

Self-Introduction:

Having 4+ years of experience, I am fully in Devops and AWS, I work with ci-cd pipeline and monitoring the infrastructure as well as end to end product deployment

In this experience I used the tools like

version control system in github, bitbucket

build tools like ant and maven

jenkins as for continues Integration

tomcat as application server

for configuration management tool as Ansible

for containerizing tool as Docker

for docker or orchestration we use kubernetes

coming to AWS we used to use EC2,VPC,S3,IAM,Cloud Front,Route53,SNS,SQS, Auto scaling

we follow the AWS best practices we use Hub and Scope Architecture; Hub is Management VPC and Scope is Production VPC

In Hub we will have all the shared resources, Bastion, NAT, monitoring login

in Application VPC we have only the work load like data bases ,application server and webserver..

-----Git-----

1. Why we need git? What makes git unique from other tools like SVN?

- git is the most commonly used version control system
- git tracks the changes you make to files,so you have a record of what has been done and you can revert to specific versions
- git also makes collaboration easier, allowing changes by multiple people to all be merged into one source
- in git if we remote repository is down, we have a backup of local repository with us

2. Let's say i have maven repo cloned on to my local, did some changes and i have build the code now target folder will be generated. So now when i do git operations like git add,

git commit or any other git operations target folder should not be considered, how would you achieve the same?

it can be done by .git ignore

3. difference between git pull and git fetch?

git pull = git fetch + git merge

- here git pull will search all the changes and modify the changes to local
- here git merge will only shows the changes in remote, will not merge

4. How to clone specific branch in git?

git clone -b <branch name> --single-branch <repository clone link>

-----Maven-----

5. when i issue mvn install what all things happen in background?

It will validate, compile, test, package, verify, install, deploy

6. what are the settings you need to do before running mvn deploy?

here we should add plugin in pom.xml to provide the path of mainclass

7. why maven takes much time for 1st execution and from 2nd execution it will take less time?

when we execute for the first it will download the dependencies in local repository, when we run for the second time it will check the dependency in local and will not download the existing dependency and build it

-----Unix and Shell Scripting-----

8. How to get present working folder?

basename "\$PWD"

it will show only the working folder not the full directory

9. How to copy files from local windows machine to cloud based Linux machine?

open power shell in the local windows and type the below command and give pswd

pscp <path of the file in windows> ubuntu@<public ip>:<linuxpath>

10. A shell script named test.sh can accept 4 parameters i.e, a,b,c,d. the parameters wont be supplied in order always and number of parameters might also vary(only 2 parameters user might supply sometimes), how to identify position of letter c?

```
i=0;
for p in "$@" ; do
    i=$((i+1))
    if [ "$p" = "c" ]; then
        echo "User supplied C has a parameter, in $i position"
    fi
done
sh test.sh a b d c
```

it will mention the C in the 4th position

-----Ansible-----

11. Why we need ad-hoc ansible commands, scenario where you have used ansible ad-hoc command?

- An Ansible ad-hoc commands uses the /usr/bin/ansible command-line tool to automate a single task on one or more managed nodes
- by ad-hoc commands we can ping, copy.... with the host machine for eg:
`ansible dev -i hosts -m ping`
`ansible dev -i hosts -m copy -a 'src=test.yml dest=/home`

12. When i need detailed logs on executing ansible playbook what option i need to use?

here in the ending of the playbook command we can specify the extension `-vvv`

13. what is ansible.cfg file?

- it is present in the path of /etc/ansible
- you can define certain settings in ansible.cfg eg: we can add hosts ip

14. what are the modules have you worked on? which module will you use for getting the file from node to master?

- copy, fetch, yum, debug, get_url, apt, command, shell
- for copying from node to master we will use fetch cmd

15. Lets say i have a playbook which has 5 tasks in playbook, first 2 tasks should run on local machine and other 3 tasks should run on node?

here we run the playbook which the yml contains two hosts mentioned separately according the required task

Jenkins

16. How to save only last 5 builds of Jenkins job?

in Jenkins job configuration, in general there will be option discard old builds there we can specify 5, hereby it will show only 5 builds in the Jenkins server

17. Have you worked on Jenkinsfile? can we use docker container as a node in Jenkinsfile? Who will handle docker container creation and deletion? If i am building a maven project always docker container is fresh instance it will try to download dependency from repository, what measures you will take to reduce build time?

yes, yes, Jenkins will handle container creation and after build is done the container will be deleted, here we should copy the mvn repository to the docker by adding arg command in the jenkins file, so it will reduce the build time

18. Why we need multi branch pipeline?

<https://www.jenkins.io/doc/book/pipeline/multibranch/>

19. If you forget Jenkins password, how would you login back?

In jenkins path, we have the file config.xml, when we edit it.... there will be called usesecurity is true, it should be changed to false

Docker

20. Any 3 best practices of docker?

- Always keep Dockerfile in empty directory or make sure directory where Dockerfile present with required file
- Use official images when possible
- use more specific tags
- look for minimal flavors

21. Difference between docker stop and docker kill?

- stop a running container (send SIGTERM, and then SIGKILL after grace period)
- kill a running container (send SIGKILL, or specified signal)

22. Command to list containers which state is exited?

`docker ps -a -f status=running` = it will show only running containers

`docker ps -a -f status=exited` = it will show only stopped containers

`docker rm $(docker ps -a -f status=exited -q)` = it will remove the stopped container

23. command to clean-up docker host (deleting stopped containers, dangling images and unused networks)?

docker system prune

24. What version of docker you have used? Specific reason to use that particular version?

just refer what version is used by you

25. Can we have multiple CMD in Dockerfile?

we can have multiple cmd in it, but no use we it will consider last cmd only

26. Have you worked on docker swarm and docker compose?

alternative Kubernetes

-----Kubernetes-----

27. Can we have multiple containers in a pod? Can we have similar containers in a pod?

Lets say i have 4 containers, one of them has failed how would you check which container has failed?

- yes we can create multiple containers, but for best practice we should use one because if we have multiple containers if one container get down total pod will get down
- to check the failed container `kubectl describe pod <podname>`

28. What is liveness and readiness probe? Why we need them?

it is used to make application highly available, with container orcastration

29. Have you worked on kubernetes monitoring? Which tools you have used?

30. Can we deploy a pod on particular node?

first, we need to label the kubernetes node with specific size

`kubectl label nodes <node name> size=medium`

now add the label to the yml script which we need to deploy the pod

```
spec:
  containers:
  - name: my-python
    image: deekshithsn/python-web-app
  nodeSelector:
    size: medium
```

now we can deploy the pod.. so it will go the specific node