KUBERNETES

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1. What is the basic unit of deployment in Kubernetes?

A. Container
B. Pod
C. Service
D. Node
Answer: B
Explanation: Pods encapsulate one or more containers that share networking and storage, representing the smallest deployable object in Kubernetes.

2. Which command creates resources from YAML manifest?

A. kubectl apply -f file.yaml
B. kubectl create file.yaml
C. kubectl deploy file.yaml
D. kubectl run file.yaml
Answer: A
Explanation: ‘kubectl apply -f‘ reconciles declarative manifests with cluster state, creating or updating resources as defined.

3. What does a Kubernetes Deployment manage?

A. ReplicaSets and Pods for declarative updates
B. Networking rules
C. Persistent storage
D. Service discovery
Answer: A
Explanation: Deployments manage ReplicaSets and ensure the desired number of Pod replicas with rolling update capabilities.

4. Which API object exposes pods to external traffic?

A. Service type LoadBalancer
B. ConfigMap
C. Secret
D. Role
Answer: A
Explanation: A Service of type LoadBalancer provisions external load balancers (cloud provider dependent) to expose cluster workloads.

5. Which command lists pods in current namespace?

A. kubectl get pods

B. kubectl pods
C. kubectl list pods
D. kubectl show pods
Answer: A
Explanation: ‘kubectl get pods‘ retrieves pod resources within the active namespace, optionally across namespaces with ‘-A‘.

6. What is a Kubernetes node?

A. Worker machine running pods
B. Namespace
C. Secret key
D. Deployment
Answer: A
Explanation: Nodes (virtual or physical) provide resources to run pods, managed by control plane components.

7. Which component schedules pods to nodes?

A. kube-scheduler
B. kube-controller-manager
C. kube-apiserver
D. etcd
Answer: A
Explanation: The scheduler assigns pods to nodes based on resource availability, constraints, and policies.

8. What is etcd used for?

A. Store cluster state and configuration
B. Run pods
C. Provide load balancing
D. Manage logs
Answer: A
Explanation: etcd is a distributed key-value store backing Kubernetes cluster data, ensuring consistency across control plane.

9. Which command describes detailed info about pod?

A. kubectl describe pod <name>
B. kubectl info pod <name>
C. kubectl detail pod <name>
D. kubectl explain pod <name>
Answer: A
Explanation: ‘kubectl describe‘ provides detailed status, events, and spec for resources like pods, aiding troubleshooting.

10. What does ‘kubectl config use-context‘ do?

A. Switch active kubeconfig context between clusters/namespaces/users
B. Create context
C. Delete context
D. Show context details

Answer: A

Explanation: Contexts define cluster, user, and namespace combinations; switching changes the default target for kubectl commands.

11. Which controller ensures specified number of pod replicas?

A. ReplicaSet
B. StatefulSet
C. DaemonSet
D. CronJob

Answer: A

Explanation: ReplicaSets maintain a stable set of pod replicas for stateless workloads, acting as the underlying resource for Deployments.

12. What is a Namespace?

A. Logical partition for resources in cluster
B. Storage volume
C. Node pool
D. Service account

Answer: A

Explanation: Namespaces isolate resources within a cluster, enabling multi-tenant usage and resource scoping.

13. Which command scales deployment to 5 replicas?

A. kubectl scale deployment app --replicas=5
B. kubectl replicas set app 5
C. kubectl deploy app 5
D. kubectl set replicas 5 app

Answer: A

Explanation: ‘kubectl scale‘ adjusts the replica count, impacting the underlying ReplicaSet controlled by the Deployment.

14. What is a ConfigMap?

A. Key-value store for non-sensitive configuration data
B. Secret store
C. Storage volume
D. Namespace

Answer: A

Explanation: ConfigMaps supply configuration data to pods via environment variables or mounted files without embedding them in images.

