job?
What is build pipeline?
How to create users in Jenkins?
How to add/remove/disconnect nodes in Jenkins?
How to restrict Jenkins job to execute on a particular node?
Jenkins Backup ?
A backup ensures that your Jenkins instance can be restored in the event of data corruption or loss, or miss-configuration of Jenkins, which leaves it in a usable state.
you can perform a backup by either taking a snapshot of the entire server or by backing up the $JENKINS_HOME directory.
How to setup multiple Java or Maven or Git versions in Jenkins server?
How to set Environmental Variables in Jenkins?
How to install/update/remove Plugins in Jenkins?
How to execute Ansible playbooks from Jenkins?
How to pass variables to Ansible playbooks from Jenkins job?
What is Nexus repository manager?
How can you version and upload artefacts in Nexus repo?
How can you deploy artefact to tomcat server from Jenkins job?
what is Jenkins Pipeline with Jenkinsfile? Write a sample jenkins file for pipeline?
Pipeline is basically a plug-in inside jenkins through which we can create a workflow inside jenkins. We have to create a job where we can control with the help of jenkinsfile which we can have it on code base. We can work it on based of the code revision, It is written on groovy scripts.

Sample Jenkinsfile written in groovy

```groovy
pipeline {
    agent any
    stages {
        stage {'Compile Stage' }   {
            steps {
                withMaven(maven : 'maven_3_5_0') {
                                sh  'mvn clean compile'
                }
            }
        }
         stage {'Testing Stage' }   {
            steps {
                withMaven(maven : 'maven_3_5_0') {
                                sh  'mvn test'
                }
            }
        }
stage {Deployment Stage' }   {
            steps {
                withMaven(maven : 'maven_3_5_0') {
                                sh  'mvn deploy'
                }
            }
        }
    }

}
```

Build id variable name?
What is console output?
What is build history?
How to store credentials in Jenkins?
How to deploy older versions of artefacts from Jenkins job?
Name different Phases in Maven and its purpose?
How to restart Jenkins from browser?
How to start/stop/restart Jenkins from command line?
What is the location of workspace of jobs in Jenkins server?
Benefits of using Nodes in Jenkins?
How to execute Bash script from Jenkins job?
Have you configured Jenkins's job? If yes, Tell me the process
what is continuous integration why we need it?
How your CI & CD pipelines is are configured.
Have you worked on maven?
How many slaves are there in your Jenkins's? How many executable are in each slave?
where you can store the build zip file (artefact). And how you deploy this to your environments?
What does "downstream/upstream design" in software development mean?
How to roll back the project from current version to previous versions?
What plugins are u used in your project
How to write custom scripts in Maven
How to setup Jenkins server and nodes using ec2 instances
how to deploy application by using git and Jenkins
For java app what are the best tools which is used for CI and CD tools.-
What problem CI solves, advantage of CI.
Maven and Ant
what is maven from where we get the pom.xml for the jobs.—
Maven is a build tool.
mvn archetype: generate
what is pom.xml file?
Maven and ant difference and what are the different scenario where it is used----

Difference between Ant and Maven ?
- Ant and Maven both are build tools provided by Apache. 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.
What is ant and from where we get the build.xml for the jobs ?
how pom.xml will read the variables which we use in the Jenkins like version ?
- By invoking maven
what is dependency in pom.xml ?
- POM inheritance
Invoke maven task is there in post build option.
are we in admin part of Jenkins, like installation of Jenkins ?
---- yes
different ways to install a plugin's in Jenkins
- using manage plugins
how you created jobs in Jenkins other than the GUI like new item option.. Other option is job dsl. ---- using Jenkins API
Why Jenkins is required if we can do the same thing with script like automatic. - Continuous Integration and its plugin feature.
How many jobs are there in Jenkins (for eg – ant, maven)
- ant is default, Maven you have to install,
yum install Jenkins will run on which server ? - Master server.
How do you do a deployment? - Using shell scripts
are you doing the deployment in an application server - yes.
What is sonarqube and How to integrate sonar qube with Jenkins - code metrics?
Main reason of using Jenkins - CI.
Commands to start Jenkins manually through command prompts like how to up the server - service Jenkins start.
How to Safe restart the Jenkins - Restart when no jobs are running.
How to create a backup in Jenkins, what is the plug in name complete process. From which directory it will take the back up (Jenkins_home) directory. - Backup Plugin.
Step to setup a Jenkins and how to create a new job - New item-> Freestyle.
How to deploy a Custom build in Jenkins - using build tools such as ant and maven.
Where we store the artefacts which gets generated from Jenkins - local/ target folder or in nexus repo.
How to bypass the Github like directly using the code and put it in Jenkins
--- t
Jenkins used an enterprise or an open source ---open source.
Different Plugin used in Jenkins ---build pipeline, backup, git.
How to change port for jenkins service when 8080 is being used , what is the command to change jenkins port ?
If your /etc/init.d/jenkins file fails to start Jenkins, edit the /etc/default/jenkins to replace the line ----HTTP_PORT=8080---- with ----HTTP_PORT=8081---- Here, "8081" was chosen but you can put another port available
when you run job from master where will be the workspace actual data (workspace) save is in master or in the slave? Answer - Slave
/etc/init.d/jenkins   ---- Jenkins as a daemon
/var/log/jenkins/jenkins.log ---- Check this file if you are troubleshooting Jenkins.
/etc/default/jenkins ---- jenkins port
cd /var/lib/Jenkins ------------- Jenkins home directory

id jenkins ----------- **Shows the user for Jenkins**
Always set an elastic IP for Jenkins server
Every job has its own id
Build information ---- `GET http://jenkins_srv:8080/queue/api/json?pretty=true`
We can configure web hooks through jenkins url, so whenever there is some commits changes in github it will point to your jenkins server and the builds automatically get triggered.
Jenkins is internal tool if u want to access it from outside upload the ssl certificates

A more comprehensive Jenkins pipeline might be broken down even further into something like this:

- **Pull from GitHub using the Jenkins Git plug-in.**

- **Compile the application using the Jenkins Maven plug-in.**

- **Ensure developers are complying with coding standards by using the Jenkins Checkstyle Plugin.**

- **Calculate McCabe cyclomatic complexity, and using that data, calculate unit test coverage. The JaCoCo plug-in is often used to perform code coverage calculations.**

- **Check for bugs and potential security flaws with static code analysis tools, such as SonarQube, PMD or FindBugs.**

- **Obtain manual sign-off by the user acceptance team by including a Groovy script in the Jenkins pipeline.**

- **Run stress tests, and measure the application's performance under load.**

- **Package the application in a format suitable for deployment. This is often a WAR file for web apps, an EAR file for enterprise Java apps or an executable JAR file for Docker-based microservices.**

- **Deploy the application to a Maven repository, such as Nexus or Artifactory.**

- **Archive all of the generated reports for future reference.**

Linux Interview questions

1. script/command to delete last word from every line in a file
awk '{gsub("[a-zA-Z0-9]*$", "");print}' <filename>
To replace last word with hello in every line
awk '{gsub("[a-zA-Z0-9]*", "hello");print}' <filename>
2.script/command to find the files with more than 1gb size
find <path for directory> -size +1G -type f

3. What is Swap Space?
4. What is the maximum length for a file name in Linux?
5. Which partition stores the system configuration files in Linux system?
6. Which command is used to uncompress gzip files?
7. What is the difference between soft and hard mounting points?
8. What are the file permissions in Linux?
9. More questions are from sed, find and awk .
10. How to check Memory stats and CPU stats as a Linux admin?
11. How to reduce or shrink the size of LVM partition?
12. How can you enhance the security of password file?
13. What is the difference between Cron and Anacron?
14. What command is used to check the number of files, disk space and each user's defined quota?
15. How can you manage memory in linux machines?
16. 18. What is the name and path of the main system log?
17. How to manage logical volumes?
18. Explain /proc file system?
19. What are the fields in the/etc/passwd file?
20. How do you terminate an ongoing process?
21. How can you know the execution time of a command?
22. How can you append one file to another in Linux?
23. How you can run a Linux program in the background simultaneously when you start your Linux Server?

