

Questions - Siemens.

Q.1) Tell me about yourself

Q.2) Terraform module

Q.3) How you are doing upgrade / update

Q.3) How you are using Terraform ~~what are you using~~ for CI/CD or using some modules.

Q.4) Setup Prometheus & Grafana?

Q.5) What is ^{Node} Exporter in Grafana.

Q.6) CMD v EntryPoint Docker

Q.7) How you are exposing your application?

Q.8) Explaining the flow, No

Q.9) Ingress controller

Q.10) Kubernetes services

Q.11) What is eksctl

Q.12) K8s Architecture & explanation

Q.13) Docker ==>

Q.14) Deployment strategy for application & Infra.

Q.15) How you are connecting to your application via DNS or ip/port? Explain why & what.

Q.16) Difference b/w New Relic & Prometheus / Grafana

Q.17) How your request reaching to pod where application is deployed.

Q.18) What is Ansible? Uses (strategic) & how you can connect to EC2 via Ansible!

- Q.19) Give one use case where you can use Ansible.
- Q.20) What is multistage in Docker?
- Q.21) What is layering in Docker?
- Q.22) Terraform statefile, where it is stored why it is stored, apart from S3 bucket where else you can store.
- Q.23) How to reduce the size of Docker image?
- Q.24) What is the OS & the version of Linux you are working on it.
- Q.25) How to install any application on a VM? Eg. GIMP

AWS EKS VERSION - 1.25

Helm - 3.14

Terraform - 1.3

Can

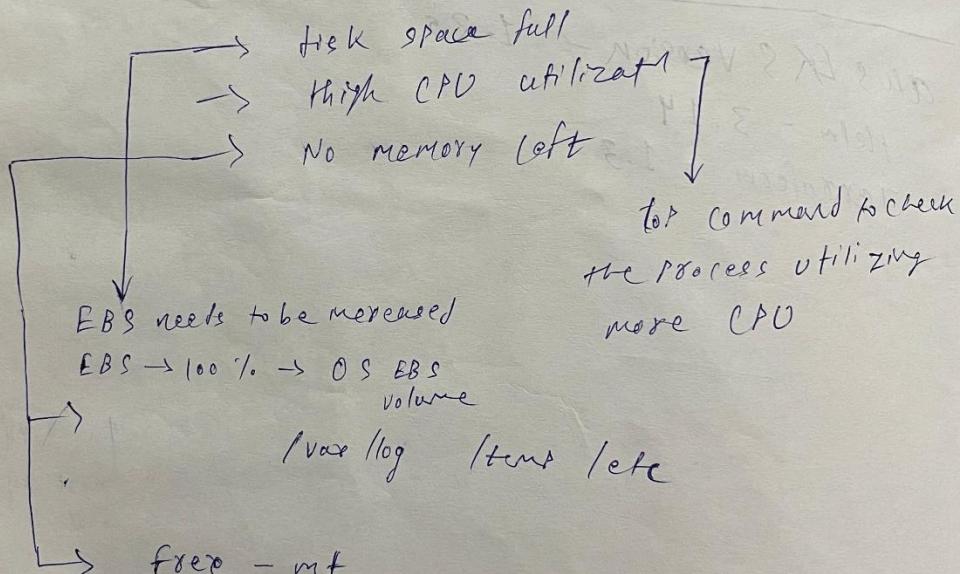
not

(Q.1) Your what actions will you take to mitigate the out of disk space issue?

(Q.2) What is bastion host or gateway service? What role do they play.

(Q.3) Multiple EC2 instances in ASG is getting terminated & this is causing downtime of the application. EC2 pricing quota all look good. How you would debug?

EC2 → terminated after unhealthy, main reasons below



→ docker run -P 500:502

Q.4) Create a script that will store log in S3 automatically,
script should be run in particular time.

Q.5) why Logging is important? what is centralized
logging & what tools help to achieve it

A.5) Ans) Log
Cloud Trail
Elastic Search | Prometheus + Grafana
New Relic.

Q.6) Check logs from docker container?
How to filter latest 200 lines from container logs?

A.6) docker container logs < container name
docker container logs --tail 200 < container name

Q.7) What will happen to logs if you restart container?

A.7) Docker image 2.7 GB ? Will this be a concern?
How to reduce its size?

A.8) Smaller Image Base (Alpine Images)

- Multi-stage builds feature when building Docker images.
- Remove package binaries after installing
- Don't install packages that isn't required.

Q.9) Docker Image vs Docker layers?

A.9) Explain CMD vs Entry point in Docker?

