

Interview Question

AWS , Linux , Terraform , Kubernetes , Docker, CI/CD

AWS

- 1- What is VPC, NAT Gateway, Transit Gateway , Peering and private subnet
- 2- What is difference b/w policy and role and what is different type of policy
- 3- What is the working process of Application and Network load balancer
- 4- How load balancer perform health check and can we change the health check port ?
- 5- How Auto Scaling work and how we can dynamic autoscaling
- 6- Vertical and horizontal auto scaling working process step by step
- 7- How S3 lifecycle management works and what is purpose , what is glacier
- 8- What is cloud trail, lambda , cloud watch , RDS

Terraform

- 1-How terraform init, plan , apply works i.e you need to check files and all
- 2- How terraform sync remote backed state file and local state file
- 3- How you can migrate existing cloud server to terraform
- 4- what is terraform provisioners and how many type of provisioners in tf
- 5- what is the use of terraform taint and how it works
- 6- What happened if someone delete some resources which was managed by terraform and what will happened if you terraform apply
- 7- what happend if someone deleted the state file and how index locking works in terraform
- 8- what is the purpose of terraform module and how to create modules and share it to other teams

Linux

- 1- htop command end to end working process
- 2- how to mount the volume in linux. What is lvm in linux
- 3- uptime and load average and what happened is server is consuming 100% memory and cpu
- 4- how to check port number , Process ID and open file and how kernel kills a process.
- 5- how system resolver DNS name to ip address
- 6- how you can search a file/folder in the linux using find command
- 7- how you check disk space , memory and cpu utilisation
- 8- How to resolve the error if a system load average is too high
- 9- what is systemd and how it different form docker
- 10- what happened when restart your system i.e how system restart/start/stoppe works
- 11- touch,cd,mkdir , netstat, link , rm -rf ., rm -rd , /etc/ , user and password creation

Kubernetes :-

- 1- kubernetes Architecture and working process and how k8s components communicate to each other via Rest Api. How kubelet works
- 2- What are services in k8s and explain different kinds of services and how they work
- 3- how service discovery works in kubernetes and how k8s allocates DNS
- 4- What is ConfigMap and Secret and uses of this.
- 5- What is StatefulSet, DaemonSet, Deployment and ReplicaSet.
- 6- how k8s check the health of kubernetes and how to configure it.
- 7- PV, PVC and storage class uses and how to mount it in pods
- 8- ingress controller and ingress resources.
- 9- what file kubelet reads to validate the api server
- 10- what happens if k8s certificate expires

Kubernetes

- 11- Rolling update and rollback update in kubernetes and how we can do this
- 12- How kubernetes perform horizontal and vertical auto scaling
- 13- how k8s monitor the metrics of the pods and then perform the scaling
- 14- what is pod affinity and anti affinity & node affinity and anti affinity
- 15- How you handle blue and green deployment
- 16- how one pods communicate if they are on same node and different node

Docker

- 1- Docker Architecture and working process
- 2- What is containerization and virtualization and what issue docker solved
- 3- what is multistage Docker pipeline and how you can reduce the docker image size
- 4- What is difference b/w CMD and ENTRYPOINT & COPY and ADD
- 5- What is docker volume and how you can mount the volume in the containers
- 6- what is container exit status and how you can solved
- 7- Have you written the dockerfile, If yes - Please elaborate
- 7- how you can build the image and push it to docker registry

CI/CD

- 1- What CI/CD tools you are using to perform ci.cd of application
- 2- what is basic difference b/w CI and CD and how you added the nodes in your pipeline
- 3- how many stages have in your pipeline and
- 4-what is the purpose of sonarqube and this step come before build step or after
- 5- have you integrated the security step in your pipeline if yes then what is scanning and who is getting the report and how your fixing it
- 6- how you are performing the CD of the application
- 7- How you are handling the error log in the pipeline and where you are storing your artifacts. How you can run only selected stage
- 8- how to run two step parallelly in the pipeline
- 9- How you are tagging the builds and pushing it to artifacts and how you are doing rolling update

Troubleshooting and Scenario based

1- We have my application running in EC2 and end user is getting request from Load balancer , all of sudden Traffic increased and your application has been crashed .

To overcome this issue , how you will design the system architecture and how you make whole this automatic

2- We have an Application and team is confused to decide which load balancer and which instance type we need to use . so what is solution on this to decide the correct size of EC2 instance and load balancer .

We also need health check

3- How you will enable the communication b/w two or more AWS account and b/w on-prem to cloud

Troubleshooting and Scenario based

- 4- You have written the k8s manifest file to deploy the java microservices but your pod is throwing the error “imagepullbackoff” , how you troubleshoot it .
- 5-You have written the k8s manifest file to deploy the java microservices but your pod is throwing the error “crashloopbackoff” , how you troubleshoot it .
- 6- How reverse proxy work ?
- 7- What is the branching strategy in your company and how you are resolving any conflicts
- 8- what step you will implement in your CI/CD to handle any kind of error and your pipeline if it has any error.
- 9- How you can setup the high available cluster and make sure that your application is high available and running 24/7
- 10- What are the metrics and application code your are monitoring using Prometheus and how you are resolving any issue if coming from monitoring tools

Troubleshooting and Scenario based

11- What major issue you have faced while creating the CI/CD pipeline or deploying the application on k8s or any cluster setup and how you have resolved that

12- what is port number of mysql, mongodb ,k8s api server, prometheus , grafana ,nginx and what port two linux server communicate .

13- How TCP/IP,UDP , HTTP/HTTPS and layer 4 & layer 7 works.