Git Interview Questions

1. What is Version control system or Source code manager?
2. Benefits of VCS or SCM?
3. What is Git and what is a repository in GIT?
4. Difference between Git and SVN?
5. Two types of git authentication?
6. Branches in Git and its purpose?
What is the common branching pattern in GIT?
7. What is Pull requests?
8. How to install git in Linux & Windows?
9. How to setup repository though command line?
10. How to setup repository in github and clone it?
11. What is git clone command used for?
12. What is git config command user for?
13. Git config data is stored in what location?
14. Git config global and local files?
15. Content of git config file?
16. Git add command's purpose?
17. How to remove/rename files in local git repo?
18. git commit command's purpose?
19. How to sync local git repo data with github?
20. git fetch?
21. git merge?
22. git pull?
23. How to change branches in local git repo?

24. What is the difference between 'git remote' and 'git clone'?
25. git status?
26. What is the function of 'git rm'?
27. What is the function of 'git checkout' in git?
28. What is the use of 'git log'?
29. Explain what is commit message?
30. How to setup GitHub ssh authentication?
31. What is git webhooks?
33. Tell me the branching strategies you followed for your project?
34. What is git rebase?
35. What is git stash?
36. What is the difference between git pull and git fetch?
37. Difference between git and svn?
38. Advantages of git compare with svn?
39. Explain about staging area in git?
40. How do you check after git merge …where merging is correctly or not?
41. How to create branch and delete a branch?
42. Do you get any conflicts while merging? How can u resolve conflicts?
43. How can u implement authentication and authorization in git?
44. What is the difference between git rebase and git merge?
45. How to merge the code?
46. Pull request in git hub - ---git pull
47. Forking a repository in git hub?
48. Diff between svn and git ---svn is centralized version control and git is Distributed Version Control.?
49. What is forking in git repositories?
50. Explain about soft and hard reset and their difference?
51. What kind of branching and merging you worked on GIT.
52. With this kind of environment and the git release branching, does it work in agile methodology?
53. What is tagging in GIT and what is the diff between feature branching and tagging?

Docker with Kubernetes Interview questions

1. Current roles & responsibilities?
2. What is Docker compose?
3. What is Docker server version?
4. What are the advantages of Docker?
5. How do you setup Docker in Jenkins in production environment?
6. How do create Docker image from Docker file?
7. How do you deploy the Docker image generated in the testing environment to production environment in Jenkins?
8. What is Docker data centre?
9. What is Docker hub & uses?
10. What are the types of Docker networks?
11. How do you define network in the Docker compose file?
12. What are the basic parameters required in the Docker compose file?
13. What is Docker interlock?
14. What is overlay networking?
15. How to communicate between 2 containers present in separate network?

16. How to store the data present in the Docker container in the AWS?
17. If we define the Docker volume in the docker compose file is it possible to share data with the EFS, NFS?
18. Difference between image and container
19. How to run containers
20. Why we need to mention dual ports(8080:8080) in docker run command
21. .Difference between Copy and Add
22.How to write a docker file to deploy a war file
i. We have private repository and don't have base images .how can deploy a war file?
ii. Write a simple docker file to deploy a war file by using base images?
23. Difference between docker compose and docker swarm
24. Why we need to use docker compose?
25. Tell me about Docker Network.

why we are using docker difference between vm?
What is docker cloud & how it is different from docker hub what is the features over docker hub?
What is the difference between docker cloud and docker swarm?
Name the docker components and its workflow ?
work of docker engine ?
How to list down one month ago created container ?
docker swarm & kubernetes differences and comparisons ?
How to remove old Docker containers
How can I get the size of a Docker image?
How you will link when the docker containers is in different virtual machine is there Any configuration in docker compose file or any command or any variable?
What is kubernetes?
What is the difference between kubectl & kops?
 Why you are using kubectl can you explain why we are using?
 Why we using kops?
what you will do if one master got corrupted, can we create multiple masters?
what you will do in case any pod deleted?
what is namespaces in kubernetes can you tell me some?
Can you tell me some commands using in kubernetes?
Tell me the command to create cluster?
Difference between rc and rs?
How to attach a volume in cluster at some time the container will be deleted then rs will recreate new container then how to attach that container automatically and how to restore the volume automatically to re-created container?
How many projects you used kubernetes?
 N number of docker containers deployed to different vms how will you manage there is no kubernetes installed?
 If installed kubernetes how you will deploy this containers into kubernetes cluster? Can you tell me the command for creating kubernetes cluster in vm?
how many nodes we required to create kubernetes cluster?
We have nearly 15 nodes in my organization all are decentralized so which node I need to create as a master?
Is there any possibility to make all the machines as masters?
Our applications are decentralized I don't want distributed environment if anything happens to the master all will collapse, can we create multiple masters?

What is the difference between kubectl and minikube?
If any container down in my cluster how you will rectify?

Scripting

How can I print shell script name?
Echo $0
How to write a script when the first command is executed then execute the below script?
    Java --version
    If [$? –eq 0]
    Then
    Echo "print the variable"
    Else
    Echo "print the variable"
    fi
    How to print the exact file name by using command?
    First assign path as a variable
    awk -F '/' '{print $(NF-1)}' <<< "$a"
    Can you tell me the syntax for for loop and while loop?
    How to dictionary in python?
    Dict={a:10,b:10}
    How to add another variable c, with key 10 to the above dictionary?
    How to replace existing dictionary?
    Dict=[c:10]
    How to print shell name?
    How to assign a all the arguments to a single variable?
    How to print the current process id of current shell?
    How to know the file that is entering randomly to my script?
    How to divide two variables in shell script?
    what is trap?
    What is shift in shell script?
    How to run our script in background?
    How to know the running back ground process id ?
    What is $*, $$ and $@?
    How to print only directories?
    How to print the directory only started with number?
    How to grep two strings at a time?
    How to grep a string that is started with some string and ends with some string like
    a…..b ?
    How to print string that starts with a?
    Did you worked on arrays?
    How will you give access of your script to a particular user?
    How to access background running scripts and their pid?
    How to run our script in foreground?

AWS interview Questions

1. What is AWS?
2. What is IAM and its purpose?
3. What are policies in IAM?

4. How to setup MFA?
5. Two types of access for IAM user?
6. What is EC2 service used for?
7. Name few types of EC2 instances?
8. Diff between T2 series and C series on Ec2 instances?
9. What are AMI's?
10. What is AWS marketplace, what are community AMI's?
11. How can you create your own AMI?
12. Enable termination protection option is for what?
13. What is EBS?
14. What are different types of Volumes?
15. Can we create volume in one zone and attach it to a instance in the other zone?
16. How to take backups of EBS volume?
17. How to restore lost/corrupted volumes in from snapshots?
18. How to transfer volume from one zone to other zone?
19. How to resize EBS volumes.
20. Modify volume feature from AWS?
https://aws.amazon.com/blogs/aws/amazon-ebs-update-new-elastic-volumes-changeeverything/
21. What are security groups?
22. Can we attach a Security group to multiple instances?
23. What is diff between inbound and outbound rules in SG?
24. What are Elastic IP's and how is it different from normal Public IP assigned to a EC2 instance?
25. What are Key pairs?
26. What is ELB?
27. What are target groups?
28. What are health check settings in target group?
29. Describe advanced health check settings from Target groups?
30. Difference between internet facing and internal ELB?
31. What is VPC?
32. What is default VPC?
33. Can we create default VPC?
34. What is DNS hostnames option used for in VPC?
35. What are Subnets in VPC?
36. What is difference between Private and Public subnet?
37. How can you design a highly available network in VPC?
38. What are Internet Gateways?
39. What are Nat gateways?
40. What are Route tables?
41. What are NACL?
42. What is VPC Peering?
43. What is RDS?
44. What are different DB software's (Engines) supported by RDS?
45. Different DB instance types?
46. What is Multi AZ RDS instances?
47. Different storage types in RDS?
48. What is backup retention policy?
49. What is auto scaling? What triggers have you used for scaling?
50 .What is s3cmd used for?