15. Which object stores sensitive data?

A. Secret
B. ConfigMap
C. Deployment
D. PersistentVolume

Answer: A

Explanation: Secrets store base64-encoded sensitive values like passwords or certificates, accessible to pods with appropriate permissions.

16. How do you view logs of pod container?

A. kubectl logs pod
B. kubectl logs <pod> -c <container>
C. Both (B for multiple containers)
D. kubectl pod log

Answer: C

Explanation: ‘kubectl logs‘ fetches container logs; specifying ‘-c‘ selects the container in multi-container pods.

17. What does ‘kubectl exec -it pod -- bash‘ do?

A. Start interactive shell inside pod container
B. Execute on node
C. Restart pod
D. Copy file

Answer: A

Explanation: ‘kubectl exec‘ runs commands inside pods; ‘-it‘ attaches an interactive terminal using the specified shell.

18. What is a ServiceAccount?

A. Identity used by pods to authenticate to API server
B. User account
C. Namespace
D. Node account

Answer: A

Explanation: ServiceAccounts provide credentials for in-cluster processes, enabling RBAC-managed access to API resources.

19. Which controller ensures pod runs on every node?

A. DaemonSet
B. StatefulSet
C. ReplicaSet

D. Job

Answer: A

Explanation: DaemonSets schedule a pod per node (or per selected nodes), commonly used for logging or monitoring agents.

20. What is a StatefulSet used for?

A. Manage stateful applications with stable identities and storage

B. Run pods once

C. Run cron jobs

D. Manage secrets

Answer: A

Explanation: StatefulSets provide stable network identities and persistent volume claims for each replica, suited for databases or clustered apps.

21. What does ‘kubectl get nodes‘ display?

A. List of cluster nodes

B. Pods

C. Services

D. Deployments

Answer: A

Explanation: ‘kubectl get nodes‘ lists nodes with status, roles, age, and version information.

22. Which file typically defines Kubernetes objects declaratively?

A. YAML manifest

B. JSON only

C. INI file

D. Shell script

Answer: A

Explanation: YAML is the prevalent format for Kubernetes manifests, though JSON is also supported.

23. What is kubelet?

A. Agent running on each node ensuring containers are running

B. API server

C. Scheduler

D. Controller manager

Answer: A

Explanation: The kubelet interfaces with the container runtime to manage pod lifecycle on worker nodes.

24. How to delete resource defined in file?

A. kubectl delete -f file.yaml

B. kubectl remove file.yaml
C. kubectl destroy file.yaml
D. kubectl drop file.yaml
Answer: A
Explanation: ‘kubectl delete -f‘ deletes resources specified in the given manifest file, matching the declarative approach.

25. Which resource provides stable IP and DNS for pods?

A. Service
B. ConfigMap
C. ReplicaSet
D. Ingress
Answer: A
Explanation: Services abstract a set of pods, offering stable virtual IPs and DNS entries, load balancing traffic across endpoints.

26. What is the default namespace name?

A. default
B. kube-system
C. kube-public
D. prod
Answer: A
Explanation: Unless specified, resources reside in the ‘default‘ namespace; system components use namespaces like ‘kube-system‘.

27. Which object defines ingress rules for HTTP/S?

A. Ingress
B. Service
C. NetworkPolicy
D. EndpointSlice
Answer: A
Explanation: Ingress resources configure HTTP/S routing and load balancing at the application layer, often via ingress controllers.

28. What does ‘kubectl rollout status deployment/app‘ monitor?

A. Deployment rollout progress
B. Pod logs
C. Node status
D. Service status
Answer: A
Explanation: This command watches the status of a Deployment rollout, indicating success or failure and hanging until completion.

29. How to pause deployment rollout?

A. kubectl rollout pause deployment/app
B. kubectl deploy pause app
C. kubectl pause app
D. kubectl rollout stop app

Answer: A

Explanation: Pausing allows manual intervention (e.g., editing spec) before resuming the rollout with ‘kubectl rollout resume‘.