If your Dockerfile has CMD so the command written in CMD
can be overwritten live below:

→ docker run -p 5004:5001 -d dockerimage:1.0
echo 'Hello World'

Q.11) What is K8s KOp e?

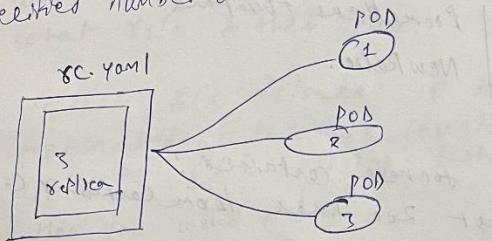
(Q.13)

Q.12) Replication Controller in K8s?

(Q.14)

Ans) A replication controller is responsible for running the specified number of Pod copies (replicas) across the cluster.

The is
NOT al
IN



at: Version : v1
KMD : ReplicationController (ReplicationController in space)

Eg:

Metadata :

name: nginx

(Q.15)

Spec :

replicas: 3

(Q.16)

selector :

app: nginx

• Ye

template :

metadata :

name: nginx

• we

labels:

app: nginx

• To

spec

containers :

- name: nginx

• L

image: nginx

port:

- containerPort: 80

Q.17

hostPort: 8080

nodePort: 30000

(Q.13) What is PV & PVC in K8s?

A.14) A Pod is trying to access a volume but it gives access error. fix it.

The issue could appear because of Access Mode of Volume
Not all PVs allow multiple pod access

In K8's

- ReadWriteOnce
- ReadOnlyMany
- ReadWriteMany
- ReadWriteOncePod

Eg: NFS allowed ReadWriteMany
EBS allows only ReadWriteOnce

(Q.15) What is a side car container?

(Q.16) We want to launch certain pods only on specific nodes. Is it possible? How to achieve this.

- Yes, this can be achieved by Taints in K8's
- we can add a taint to a node —
 - Kubernetes taint notes notes key = value : Effect.
- Taints are a property of nodes that push pods away if they don't tolerate this taint.
- Like labels, one or more Taints can be applied to a node.

(Q.17) How does K8's scheduler quickly assign worker nodes for the pods? Explain internal working of K8's scheduler.

Ans) Scheduler in the form of metadata Health & Load
Scheduler prepare a list on the received information first it filters and it scores by which it will be able to analyze the healthy work notes.

Every pod goes thru pod scheduling cycle
pod shared the information of its requirement to get schedule on a worker node.

Q.18) You have 10 Notes with 500 MB of disk attached to each Note. If any of the Note reaches 85% disk space usage, pods should get evicted and schedule in different & healthy note.

Ans) eviction command applied at Note level not at pod level

eviction setting by kubelet command
kubelet uses internal algorithm to decide which pods will get evicted, this decision is based on the quality of the service that's

QoS. The pod selection for eviction get gracefully terminated post that it will be evicted and attached to the healthy note like resource

will be released. for eviction-hard
eviction-soft in kubelet config file

Q.19) Helm, its version & advantage of it

- A.) It is basically packaging all your K8s files into a single chart format which will help in deployment, rollback, upgrade, prod, Staging & Dev.

Q.20) why Helm?

A.) Which helm repository to you use to store charts

Q.21) Which helm repository to you use to store charts?

Q.22) Let's say you have 2 servers with different ports & you want to apply same chart to both the different VM/Server for applying & using same run book / Playbook?

A.) We can achieve this by using below host file format

[webserver]

0.4.20.90 ansible_port=4000 ansible_user=root

39.12.3.23 ansible_port=8001 ansible_user=shatty

Q.23) In ansible Playbook, we have a section which could fail on certain note. But we don't want Playbook to stop & exit because of this.
If it possible to ignore this part of Playbook fails?

Q. 25) Ans) Yes we can achieve it using ignore_errors sub argument

— name : Do not count this as a failure
ansible.builtin.command : /bin/false
ignore_errors : yes

playbooks.yml

— name : update

— name : install → it fails then ignore_errors
skip to the next one.

— name : run

Q. 26) How to handle secrets in ansible?

Ans) ansible-vault create vault.yml
echo 'data to be encrypted' > encrypt-file.txt
ansible-vault encrypt encrypt-file.txt

vault → ansible-vault

↳ encrypt
↳ decrypt

ansible workspace ↳ ansible-vault
↳ secrets

external integration also possible
live KMS and
vault Hashicorp

Q.25) what is instance fleet in Aws?

A) suppose Aws can launch only one type of EC2 instance in fleet it can be of different type.

Combination of different EC2

Q.26) what is horizontal & vertical scaling?