51. What is AWS CLI used for? Give any real time scenario where you used AWS CLI?
52. How can we mount s3bucket in Linux instance as a mount point? Any real time use case for it?
53. Please explain the procedure for setting up a alarm with Cloud Watch monitoring?
54. What is AWS Beanstalk? Name any platform you used in beanstalk and the code deployment procedure for it?
55. Name few customization options available with Beanstalk?
56. What is Launch configuration in Auto scaling?
57. What is Route 53 used for, name few features of route 53?
58. Difference between AWS Region and Zone?
59. How will you identify which one is public subnet & private subnet in VPC
60.Is Amazon EBS storage is NAC/SAN storage?
61. What are services available to connect your premise data centre to AWS cloud?
62. Can AWS EC2 access s3 bucket without access key?
63. I want deploy containers but have storage persistent problems in AWS and in Docker?
64. How are you using AWS in your project/company?
65. Difference between IAM Roles & Policies?
66. Describe your AWS Architecture in your company?
67. What is RDS what is the work you have done in RDS?
68. What is cloud formation?
69. What is CDN?
70. I have pdf files in an instance and they are eating away the space. I need these files, what is solution do you provide for accessing these files?
71. What is route 53? How do you configure it? And link it to ELB?
72. What are private subnets? What is it needs?
73. What is the need for having your application or instances in private subnets when you have public domain through route 53?
74. Why we need to use Glacier?
75. Tell me S3 reduced redundancy vs. infrequent access?
76. Tell me S3 Bucket level permissions?
ebs or s3 which one is faster
Draw vpc architecture
How you interconnect aws services for basic application?
What if you lost the .pem key , how you can you access the instance ?

Ansible Interview Questions

1. What is inventory file used for and default inventory host location?
2. What is Ansible configuration file used for and its default path?
3. Do you write your inventory file?
4. How many types of variables and precedence?
5. Write the command to find the python version on nodes?
6. What is the file structure of Ansible roles?
7. What happen when one node or instance is unreachable?
8. What happen when one task is failed in playbook?
9. I have 20 servers, I want to install one package in 5 servers and other package in next 5 servers. Like that how to write in Ansible script for that…Explain?
10. What is the architecture of Ansible?
11. How do I supply variables while executing the playbook in Ansible?

12. Explain about the tags in Ansible?
13. How to execute failure playbook again?
14. How is Ansible different than any other configuration management tool?
15. Ansible playbooks are written in what format?
16. What is a module in Ansible?
17. What is inventory used for in Ansible?
18. Name three places where Ansible variables can be stored?
19. What connection Ansible establishes with Linux and windows node.
20. Difference between Remote and local execution in Ansible.
21. What is the purpose and location of Ansible.cfg file?
22. Name any two settings from Ansible.cfg file.
23. Please write below a sample inventory file with host, group & group of groups' syntax in it.
24. What is the difference between group vars & host vars directory?
25. What are adhocs commands used for & write below syntax of a adhocs command?
26. Write below ad hoc command to gather fact variables on all the hosts from the inventory file?
27. What format does Ansible ad hoc command returns the output?
28. Name three types of modules in Ansible?
29. Name any 10 modules in Ansible that you have used.
30. How to list all the Ansible core modules from command line.
31. How to display all the options/attributes for apt module from command line.
32. How can you check mandatory option for any module from command line?
33. What is setup module used for?
34. Write down sample global play declaration
35. Write down any two tasks from playbook with its proper format and names.
36. What is the difference between sudo and become module and its purpose.
37. Write down playbook syntax of starting ntp service on webserver and dbservers host group at once.
38. How to take user input from a playbook?
39. What is debug module used for in playbooks?
40. How to store output of any task into a variable from playbook?
41. What are handlers used for in Ansible and how is it different from tasks?
42. Conditional execution in Ansible is used for what purpose and write down its syntax with small description?
43. What are templates used for and its format?
44. What are Ansible roles and its purpose?
45. Command to generate Ansible roles directory structure.
46. Name 5 directories from Ansible roles.
47. What is {{ }} symbol used for in Ansible.
48. Write down all the places where we can define variables according to its precedence.
49. Write down syntax of dictionary variable?

TRUE or FALSE
50. Setup module gets executed after executing any ad hoc command.
True or False
51. Ansible playbooks are written in XML format.
True or False
52. Ansible.cfg file is list of plays.
True or False

53. Fact variables is generated by Ansible and we do not need to create fact variables.
True or False
54. Ansible is written in Python language.
True or False
55. Ansible works on Master and client relationship, where Ansible control server package is installed on master and Ansible client package is installed on all the clients.
True or False
56. Ansible loop module is with items.
True or False
57. All the templates in Ansible roles has to be defined in main.yml file inside templates directory.
True or False
58. All the roles uploaded in Ansible galaxy website is written and owned by Ansible Inc. (organization).
True or False
59. Ansible can only get installed on Linux machine but can manage Linux and windows nodes.
True or False
60. Write an Ansible task that can copy the file to remote location with the ownership of JBoss?

61. What is local action in Ansible?
62. What are the roles in Ansible?
63. Write a playbook for installation of apache in Ubuntu and centos?
64. How to create a role in Ansible?
65. Different types of inventories in Ansible?
66. If we want system information of machine how we will get the data with Ansible like we use factor in puppet?
67. In which language we write playbooks in Ansible?
68. Activity that we use with Ansible or advantage Functionality or purpose of Ansible using in your project?
69. How to launch an LDAP server using Ansible?
70. How Ansible works... And what are the playbook written other than the basic playbooks?
71. For example there are 4 aps server running and 4 webservers running and we have a new code change and this change should automatically copy to these different servers using Ansible, how I will come to know new code is generated.
Use Jenkins with POLL SCM option and after artefact is generated using Ansible to pushing copy module.
72. Have u done any automation like app goes down then for self-healing of the app kind of the thing.
73 .Have u written any playbook. Explain it
74. What is a dynamic inventory in Ansible?
75. How can you manage cloud services with Ansible?
76. How can you protect sensitive information in Ansible?
77. How can you save the output of module execution in Ansible?
78. How can you manage error handling?
79. What are conditionals in Ansible?
80. Write a playbook to create AMI on AWS?
81. How can you the fact variables in Ansible?
82. Can we create an Ansible module?

83. How can you do provisioning with Ansible?
84. BASH Vs. Python vs. Configuration Management Tools?
85. How can you update a single table in a Database with Ansible?

1. How can you do provisioning with Ansible?
2. How can you protect sensitive data on Ansible?
3. BASH Vs. Python Vs. Configuration Management Tools?
4. How can you update a single table in a Database with Ansible?
5. How would you take a backup of a MySQL database? *

Frequently Questions

1. What is chef work flow?
2. How we get the properties of node
3. What is resources?
4. What is diff b/w chef server and chef client?
5. What is run list?
6. What is diff b/w cookbook and recipe?
7. How bootstrap will work & what is process
8. Which language chef deploy?
9. How do you increase RAM for a EC2 instance?
10. How do you maintain DR in a cloud?
11. How do you configure SSL in Tomcat?

1) Tell me your roles and responsibilities?
2) What is python-boto?
3) Are you using private cloud?
4) How to create the aws instances using configuration tools?
5) Asking on modules?
6) ci/cd work flow?
7) Asking about plugins in Jenkins?
8) Explain Ansible playbook?
9) How to deploy the artefacts?
10) How to build the artefacts?
11) Git fetch?
12) Git pull?
13)Write a playbook using loops?

1. How to setup Jenkins server and nodes using ec2 instances
2. about maven, ant, sonar

3. How to deploy application by using git and Jenkins
4. How to create docker image
5. How is docker different from vagrant?
6. about Ansible modules
7. About git fetch and git pull
8. How your present company help in your career?