30. What is a Job in Kubernetes?

A. Controller that runs pod(s) to completion
B. Long-running service
C. Scheduled task
D. Ingress rule

Answer: A

Explanation: Jobs ensure specified pods complete successfully, useful for one-off batch or processing tasks.

31. Which command explains fields of resource?

A. kubectl explain deployment.spec
B. kubectl describe spec
C. kubectl detail spec
D. kubectl doc spec

Answer: A

Explanation: ‘kubectl explain‘ describes resource schema, viewing available fields and descriptions for API objects.

32. How do you label a node?

A. kubectl label node node1 env=prod
B. kubectl set label node1 env=prod
C. kubectl label nodes env=prod
D. kubectl annotate node node1 env=prod

Answer: A

Explanation: Labeling nodes enables scheduling constraints and selection via node selectors or affinity rules.

33. What is used to enforce network traffic rules?

A. NetworkPolicy
B. Service
C. ConfigMap
D. Secret

Answer: A

Explanation: NetworkPolicies define how pods communicate with each other and external endpoints, depend on network plugin support.

34. Which storage concept binds PV to PVC?

A. PersistentVolumeClaim requesting PersistentVolume
B. ConfigMap mount
C. Secret mount
D. Ingress

Answer: A

Explanation: PersistentVolumeClaims request storage resources; the control plane binds them to suitable PersistentVolumes matching requirements.

35. What is clusterIP service type?

A. Exposes service on cluster internal IP
B. External load balancer
C. NodePort exposure
D. Headless service

Answer: A

Explanation: A ClusterIP service is accessible only within the cluster, providing internal routing via the virtual IP.

36. How to view events in namespace?

A. kubectl get events --namespace ns
B. kubectl describe events ns
C. kubectl events ns
D. kubectl log events

Answer: A

Explanation: ‘kubectl get events -n‘ lists events such as warnings and normal logs, crucial for diagnosing scheduling or runtime issues.

37. Which component handles certificate signing?

A. kube-controller-manager (CSR controller)
B. kube-scheduler
C. kube-proxy
D. kubelet

Answer: A

Explanation: The controller manager’s certificate signing controller processes CertificateSigningRequests when configured, issuing client certificates.

38. What does kube-proxy do?

A. Manages network rules on nodes for service abstraction
B. Stores cluster state
C. Schedules pods

D. Runs controllers

Answer: A

Explanation: kube-proxy configures iptables or IPVS rules to implement Kubernetes Services, forwarding traffic to pod endpoints.

39. How to forward local port to pod?

A. kubectl port-forward pod/NAME 8080:80

B. kubectl forward port NAME 8080 80

C. kubectl port NAME 8080 80

D. kubectl proxy 8080 80

Answer: A

Explanation: Port forwarding tunnels local ports to pod ports for debugging or temporary access without exposing the service externally.

40. What is taint used for?

A. Mark node to repel certain pods unless tolerations specified

B. Label pods

C. Annotate services

D. Manage secrets

Answer: A

Explanation: Taints repel pods lacking matching tolerations, dedicating nodes to specific workloads or enforcing scheduling constraints.

41. Which object automatically restarts failed pods?

A. ReplicaSet/Deployment

B. Job

C. CronJob

D. Secret

Answer: A

Explanation: Controllers like Deployments and ReplicaSets monitor pods and replace them when they crash or are deleted unexpectedly.

42. What is ‘kubectl top‘ used for?

A. Show resource usage (CPU/memory) of nodes/pods

B. Show logs

C. Show events

D. Show config

Answer: A

Explanation: With Metrics Server installed, ‘kubectl top‘ surfaces current CPU and memory metrics for nodes and pods.

43. Which object schedules periodic jobs?

A. CronJob

B. Job
C. Deployment
D. StatefulSet
Answer: A
Explanation: CronJobs create Jobs on a specified schedule (Cron expression), handling periodic tasks like backups or reports.