Horizontal Scaling Eg: Auto, replication controller

Vertical Scaling: x.large → 2x. large

Increase the CPU & memory

→ To handle more traffic creating more instances

Q.27) Could explain how you will block or IAM user from accessing a specific S3 bucket?

A) It is not possible from IAM.

It can be achieve from bucket policy

Q.28) what kind of DB's have you used?

A) DynamoDB

AWS RDS

Q.28) why do we have 3 different kind of IAM Policy

managed, customer managed & Inline Policy?

Q.29) what is ingress & egress in Aws?

10/05/2024 Knorr-Bremse

Q) How will you approach the Kubernetes Upgrade?

(Q) What is Docker multi-stage image? Use case

(Q.) What is Docker Compose?

(Q) How will you setup Prometheus & Grafana for newly created AWS EKS? Detail explanation.

(Q) ~~Are you~~ How you have installed Jenkins?

(Q) Is node exporter running on all the WN?

(Q) Is node exporter running on all the WN?

Q) How to check the current version & flavour of Linux system?

Q.) What kind of services you are using in AWS?

Q.) Do you know the Billing & Costing part of AWS services.

Q.) Memory, disk space & CPU in Linux

a.) Memory, disk space & CPU in Linux & how to kill

a.) Process to check in Linux & how to kill specific process?

(Q) Can pods have multiple containers?

(Q) How will you get the details of all the containers running in the pod?

(Q) How to check logs? Can you check application log without exec into the pod?

(Q) What is PVC? Why PVC required?

(Q) How you can manage access based on Jenkins Job? That specific user will able to see specific job.

Q.) How can you copy log file to your local out site of the pod without using exec.

(Q) Without FROM layer in Dockerfile, will it build the image?

(Q) Suppose there is some resource you created from Terraform but someone delete that resource from console. What will happen if you do terraform apply now.

(Q) How would you store your credentials & password & where?

(Q) Difference b/w Tuple & list in Python!

a) How to define variable in Python?

(Q) Difference b/w Reverse & forward proxy?

for YAML specification for K8s
remember a KMS

apiVersion:

kind:

metadata:

name:

label:

spec:

replicas

(Q) Differ

a) what

Q.) Type

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Q) Difference b/w Deployment / Statefulset / Daemonset

A) What is Ingress in K8s?

Q.) Types of service in K8s.

Q.) What is flow from user to Pod?

A.) example.com → Ingress Controller → Ingress Yaml → Service → Deployment → Pod.

Q) Architecture in K8s?

Q) If client have on-prem server & now they want to migrate to cloud?

A.) Assessment & Planning - Architecture, dependencies, external tools.
Containerization strategy - LIFT & SHIFT
Virtual decomposition.

Application refactoring - Monolithic to Microservice

Q.) If everything in pod is OK then also it's giving slow response. What to check?

A.) DNS → from where our traffic routed

Query response - Inside pod software or code is taking time

Q.) How you troubleshoot if response is slow?

A.) Check resource limits.

Kubectl logs - check logs
external dependency.

- Q) If we push change to github then how we revert back! (Q) what
- Q) write a pipeline in Jenkins to upload image to ECR (Q) Do (Q)
- (Q) without peering how we can establish connection? (1) AP
Ans) VPN / Direct connect / Transit gateway (2) H
/ Public facing endpoint. (3) He
in
- (Q) Technique for High Availability? (4) Mo
- A.) How we can reduce boot time of VM? (5) W
Ans) Download any file from web & download it in AWS S3 (7) S
write AWS Devops Pipeline. (8) H
- Q.) How in docker run command using non-root user? (9) A
- 4.) Difference types of Job in Jenkins?
- Q) If any linux system is down, then how you troubleshoot
- Q) Secret vs Config map in K8s?
- Q) Configmap vs ENV variable?
- Q) privilege = true, what does it mean in docker?
- Q) If i had created ec2 instance but after create I will get public how you get that with terraform?

(Q) What is backet & How you manage state Cooring ?

(Q) Deployment Strategy ?

(Q)

~~NTT Data / Vodafone~~ Round 2

① APP vs APP set in ArgoCD

(2) How to use Configmap & Secret in K8s

(3) How to use Credentials saved in AWS Secretmanager in AWS EKS

(4) How to store data in AWS RDS from AWS EKS ?

(5) Why we use Helm ? Advantages.

(6) How to add a new node in already created AWS EKS cluster.

(7) Suppose you have multiple containers in a pod, which will run first ?

(8) How to see each log of a specific container of log ?

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I will get

1. N.H
2. C.R
3. S.B
4. M.S

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2. C.R

3. S.B

4. M.S