1. Tell me about yourself briefly?
2. Roles and Responsibilities
3. How to create virtual host in apache
4. Versions (like Ansible, git, MySQL,)
5. Write a playbook for installation of apache in Ubuntu and centos
6. Document root of apache and tomcat
7. What is the configuration file in tomcat?
8. Defaults port numbers (apache, tomcat, MySQL)
9. How to connect client and server (windows to Linux)
10. What is SSH?
11. What is Docker file commands?
12. How to create a link between two containers
13. How to port forward in Dockerfile
14. Difference between small 'p' and capital 'P'(Docker)
15. How to create a job in Jenkins
16. What plugins are u used in your project?
17. How to create a role in Ansible
18. What are challenges you are faced
19. Are u faced performance issue
20. How to launch an instance from AWS
21. How to merge the code
22. How to write custom scripts in Maven
23. How to find a specific line in a file
24. Are u involved in Shell Scripts?
25. How to configure yaml file in vagrant file

Python Use Cases

Problem 1: Monitor web server logs and send out an email (or notification) when 500's or 400's appear more than 10 times in last 10 minutes.
Solution: Write a python script to parse the web server logs and keep a count of status codes. Set a cronjob or run this script as a daemon.

Problem 2: MySQL server is throwing too many connections.
Solution: Write a python script that connects to MySQL and parses `show process list` to find the number of connections per user per host. Send an email with this information to team. This can again be a cronjob on the MySQL server itself or any server which can connect to MySQL.

Problem 3: We need to monitor uptime for our website.
Solution: Write a script in python that pings your website and looks for a 200. If you don't get 200 send out an email to team. You can set a cronjob on multiple servers (except the server hosting your website).

Problem 4: Deployments on Staging are a mess.
Solution: Write an application in Flask with a minimal UI that allows developer to select a service and the branch to be deployed. Behind the scenes you could use simple git commands to fetch the code and restart the service.

DevOps Interview Questions

DevOps Basic

1. What is DevOps and what is the need for it?
2. What is Agile?
3. How did Cloud computing helped the DevOps movement?
4. What is the DevOps adoption rate in 2019?
5. Is DevOps and Automation same thing? Please justify either of your answer.
6. Draw a DevOps lifecycle below.
7. What is Continuous integration?
8. What is ContinuousDelivery and Continuous Deployment?
9. What are DevOps Engineers main objectives/roles/responsibilities?
10. What is Infrastructure As A Code?
11. Can we do DevOps without cloud computing? Please justify your answer?
12. Name some tools used in DevOps?
13. Name the job roles in Agile/Scrum and their responsibilities?
14. What is the meaning of backlog in scrum?
15. What are user stories?
16. What is a sprint and its duration?
17. Please define planning meeting, daily scrum meeting and retrospective meetings in one line.
18. What is the difference between Linux and UNIX? Name some Unix and Linux OS below.
19. What is a root user and its home directory path, state the difference between " / " and " /root " directory?
20. What does /etc, /bin, /sbin and /boot directories contains?

Software Delivery cycle ?
What is Continuous Integration?
What CI tools have you used? Example: Travis-CI.
What is Continuous Delivery and why is it important?
What is Continuous Deployment?
Explain the importance of A/B testing and how it relates to software delivery? What are your favourite deployment techniques and why? Examples include: 0 downtime, Canary, or Blue/Green deployments.
Explain a time when a software release has gone poorly
How can you reduce the time to test and Deploy code?

Source Control
What types of source control programs are you comfortable with?

What are the benefits of using source control?
Describe some branching strategies that you have used?
Give an example of a good commit message?

Testing
Talk about different types of automated testing you have implemented?
What is the importance of software testing?
What testing paradigms do you use, if any?
Explain the difference between unit and end to end testing?
Have you used any testing frameworks? If so, which ones?

Architecture
Explain what a Restful architecture is?
How would you scale a slow website?
Your application just got millions of users overnight, what do you do?
What are some ways to increase client-side performance?
Can you explain the significance of a primary/replica database architecture?
What are some caching strategies you can implement to increase performance?
What are the advantages and disadvantages of implementing a Micro services architecture?
What is the difference between vertical and horizontal scalability?
Explain kubernetes architecture ?

Database
What is the difference between a relational and non-relational database?
When do we optimize the database?
Can you give some ways to optimize the performance of a database?
What does A.C.I.D mean?
How can you customize the query plan to increase throughput?
Explain how you would do Database Continuous Delivery?

Linux
How can you view running processes?
How do you check server uptime?
How do you start/stop services?
How do you display the shell's environment variables?
What does #!/bin/bash at the top of a script do?
What does "&" after a command do?
What does piping commands mean?
What distributions have you used on servers? Why?

1. What would you do if you got a low disk warning? *
2. Your site goes down nearly every hour on the hour. What do you look at to diagnose this? *
3. Your application just got millions of users overnight, what do you do? *
4. How do you manage security updates? *
5. What are some caching strategies you can implement to increase performance? *
6. Describe the most challenging situation that you have faced. How did you fix it? *

7. What is truncating files?
8. How can you perform roll back operations when the deployments fails?
9. What are start-up scripts and how you enable start up scripts in Ubuntu?

Security
What is the importance of SSL?
What is a SQL injection?
What is cross-site scripting (XSS)?
Why shouldn't you roll your own crypto?
How are passwords stored on databases?
What is a Man-in-the-middle attack?
How do you safely manage environment variables in a cloud environment?
How do you manage security updates?
How do you keep encryption keys and credentials secure but make them available to machines that need them?

Cloud
Which cloud providers are you familiar with?
What are the benefits of using a cloud provider?
Have you managed production systems in the past?
Configuration Management
Which Configuration Management tools are you most comfortable with? Examples include: Chef, Salt, Puppet, or Ansible?

Container Concept

How does Docker improve scalability, distributed computing, and efficiency vs. traditional cloud virtual machines?
List some Docker use cases

Networking
What is the difference between a vlan and subnet?
What is a broadcast domain?
What is the difference between icmp, tcp and udp?
Explain how a tcp session is set up?
How are tcp options negotiated and selected?
How would you use tcpdump to determine if one remote host was making a connection to your server?

General
Which Software Stack do you use and why?
Describe your worst Fear?
What new technology would you like to learn?
Have you worked on any side projects?
Do you contribute to any open source projects?
What are the critical problems you faced and how did you resolved it?

Web Servers

1. How do you tune NGINX performance?
2. How can you create multiple tomcat servers from a single binary file?
3. What is refresh time for the tomcat server?
4. How to make connection to tomcat server from apache server?
5. Different Mechanisms in apache/Nginx?
6. Proxy and Reverse Proxy?
7. What is http protocol?
8. MPM module?
9. Tell me the process to set up ssl certificate for your application?
10. What is max clients in apache configuration?
11. What are the modules you used in apache/Nginx?
12. Have you ever used mpm modules in apache and what is their purpose?
13. What is virtual hosting?
14. Prefork, Worker and event MPM?

Fresher Questions asked by Infosys

pm -qa -- to list installed package on rhel/centos
yum list installed ------ to list installed package on rhel/centos

gg -- cmd used for go to 1st line of vim editor

how do you replace a string abc in a text file with xyz using terminal ------> sed -i -e 's/abc/XYZ/g' /tmp/file.txt

A runlevel is a preset operating state on a Unix-like operating system.

0 - System halt; no activity, the system can be safely powered down.
1 - Single user; rarely used.
2 - Multiple users, no NFS (network filesystem); also used rarely.
3 - Multiple users, command line (i.e., all-text mode) interface; the standard runlevel for most Linux-based server hardware.
4 - User-definable
5 - Multiple users, GUI (graphical user interface); the standard runlevel for most Linux-based desktop systems.
6 - Reboot; used when restarting the system.

By default Linux boots either to runlevel 3 or to runlevel 5. The former permits the system to run all services except for a GUI. The latter allows all services including a GUI.

How to Check Previous Day Memory and CPU Usage?
nmon

How do I install a .tar.gz (or .tar.bz2) file?

