# Conversation between Srinath Karkampally and Copilot

## User Questions

Which flavour of Linux you know? Which flavours have you worked.  
Which version of RHEL , have you worked?  
How do you locate a file name having a string? How do you do this from root directory?  
Locate it from sub directory as well.  
5. How to search a string within a file? From all the sub directory file as well?  
6. Systemd and system init diﬀerence or correlation.  
7. How to check all serives were up after a system boot?  
8. If any services didn’t start, how to troubleshoot?  
9. On Aws EC2, how to check applications came up?  
10. On AWS, how do you check logs?  
11. Where do you configure min and maximum pod?  
12. How do you check how many pods were started?  
13. What are life cycles of a pod?  
14. If any pods were failing to start, how do you start troubleshooting?  
15. What are ways database can be installed in aws?  
16. Explain on load Balancer in AWS?  
17. Explain security groups and NACLs.  
18. With example, explain application load balancing and network load balancing.  
19. Explain, how do min and max pod configuration In load balancing?  
20. How does a kubernetes know when to spin up an additional pod? Give the configuration  
Details.  
21. Explain about cluster in kubernetes.  
22. In order to host an enterprise application, what are all things you would consider  
23. Ingress and egress configuration. Explain in detail. How would you configure it.  
24. How would you configure routing of application to accept ingress.  
25. How do you handle database creeds in eks or k8?  
26. Explain about secrets and configMap  
27. How the configMap is used within application  
28. How do you secure transport layer security  
29. Across zone load balancing - explain the concept and provide details on how will you  
configure  
30. In aws load balancing, what’s the use of sticky session?

## Copilot Answers

That's a solid and comprehensive set of DevOps and Kubernetes interview questions, Srinath! Let's go through them one by one with clear, concise answers:  
  
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1. Which flavours of Linux do you know or have worked with?  
- Worked with: RHEL (Red Hat Enterprise Linux), CentOS, Ubuntu, Amazon Linux, Debian.  
- Familiar with: Fedora, SUSE, Alpine Linux (especially in containers).  
  
2. Which version of RHEL have you worked with?  
- RHEL 7.x and 8.x are most common in enterprise environments.  
- RHEL 9 is gaining adoption; familiar with its systemd enhancements and Podman support.  
  
3. How do you locate a file name having a string?  
- From root directory:  
 find / -type f -name "\*string\*"  
- From a subdirectory:  
 find /path/to/dir -type f -name "\*string\*"  
  
4. How to search a string within a file?  
- In a single file:  
 grep "search\_string" filename  
- In all files under a directory:  
 grep -r "search\_string" /path/to/dir  
  
5. systemd vs init (SysVinit)  
| Feature | systemd | init (SysVinit) |  
|----------------|-----------------------------|-----------------------------|  
| Boot Speed | Faster (parallel startup) | Slower (sequential) |  
| Unit Files | Uses .service files | Uses /etc/init.d/ scripts |  
| Dependency Mgmt| Built-in | Manual |  
| Logging | journald | /var/log/messages |  
  
6. How to check all services were up after boot?  
systemctl list-units --type=service --state=failed  
Or check boot logs:  
journalctl -b  
  
7. If any services didn’t start, how to troubleshoot?  
- Check status:  
 systemctl status <service>  
- View logs:  
 journalctl -u <service>  
- Check dependencies and config files.  
  
8. On AWS EC2, how to check if applications came up?  
- Use:  
 systemctl status <app>  
- Or check logs in /var/log/ or application-specific logs.  
- Use cloud-init logs for boot-time issues:  
 cat /var/log/cloud-init.log  
  
9. On AWS, how do you check logs?  
- CloudWatch Logs: Centralized logging.  
- EC2 logs: /var/log/, journalctl, or app-specific paths.  
- Use AWS CLI:  
 aws logs describe-log-groups  
 aws logs get-log-events --log-group-name ...  
  
