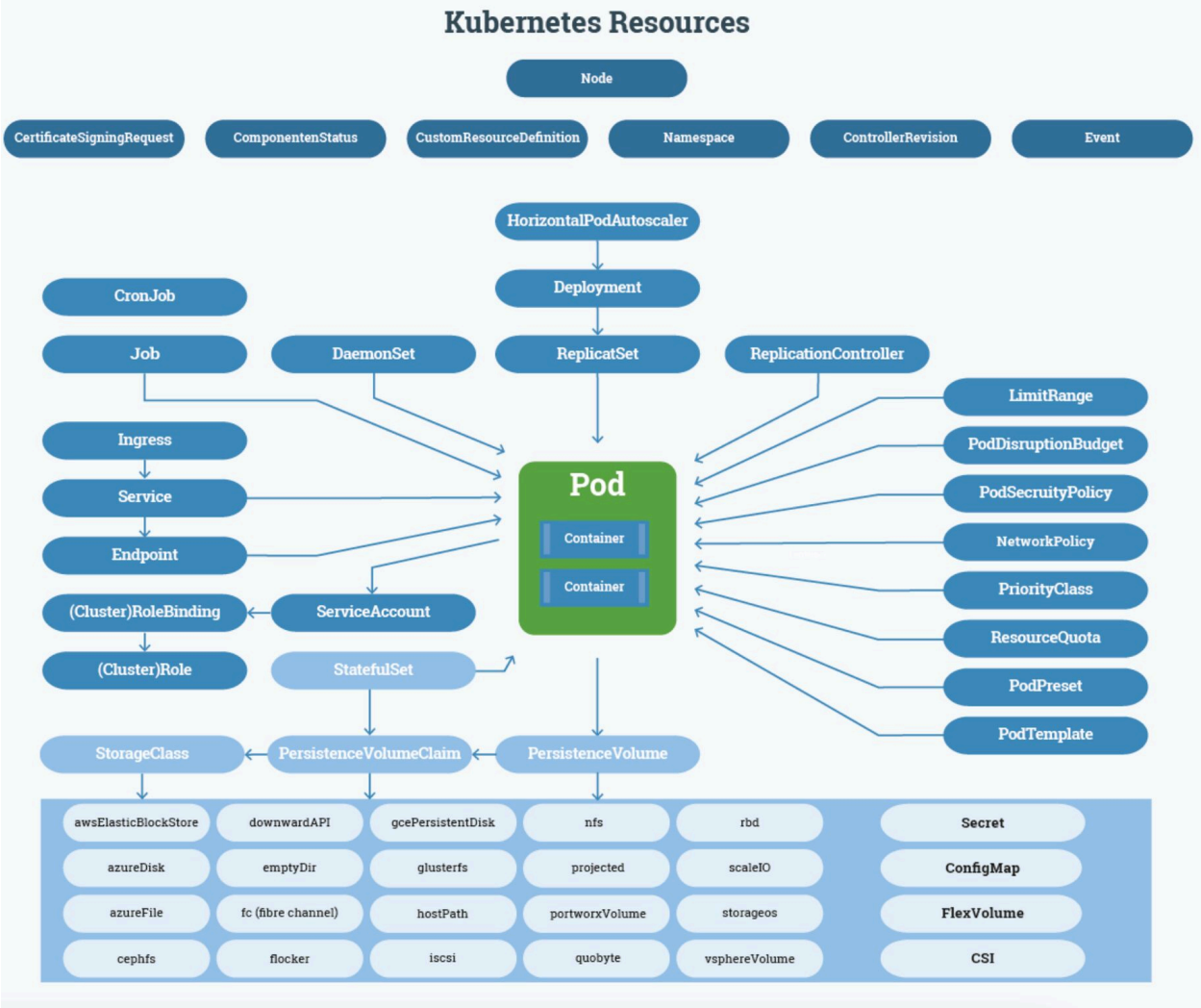

kubernetes real time interview questions with advanced concepts and scenarios

📍Basic Level [Kubernetes]

1) Explain the control plane components and their functionalities, and how they interact with each other.
2) Explain how the kube-proxy component works on the node.
3) Explain the CNI and CRI interfaces.
4) How to troubleshoot etcd issues.

📍Intermediate Level [Kubernetes]
5) Explain the core components and benefits of a service mesh like Istio or Linkerd.
6) Describe how traffic management (e.g., canary deployments, A/B testing) is implemented using a service mesh.

7) Discuss the security implications and best practices for implementing mutual TLS (mTLS) in a service mesh.
8) How do you troubleshoot a performance issue originating from the service mesh?
9) Explain the differences between ClusterIP, NodePort, LoadBalancer, and Ingress services.
10) Describe how you would implement a multi-cluster ingress solution.
11) Discuss the challenges of implementing network policies and how you would troubleshoot network connectivity issues within a Kubernetes cluster.
12) Explain how to implement and troubleshoot egress network policies.
13) Explain the differences between PersistentVolumes (PVs), PersistentVolumeClaims (PVCs), and StorageClasses.

📍Advanced Level [Kubernetes]
14) Describe how you would implement dynamic provisioning of persistent storage for stateful applications.
15) Discuss the challenges of managing stateful applications in Kubernetes and how you would ensure data consistency and availability.
16) How to take and restore a snapshot of a persistent volume?
Security Best Practices:
17) Describe how you would implement role-based access control (RBAC) to restrict access to Kubernetes resources.
18) Discuss the importance of container image security and how you would implement image scanning and vulnerability management.
19) Explain how you would implement secrets management using Kubernetes Secrets or an external secrets management solution (e.g., HashiCorp Vault).
20) How would you implement and enforce pod security policies, and how have pod security standards changed the landscape?
21) Describe how you would implement a comprehensive monitoring and logging solution for a Kubernetes cluster.
22) Discuss the importance of distributed tracing and how you would implement it using tools like Jaeger or Zipkin.

PS: Like & share this content with your friends and community