The first thing you need to do is extract the files from inside the tar archive to a folder. Let's copy the files to your desktop.
You can extract an archive by right-clicking the archive file's icon inside your file browser

and pressing the appropriate entry in the context menu.
Extracting the archive should create a new folder with a similar name. e.g. program-1.2.3.
Now you need to open your terminal and navigate to that directory using the following command:

cd /home/yourusername/Desktop/program-1.2.3
Make sure you read a file called INSTALL, INSTALL.txt, README, or something similar if one was extracted.
You can check if such a file exists from the terminal by using the ls command. The file can be opened and read with the command:

xdg-open INSTALL
Where INSTALL is the name of your file. This file will contain the right steps to follow to continue the installation process. Usually, the three "classical" steps are:

./configure
make
sudo make install
You may also need to install some dependencies if, for example, running configure prompted you with an error listing which dependencies you are missing.
You can also use checkinstall instead of make install. See here
https://help.ubuntu.com/community/CheckInstall

Remember that your mileage may vary.

Diff between yum and rpm

1.RPM is a package manager while YUM is a frontend that can be used with RPM.

2. The RPM package manager is unable to track dependencies while YUM can.

how to add an Existing User Account to a Group

usermod -a -G examplegroup exampleusername

what are difference coloumns in /etc/passwd file

The /etc/passwd file is a colon-separated file that contains the following information:
User name
Encrypted password
User ID number (UID)
User's group ID number (GID)
Full name of the user (GECOS)
User home directory
Login shell

vi /etc/passwd file

tom:x:1000:1000:AB Gite:/home/ab:/bin/bash

how to disable user in redhat

usermod -L -e 1 ab

ipa user-disable ab

Which command is used to record a user login session in a file?

macro
read
script   -----   is the Answer
record
sessionrecord

which aws storage service is recommended to store huge amount of data

S3

how do i enable auto archive to glacier from s3 when data is 3 months old

you can create a lifecycle rule in which you specify the initial transition action to STANDARD_IA (or ONEZONE_IA) storage,
another transition action to GLACIER storage for archiving, and an expiration action. As you move the objects from one storage class to another, you save on storage cost.

https://docs.aws.amazon.com/AmazonS3/latest/dev/lifecycle-transition-general-considerations.html

If i delete an object in s3 how do i recover the deleted files

Once deleted, there is no method to restore or undelete an object.

If you have versioning enable, yes you can! On a versioned bucket, a delete action on a file does not really delete it but it adds a version with a "Delete Marker".
You can delete the delete marker with the AWS CLI:

aws s3api delete-object --bucket yourbucket-name --key "yourfile" --version-id id_of_the_delete_marker

You can get all the files in the bucket with

aws --output text s3api list-object-versions --bucket yourbucket-name > files.txt

If you want to undelete all the files in the bucket you can try:

```
echo '#!/bin/bash' > undeleteScript.sh && aws --output text s3api list-object-versions
--bucket yourbucket-name | grep -E "^DELETEMARKERS" | awk '{FS = "[\t]+"; print "aws
s3api delete-object --bucket yourbucket-name --key \42"$3"\42 --version-id "$5";"}' >>
undeleteScript.sh && . undeleteScript.sh; rm -f undeleteScript.sh;
```

what is object store in aws

AWS Storage Gateway provides you a physical or virtual appliance to use on-premises to easily move volumes or files into the AWS Cloud.
Once you have your data on Amazon S3 & Amazon Glacier, you have the most complete set of storage management and administration capabilities available in the cloud.

Difference between ebs and s3 and efs

Amazon S3 is an object storage and is suitable for storing user files and backups in massive numbers.
Amazon EFS was designed to provide scalable storage for the users of Amazon EC2 cloud computing service.
Amazon EBS was also created to enhance the functionality of Amazon EC2 - it is similar to your computer's drive but in a virtualized environment.

Difference between on demand, reserved and spot instances

Once you get the on-demand instance you keep it until you terminate it. In this pricing model, you pay the most because you can leave at any time.

With reserved instances, you get the same instance hardware, but you pay less.
You make some form of commitment at the beginning, and then you get to pay for the instance at a discounted rate.

With spot, AWS does not commit to you. With this kicker model, the pricing becomes extremely attractive. We're talking about a 60% to 90% savings.
That's not just me being overly optimistic. I've seen these savings realized repeatedly.

AWS Bill / On-Demand	Reserved (40% savings)	Spot (80% savings)
$5,000/mo	$3,000/mo ($2,000/mo)	$1,000/mo ($4,000/mo)

Difference between classic load balancer and application load balancer

The Classic Load Balancer operates on both the request and connection levels. However, it doesn't support features like host and path based routing.
This is the first load balancer that AWS introduced in 2009 so it is missing some features.
The Application Load Balancer was introduced to address this.
A Classic Load Balancer is recommended only for EC2 Classic instances.

The Application Load Balancer operates at the request level only. If you're dealing with HTTP requests, which you are for your web application, you can use this.
It supports the basic feature of distributing requests using the round robin algorithm. It also

supports advanced features like host and path based routing.

multiple files search in bash shell?
can we use ansible without using playbook?
ansible command for copying a file and paste to your client?
docker components?

1.What are lower environments in Jenkins?

1. Lower environment is just like production environment, it will be in the same network as production but it will be smaller compared to production data.
It will have same, network, security, similar data etc etc. The only difference is that its non prod and will be little smaller.
The idea is to test the upgrade in lower environment before it goes to production.
If the deployment or any change work in lower environment there are high chances that it will work in production as well.

2.what is jenkins file?

2. Jenkinsfile is a groovy script written to create Jenkins pipeline automatically.
So instead to of we create all the jobs manually and connect then to create pipeline, jenkinsfile can do this automatically and you can put it in your source code.

In Jenkins ,with out using version control system tools, how the code will pull into Jenkins and how you will build?

If you really want to build from an existing checkout somewhere on the file system, then do not use "Source Code Management" section of Jenkins. Leave it as "none"

Go straight to the "Build" section
Click "Add Build Step"
Select Invoke Ant"
Click Advanced
And under "Build File", provide a full path to the ant build file on your file system. You would have to include the drive letter (if on Windows) or a leading /
(if on Linux) to break from the Workspace (by default, this path is relative to Workspace). Or use a lot of ../../../.. if needed.
But like others have said, this is not the way a CI system is supposed to be used
change the hostname in Linux ------   edit /etc/hostname

Some High-level Scenarios

1. How do you explain in business perspective about Dev-Ops Culture, IT Automation, Dev-Ops Lifecycle to the customer.
2. How do you implement Dev-Ops in real-time environment.
3. Explain Dev-Ops Tools and how do you used in your project.
4. Explain in business perspective about Dev-ops tools as step-by-step process to the customer.
5. Explain any one source code management tool (Git or SVN or CVS) and what is the purpose.
6. Explain any one continuous integration tool (Jenkins or Teamcity or Bamboo) and what is the purpose.
7. Explain about the deployment process using web server (Apache Tomcat or WebLogic)
8. Explain about Configuration Management tool used in Dev-Ops (Chef, Puppet, Ansible) and what is the purpose.
9. Explain about any one code analysis tools (Sonar) and what is the purpose of this tool.
10. Explain about ELK and what is the purpose of this tool.
11. Explain about one monitoring tool and purpose of this tool (Nagios).
12. Explain anyone collaboration tool like "Jira" and what is the purpose of this tool.
13. Explain about burndown chart?
14. Explain about Docker and what is the purpose of this tool.
15. Explain DevOps Metrics and in-depth knowledge of business case creation and competitive analysis.
16. Tell me any one public cloud architecture "AWS or Azure"
17. What are the benefits and what are the services available in Azure.
18. Explain in detailed about IAAS, PAAS, & SAAS and how do we use each service in the real-time.
19. How do you present Dev-Ops Matrices, Reports in a dashboard to the client.
20. Final question As a automation consultant how do you approach the customer to use the Dev-Ops for their project and how do they get benefited and advantages.
Managerial Question

Tell me about yourself?
What work you're doing in your company as DevOps Engineer? / What are the Daily task you're doing in your job ?
Tell us something about your present company?
How many tools you're familiar with? Name them and rate your skills?
How many projects you covered ? And what are contribution you have done in it?
Why you're leaving your present company?
What are the difficulties you faced in your company and how you deal with it?
What is your company location ? Do you know the hospital near your company ? (Tricky)
What is your current CTC , what's the deductions and what is your expectation?
Do you have a PF account ? Can you relocate if required? Do you have a Passport?