10. Where do you configure min and max pods?  
- In HPA (Horizontal Pod Autoscaler):  
 minReplicas: 2  
 maxReplicas: 10  
  
11. How do you check how many pods were started?  
kubectl get pods --all-namespaces  
  
12. What are the life cycles of a pod?  
- Pending → Running → Succeeded / Failed / CrashLoopBackOff  
- Lifecycle hooks: postStart, preStop  
  
13. If pods are failing to start, how do you troubleshoot?  
- Check pod status:  
 kubectl describe pod <pod-name>  
- View logs:  
 kubectl logs <pod-name>  
- Check events and resource limits.  
  
14. Ways to install databases in AWS:  
- RDS (Managed)  
- Aurora  
- EC2 self-managed  
- EKS with StatefulSets  
- DynamoDB (NoSQL)  
  
15. Load Balancer in AWS:  
- Types: ALB (Layer 7), NLB (Layer 4), CLB (legacy)  
- Distributes traffic across targets (EC2, containers, IPs)  
  
16. Security Groups vs NACLs  
| Feature | Security Group | NACL |  
|------------------|------------------------|-----------------------------|  
| Level | Instance-level | Subnet-level |  
| Stateful | Yes | No |  
| Rules | Allow only | Allow & Deny |  
  
17. ALB vs NLB (with example):  
- ALB: HTTP/HTTPS, path-based routing.  
 - Example: /api → service A, /web → service B  
- NLB: TCP/UDP, high performance, static IPs.  
  
18. Min/Max pod config in load balancing:  
- Set in HPA to scale based on CPU/memory.  
- Load balancer distributes traffic to available pods.  
  
19. How does Kubernetes know when to spin up pods?  
- HPA monitors metrics (CPU, memory).  
- Config:  
 apiVersion: autoscaling/v2  
 kind: HorizontalPodAutoscaler  
 spec:  
 minReplicas: 2  
 maxReplicas: 10  
 metrics:  
 - type: Resource  
 resource:  
 name: cpu  
 target:  
 type: Utilization  
 averageUtilization: 70  
  
20. Kubernetes Cluster:  
- A set of nodes (masters + workers)  
- Manages containerized workloads  
- Components: API Server, etcd, Controller Manager, Scheduler, kubelet, kube-proxy  
  
21. Hosting enterprise app – considerations:  
- High availability  
- Auto-scaling  
- Security (IAM, TLS, Secrets)  
- Monitoring/logging  
- CI/CD  
- Backup & DR  
- Cost optimization  
  
22. Ingress & Egress configuration:  
- Ingress: Controls incoming traffic via Ingress Controller.  
- Egress: Controlled via Network Policies or NAT Gateway.  
- Example Ingress:  
 apiVersion: networking.k8s.io/v1  
 kind: Ingress  
 metadata:  
 name: my-ingress  
 spec:  
 rules:  
 - host: myapp.example.com  
 http:  
 paths:  
 - path: /  
 pathType: Prefix  
 backend:  
 service:  
 name: my-service  
 port:  
 number: 80  
  
23. Routing app to accept ingress:  
- Deploy Ingress Controller (e.g., NGINX)  
- Create Ingress resource  
- DNS → Ingress → Service → Pod  
  
24. Handling DB credentials in EKS/K8s:  
- Use Secrets:  
 kubectl create secret generic db-creds --from-literal=username=admin --from-literal=password=pass  
  
25. Secrets vs ConfigMap:  
| Feature | ConfigMap | Secret |  
|-------------|------------------------|----------------------------|  
| Data Type | Plain text | Base64 encoded |  
| Use Case | Non-sensitive config | Sensitive data (passwords) |  
  
26. Using ConfigMap in app:  
- As env vars:  
 envFrom:  
 - configMapRef:  
 name: my-config  
- Or as mounted volume.  
  
27. Securing transport layer:  
- Use TLS/SSL  
- Cert-manager for auto TLS in K8s  
- Use HTTPS for Ingress  
  
28. Cross-zone load balancing:  
- Enabled in ALB/NLB  
- Distributes traffic across AZs  
- Improves fault tolerance  
  
29. Sticky sessions in AWS Load Balancer:  
- Ensures user is routed to the same backend  
- Useful for session-based apps  
- Enabled via ALB target group settings