Objective :

To be associated with a progressive organization that gives scope to apply my Knowledge and skills, and to be a part of a team that dynamically works towards growth of the organization.

Professional Summary :

- Acquired 3+ years of IT Experience as a **DevOps** Engineer in the field of **Software Configuration Management**.
- Hands on experience in automating **CI & CD** pipeline using Hudson, **Jenkins** tools.
- Expertise in creating & maintaining the infrastructure for different Environments.
- Proficiency with Configuration Management tools & Build management tools such as **Ansible, Puppet, Maven, Git, shell script, Jenkins, Docker .**
- Expertise in writing **playbooks** and creating Roles for **Scalablity** and **Reusablity** in **Ansible**.
- Hands on experience in **provisioning, orchestration, packages,services, configuration and deployment** using **ansible** .
- Experience in writing **manifests** and **modules** in **Puppet .**
- Experience in **AWS** to manage and configure **EC2** services and Automating **AWS** cloud deployments.
- Working on **AWS** cloud such as creating **EC2, S3, auto scaling** etc.
- Experience on Automate the Build and deploy of all internal **PHP, Python, Java** applications of bank to lower environments by using **Ansible, puppet, Jenkins** and **Shell scripts**.
- Experienced in develop, enhance and maintain the build, deployment and configurations for continuous integration and automate regression and acceptance testing.

- Experience on Maintain the configuration changes on Environment.
- Proven experience on create Branching and Tagging concepts in Version Control tool like **GIT**.
- Perform deployments to multiple environments like **Dev, QA,and UAT** environments.
- Experience in **Containerization tool** like **Docker** .
- Experience in **build Docker images** such as **Docker files**.
- Experience in **Agile Technologies** such as **Scrum**.
- Have excellent problem solving, time management skills, ability to work independently or as part of a team.

Technical Skills :

Operating Systems	RedHat Linux, Windows
Version Control Tools	GIT
Build Management Tools	Maven
Scripting Languages	Shell script
Application Servers	Apache Tomcat
Continuous Integration Tools	Jenkins
Configuration Management Tool	Puppet, Ansible
Containerization tool	Docker
Cloud Technology	AWS

Professional Experience :

- Working as a **DevOps** Engineer in **xxxxxxxxxxxxxxxxxx**. from July xxxxx to till now.

Education Qualification :
- M.Sc from **XXXXXXXXX Technological University** .
- B.Sc (Computer Science) from **XXXXXXX University** .

Project Summary :

Project 1

Project   :   xxxxxxxxxxxxx

Organization	:	**xxxxxxxxxxxxxx**
Duration	:	Jan 2015 to till now
Technology	:	**Java, Git, Jenkins, RedHat Linux, MAVEN, Ansible, shell script , AWS, Nexus .**
Application Server	:	Apache Tomcat
Designation	:	DevOps Engineer

Description:

xxxxxxxxxxxxxxxxxx is a complete digital presence analysis platform that enables reps to sell smarter and more efficiently. Reps can use it to easily pinpoint under-performing aspects of their customers' web presence and generate proposals on the spot to turn those weaknesses into strengths.

Responsibilities:

- Software Configuration management (Automate **CI & CD pipe** using **Ansible**, **Maven**, **Jenkins & GIT**).

- Writing **inventory files** and **ansible** configuration files.

- Creating **playbooks** in **Ansible** for configuration and Deployment activities.

- Automating **AWS** cloud deployments using **Shell script** and **Ansible**.

- Configured **packages**, **services** using **Ansible modules** like yum, service, templates, handlers etc.

- configuring **Apache tomcat** server using **Ansible** .

- Configured **Jenkins Jobs**, install **plugins** for generating Project artifacts.

- Setup the **Nexus Repository** for deploy the artifacts.

- Responsible for tagging and maintain code on version control **GIT**.

- Responsible for creating Builds and Deployments Planes.

- Creating **War / Ear** files using **Maven**.

- Perform Build activities using Maven and Jenkins tool.

- Perform Deployment of War files in Tomcat application servers using Shell script and Ansible.

- Automate the build Process Using **Jenkins jobs**.

- Verify Deployments logs to check for successful deployments.

- Convert the **playbooks** in **Roles** for **reusablity** and **Scalablity**.

- Perform deployments to multiple environments like **Dev,QA,**and **UAT** environments

Project 2

Project	:	xxxxxxxxxxxxxx
Client	:	xxxxxxxxxx
Duration	:	July 2013 to Dec 2014
Technology	:	Java, Git, Jenkins, Linux, Maven, Shell Script .
Application Server	:	Apache Tomcat.
Designation	:	DevOps & Linux Admin.

Description:

xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx

Responsibilities:

- Software Configuration Management (Using Git, Maven, Jenkins, linux)
- Creating **jar / War** Files Using Maven.
- Creating branches and tags using Git.
- Maintain the Git Repository.
- Automate the build process using Jenkins jobs.
- Monitoring daily builds using CI tool Jenkins .
- Verifying logs if build fails.
- Deploying jar/war files in Tomcat app server.
- Verify Deployment logs to check for successful deployments.
- Deploy the artifacts into Nexus Repository.
- Performing deployments to multiple environments like DEV, QA, PER, UAT.
- Perform Deployment of war file in app servers using shell script.
- Responsible to create build and deployment plans .

xxxxxxxxxxxx

Career Objective:
Seeking a growth oriented carrier in the world of information and Cloud Technologies, where I have more scope to learn, teach & nurture my knowledge by working on diversified protocols of applications.

Summary of Experience:
- Having 3+ years of experience in Devops Engineer in the fields of automation, configuration management and cloud services.
- Experience in using Git, jenkins, ansible and AWS services which reduce the effort of developers and operation teams in performing maintenance and daily operations.
- Experience in installing, configuring and administering jenkins in Linux machines.
- Build pipeline for continuous integration and continuous deployment by using jenkins.
- Experience in creating nodes in jenkins, which distributes the loads and run the jobs parallelly.
- Experience in configuration management tool such as ansible.
- Experience in provisioning, orchestration, configuring nodes and deployment using ansible.
- Expertise in writing playbooks for installing the packages like Apache, tomcat, MySQL, nginx in linux machines.
- Experience in adhoc commands and creating roles in ansible for reusability and scalability.
- Expertise in using Version control systems like GIT.
- Experience in source code management concepts such as branching and merging.
- Knowledge on Docker files to build the Docker images.
- Knowledge on MySql database to manage data.
- Expertise in AWS cloud services such as EC2, EBS, IAM, AMI, VPC, cloud watch, cloud trail, S3, Beanstalk, RDS.
- Design highly available, cost effective and fault tolerant systems using multiple EC2 instances, Auto scaling, Elastic Load Balancer and AMIs.
- Experience in creating backup of EBS and restoring it in desired locations.
- Design roles and groups for users and resource tags using AWS Identity and Access

Management(IAM).
- ➢ Manage network security using Security Groups and NACL.
- ➢ Monitoring the services by using monitoring tool like cloud watch.
- ➢ Experience in troubleshooting the build and deployment failures.
- ➢ Good communicator with exceptional analytical, client management, relationship management and coordination skills.

TECHNICAL SKILLS:

Operating Systems	**Ubuntu, Centos**
Configuration Tools	**Ansible**
CI/CD Tool	**Jenkins.**
Scripting	**Bash Scripting.**
Database	**MySQL.**
Virtualisation	**Virtualbox and vagrant**
Cloud technology	**Amazon web services**
Containerization	**Docker**
Monitoring tools	**Cloud Watch.**

Education:
- ➢ B.Tech(IT) from XXXXXXXXXX Technological University, someplace in 2013.

Employer Details:
- ➢ Working as a Devops Engineer in xxxxxxxxxxxxxx from Nov 2013 to till date.

Professional Summary:

Project : xxxxxxxxxxxxxxxxxxxxxxxxxx

Organization	: xxxxxxxxxxxx
Role	: DevOps Engineer.
Environment	: Git, Jenkins, Maven, Nexus, Ansible, AWS cloud.
Duration	: Nov 2015 to till date.

Responsibilities:
- ➢ I have been working with a team whose key responsibilities are creating and managing infrastructure for developers, testers, and DB admins in a way to accomplish automation.
- ➢ Configured Jenkins with maven build tool to generate the war/ear files and archived them.
- ➢ Using Nexus to store the generated artifacts and versioning the artifacts with timestamp.
- ➢ Integrating Git with Jenkins and Nexus in continuous integration and configured Jenkins with Poll SCM build trigger.
- ➢ Ansible is the primary automation tool in configuring and deploying artifacts to several environments.
- ➢ As most of the infrastructure is hosted in AWS cloud and responsible for creating and managing EC2 instances.
- ➢ Writing playbooks for installing and configuring the EC2 instances and automate deployments.
- ➢ Converting ansible playbooks into roles for scalability and reusability.
- ➢ Maintaining AMI's for backup of configured EC2 instances.

- ➢ Deploying the artifacts in environments like DEV, QA, UAT with ansible and jenkins.
- ➢ Creating backup of EBS volumes and restoring them.
- ➢ Providing infrastructure for production environments for installing of servers in load balancer, webservers and database servers.
- ➢ Ensuring the servers to sustain the load by configuring Elastic load balancer and auto scaling.
- ➢ Enabling highly available and robust virtual private cloud to ensure the network isolation from public cloud and secure them with security groups.
- ➢ I have personally used vagrant for testing automation scripts before configuring them in real time servers.

Project : xxxxxxxxxxxxxxxxxxxxx

Organization	: xxxxxxxxxx
Role	: Devops Engineer
Duration	: Nov 2013 to Oct 2015
Environment	: Ubuntu, Git, Maven, Jenkins, Nexus, ansible.

Responsibilities:
- ➢ Configured jenkins job with Git and maven for generating artifacts.
- ➢ Responsible for maintaining backups in jenkins.
- ➢ Installing ansible, Creating inventory file and ansible configuration files.
- ➢ Involved in writing playbooks for installing the different environments like DEV, QA, UAT for pre-production.
- ➢ Configured Jenkins with ansible for deployment of the application in servers.
- ➢ Writing playbooks for deployment of applications in configured servers.
- ➢ Creating playbooks into roles for reusability and scalability.
- ➢ Creating and maintaining the jenkins slaves for distribution of loads and run the parallel builds.
- ➢ Using branching strategy for source code management and ansible files in Git.
- ➢ Configuring Jenkins with Github Webhooks to automate the integration, when source code is pushed and notify the errors to developers.

[xxxxxxxxxxx]

SAMPLE RESUME 3

OBJECTIVE
To enhance my working capacities, professional skills, business Efficiencies and to serve my organization in best possible way with sheer determination and commitment.

WORKING EXPERIENCE

➢ Working as DevOps Engineer with xxxxxxxxxxxxx from Nov 2015to Till Date, Hyderabad.

➢ Worked as DevOps Engineer with **xxxxxxxxxxxxxx** from Sep 2013 to Oct 2015 Hyderabad.

PROFESSIONAL SUMMARY:

✓ Experience in building Continuous Integration (CI) & Continuous Deployment/Delivery (CD) pipeline as an iterative process using Jenkins.Expertise in using Configuration Management tool Ansible .

✓ Experience in writing playbooks to automate infrastructure creation, configuration and operation changes with help of modules in playbooks.

✓ Expertise in writing playbooks and converting in to Roles for Scalability and Reusability in Ansible.

✓ Experience on AWS cloud services EC2, RDS, S3, ELB, EBS for managing the multi tier environments.

✓ Experience in managing Auto scaling and Cloud watch services for applications.

✓ Experience in Building, configuring and managing EC2 instances with Ansible playbook.

✓ Experience in creating Highly available VPC for applications with high security using NACL and Security Groups.

✓ Experience in configuring and using S3FS and S3cmd for artifact storage management and backups.

✓ Experience on configuring and managing AWS Beanstalk for static web applications.

✓ Experience on Automating the Build and Deploy of PHP, Python, and Java applications to different environments by using Ansible, and Jenkins.

✓ Experience on using version control management tool GIT and its web repositories in Github for source code storage and management.

✓ Knowledge on Branching and Tagging concepts in Version Control tool GIT.

✓ Experience on installation of Apache, Tomcat, MySQL and Nginx. Written playbooks to install and configure these packages.

✓ Knowledge on Build management tools like Maven and Ant.

✓ Versioning and Keeping track of all builds and artifacts for backup and rollback strategy.

✓ Experience in using Nexus for artifact storage and for downloading artifacts for deploying it to applications and for testing.

✓ Automated process of downloading artifacts from Nexus to CD pipeline using playbook in Ansible.

✓ Knowledge on using Docker and recently worked on Docker for successful setup of Dev & Test environment for Developers and Testers by using Docker Build & Compose.

✓ Having Good Trouble shooting skills helped in build, deployment, infrastructure and network related issues.

✓ Knowledge on Shell Scripting for automating tasks for regular usage and system operations.

✓ Knowledge on Agile Technology such as Scrum.

✓ Knowledge on Software Development Life Cycle (SDLC) processes.

✓ Experience in Educating developers and QA folks on Build pipe line activities.

✓ Expertise in creating & maintaining the infrastructure for different test Environments and provisioning them using Vagrant and virtual-box.

✓ Have excellent problem solving, time management skills, ability to work independently or as part of a team.

EDUCATIONAL QUALIFICATION:

➢ Completed B.Tech in 2013 from XXXXXXX University .

TECHNICAL SKILLS:

SKILLS	TOOLS
Operating Systems	**Windows, Centos.**
Configuration Tools	**Ansible**
Continous Integration Tool	**Jenkins.**
SCRIPTING	**Bash Scripting.**
DATABASES	**MySQL.**
TOOLS: Unix tools- Ticketing tools- Monitoring tools-	**Putty,PuttyCM ,Winscp.** **BMC Remedy** **Cloud Watch.**

PROJECTS HANDLED

PROJECT# 1

Title   :xxxxxxx
Client   :xxxxxxx
Role   :DevOps Engineer.
Domain   :xxxxxxx
Duration   :Nov 2015 to Till date
Team Size   :8

Roles & Responsibilities:

✓ Developing Ansible Playbooks , Docker files for different scenarios to manage the infrastructure and integrating with CI / CD (Jenkins)

✓ Worked as a DevOps Engineer for a team that involves three different development teams and multiple simultaneous software releases.

✓ Configured **Git** with **Jenkins** and schedule jobs using **POLL SCM** and option.

✓ Deployed java applications to **application servers** in agile continuous integration environment and also automated the whole process.

✓ Responsible for installing **Jenkins** master and slave nodes.

✓ Deployed the build artifacts into environments like QA, UAT and production according to the build life cycle.

✓ Configure, monitor and automate **Amazon Web Services.**

✓ Created and managed custom **CentOS** and Linux based **AMI**s.

✓ Involved in deploying the content cloud platform on Amazon Web Services using **EC2**, **S3** cloudstalk.

✓ Creating **S3 buckets** and also managing policies for S3 buckets andGlacierfor storage and backup on AWS.

✓ Create and setup automated nightly build environment for java projects using **maven.**

✓ Managed **Nexus** repositories to download the artifacts (jar, war & ear) during the build.

✓ Setup **Elastic Load Balancer** for distributing traffic among multiple Web servers .

PROJECT# 2

Title	: xxxxxxxxxxxxxx
Client	: xxxxxxxxxxx
Role	: DevOpsEngineer
Duration	: Nov 2013 to Oct 2015.
Team Size	: 6.

Roles & Responsibilities:

✓ Creating **inventory** file and **ansible** configuration files.

✓ Creating **playbook** for installing **nginx** package on **load balancer**

✓ Creating playbook to installing **mysql-server package** on database server and Apache package in web server.

✓ Using playbook install **python-mysqldb** in app and db servers.

✓ Setup the Apache for receiving python application using **mod-wsgi** to serve the request.

✓ Using **apache module** enable the mod –wsgi

✓ To run the **python** application we install the **Flask & SQL packages**.

✓ Activating the **python site** and deactivating the apache default site

✓ We will enable a redirect rule which forward request from **nginx** to app servers randomly

✓ We convert the **playbooks** into roles for **Reusability** and **Scalability**

✓ Make the db server to listen to all interface.

✓ Configured **Git** with **Jenkins** and schedule jobs using **POLL SCM** build trigger.

RESUME

AB
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ab@xxxxxxxx.com

Career Objective

Seeking a growth oriented career in world of information and Cloud Technologies, Where I have more scope to learn, teach & nature my knowledge by working on diversified protocols of applications.

Professional Summery

Having 4+ Years of experience on DevOps engineer in the fields of automation, configuration management and cloud service and handled the following activities.

Responsibilities:

- Expertise in using Git, Jenkins, Ansible and AWS services which reduces the effort of developers and operation team in performing maintenance and daily operations.
- Expertise in setting up maintaining CI &CD pipeline using tools like Jenkins, SonarQube, Github, Nexus & Jfrog artifact repository's
- Expertise in setup and manage kubernetes cluster on AWS by using tools like kops, kubectl, awscli.
- Experience in writing kubernetes definitions files for pod, services, deployment, replication controls, & replication Set.
- Expertise in using versioning artifacts and stores in repositories.
- Expertise in configuration management tool such as Ansible.
- Expertise in Provisioning, Orchestration, Configuration nodes and deployment using Ansible.
- Expertise in writing playbooks in setting up complete application stack which includes services like Apache, Tomcat, MySql, Nginx, LAMP Stack.
- Expertise in roles in Ansible for reusability and scalability for other projects,
- Automated process of downloading artifacts from Nexus to CD pipeline using playbook in Ansible with Jenkins.
- Experience in installing, configuring and administering Jenkins.
- Configured Jenkins jobs, install plugins for generating project artifacts.
- Experience in creating Jenkins Parallel job execution with Master, Slave to distribute

load.
- Expertise on containerizing services & applications.
- Experience on Dockerfiles to build the Docker images.
- Knowledge on using Docker for successful setup of DEV & TEST environment for Developers and Testers by using Docker Build & Compose.
- Expertise in AWS cloud services such as EC2, EBS, AMI, IAM, VPC, Cloud Watch, S3, Beanstalk, RDS, Route53, Auto Scaling, ELB.
- Experience in creating backups of EBS and restoring it in desired locations.
- Design high available, cost effective and fault tolerate systems using multiple EC2 instances, Auto Scaling, Elastic Load Balancer & AMIs.
- Setup & maintain Elastic Load Balancer for distributing traffic among multiple web servers.
- Securing and distributing network traffic by setting up high available VPC.
- Design roles and groups for users and resource tags using AWS Identity and Access Management(IAM).
- Manage network security using Security Groups & network security using monitoring tool like cloud watch.
- Expertise in configuring S3FS for setting up Shared Storage (Centralized storage) .
- Expertise in setting & managing S3CMD for artifact storage & management backups to AWS S3 bucket trough command line interface.
- Experience on MySql database to manage data.
- Experience in using Nexus for artifact storage and for downloading artifacts for deploying it to applications and for testing.
- Knowledge on shell scripting for automating tasks for regular usage and system operations.
- Experience in python modules like FABRIC, BOTO3, & python package management system like PIP.
- Actively participate in daily SCRUM meetings and perform daily risk analysis of backlogs
- Experience in Chef creating cookbooks, and bootstrapping nodes, grouping nodes based on the requirement.
- Knowledge in Configuring and managing build tool like maven
- Knowledge in configuring & managing VirtualBox, VMware Workstation, by using Vagrant in a single workflow
- Experience in using Repo, configuring and monitoring RAID, configured LVM

Experience Profile

Experience as a DevOps engineer at XXXXXXXX, Placename from Mar 2014 to till-date.

Academic Profile

B.Tech (Information Technology), from JNTUA 2013-XX

Technical Skills

Operating Systems	RHEL, Ubuntu, Centos.
Configuration Tools	Ansible, chef.
CI/CD Tool	Jenkins.

Scripting	Bash Scripting, Python.
Database	MySql.CouchDB
Virtualization	Virtualbox & vagrant.
Cloud technology	Amazon web services.
Containerization	Docker, Kubrnetes.
Monitoring tools	Cloud Watch, Nagios.
File System	NFS, Ext2, Ext3 and Ext4, Xfs.
Package Mgmt	RPM and YUM, several command options for RHEL Dpkg and apt-get for ubuntu operating systems

Work Profile:

XXXXX   **Dec 2016 – Till date**

DevOps Engineer

Roles & Responsibilities:-

- I have been working with a team whose key responsibilities are creating and managing infrastructure for developers, testers and DB Admins in a way to accomplish automation.
- Configured Jenkins with maven build to generate the war files and archived them
- Using Nexus to store the generate artifacts and versioning the artifacts with timestamp.
- Integrating GIT with Jenkins and Nexus in continuous integration and configured Jenkins with poll scm build triggers.
- Ansible is the primary automation tool in configuring and deploying artifacts to several environments.
- As most of the infrastructure is hosted in AWS cloud and responsible for creating and managing EC2 instances.
- Optimized volumes and EC2instances.
- Creating users and groups, provided security for authentication of resources using IAM.
- Providing infrastructure for production environments for installing of servers in load balancer, web servers and databases servers.
- Developing Ansible Playbooks for different scenarios to manage the infrastructure and integrating with **CI (**continuous integration**), CD (**continuous deployment**).**
- Converting playbooks into roles for reusability and scalability.
- Involved in writing playbooks for installing the different environments like **DEV, QA, UAT** for pre-production.
- Creating and maintaining the Jenkins slaves for distribution of load and run the parallel builds.
- Configured application servers (Apache Tomcat, JBoss) to deploy the code.
- Created and configured multiple instances on tomcat for different teams.
- Configure plugins for the integration tools to the version control tool.
- Build java code in different Jenkins servers as per the schedule.

Environment: Git, Maven, Ansible, Jenkins, Aws Cloud, Nexus.

XXXXX	Apr 2014 – Oct 2016
DevOps Engineer	

Roles & Responsibilities:-

- Coordinates with the Development, Database Administration, QA and IT operations teams to ensure there are no resource conflicts.
- Successfully created kubernetes production grade cluster.
- Writing inventory files and Ansible configuration files. Creating playbooks in Ansible for configuration and Deployment activities.
- Configured packages, services using Ansible modules like yum, service, templates, handlers etc.
- Configuring Apache tomcat server using Ansible.
- Configured Jenkins Jobs, install plugins for generating Project artifacts.
- Perform Deployment of War files in Tomcat application servers using Shell script and Ansible.
- Develop Continuous Integration, Nightly and On-demand build system from scratch with Jenkins, Maven.
- Provided trainings to users on GIT, Jenkins tool management practices and other tools.
- Expert in installing and configuring Continuous Integration tools such as Jenkins for build and deployment automation.
- Used the continuous integration tool Jenkins to automate the daily processes.
- Maintenance of continuous integration based on Maven and Jenkins.
- Created Documentation for Application Deployment (WAR, JAR, EAR) in Domain and Clustered environments to achieve High Availability and Fail-over functionality.
- Configured email and messaging notifications, managed users and permissions, and system settings by using Jenkins.
- Configured GIT with Jenkins and schedule jobs using Poll SCM option.
- Implemented and manipulated Shell and Python scripts for release and build automation to suit the requirement.
- Used Maven as a dependency management tool to manage all the dependencies that are required.
- Providing on-going support and administration for GIT and Maven build automation.
- Developed Shell Scripts for the purpose of manual deployment of the code to the different environments and E-mail the team when the build is completed.
- Managed software baselines and configurations, including labeling, branching/merging and promoting versioned files.

Environment: Jenkins, Maven, Nexus, Git, Apache Tomcat, Ansible

I hereby declorrect to the best of my knowledge.

AB