44. What is RBAC?

A. Role-Based Access Control to define permissions
B. Role-Based Authentication
C. Resource-Based ACL
D. Remote Binary Access Control
Answer: A
Explanation: Kubernetes RBAC defines roles and bindings to regulate access to API resources by users and service accounts.

45. How to list all resources in namespace?

A. kubectl get all -n namespace
B. kubectl list namespace all
C. kubectl all namespace
D. kubectl show namespace
Answer: A
Explanation: ‘kubectl get all -n‘ retrieves commonly used resource types; for full coverage, ‘kubectl api-resources‘ plus loops may be needed.

46. What is ‘kubectl cordon node‘?

A. Mark node unschedulable for new pods
B. Drain node immediately
C. Delete node
D. Label node
Answer: A
Explanation: Cordoning prevents new pods from scheduling on a node while allowing existing pods to continue running.

47. How to remove pods from node safely?

A. kubectl drain node --ignore-daemonsets --delete-emptydir-data
B. kubectl delete node
C. kubectl stop node
D. kubectl evict node
Answer: A
Explanation: Draining gracefully evicts pods (excluding daemonsets unless forced), preparing the node for maintenance.

48. What is a context in kubeconfig?

A. Combination of cluster, namespace, user credentials
B. Only cluster
C. Only namespace
D. Only user
Answer: A
Explanation: Contexts group connection details and defaults, allowing quick switching between clusters/namespaces.

49. How to set default namespace in context?

A. kubectl config set-context --current --namespace=dev
B. kubectl namespace dev
C. kubectl set namespace dev
D. kubectl change namespace dev
Answer: A
Explanation: Updating the current context with '--namespace' ensures future kubectl commands target the desired namespace.

50. What does 'kubectl apply' do when resource exists?

A. Performs declarative update merging changes
B. Fails
C. Replaces resource entirely
D. Ignores
Answer: A
Explanation: 'apply' merges the manifest with live state, updating only necessary fields, providing declarative management across iterations.

51. Which addon provides metric APIs for 'kubectl top'?

A. Metrics Server
B. Prometheus
C. Grafana
D. Fluentd
Answer: A
Explanation: Metrics Server aggregates resource usage data for the API server, enabling 'kubectl top' and autoscaling decisions.

52. What is headless service?

A. Service with clusterIP None providing direct pod endpoints
B. Service without selector
C. Service without ports
D. Service not running
Answer: A

Explanation: Headless services skip load-balancing VIPs, returning individual pod endpoints (useful for stateful workloads).

53. Which command creates secret from literal?

A. kubectl create secret generic db --from-literal=USER=admin
B. kubectl secret create db USER=admin
C. kubectl add secret db
D. kubectl new secret db

Answer: A

Explanation: ‘kubectl create secret generic‘ builds secrets from literals or files, storing data base64-encoded.

54. What is ‘kubectl rollout undo‘ used for?

A. Roll back Deployment to previous revision
B. Remove deployment
C. Undo config change
D. Delete pods

Answer: A

Explanation: Rolling back reverts a Deployment to an earlier ReplicaSet version when new releases cause problems.

55. Which resource ensures containers start in order with dependencies?

A. initContainers in Pod spec
B. StatefulSet
C. ReplicaSet
D. DaemonSet

Answer: A

Explanation: ‘initContainers‘ run sequentially before app containers, performing setup tasks or waiting for dependencies.

56. What is Horizontal Pod Autoscaler (HPA)?

A. Controller adjusting replica count based on metrics
B. Vertical scaling
C. Node autoscaling
D. Storage autoscaling

Answer: A

Explanation: HPA monitors metrics (CPU, custom) and scales the number of pod replicas to match load.

57. Which command generates manifests quickly?

A. kubectl create deployment nginx --image=nginx --dry-run=client -o yaml
B. kubectl new manifest
C. kubectl manifest create

D. kubectl run manifest

Answer: A

Explanation: ‘kubectl create‘ with ‘--dry-run=client -o yaml‘ prints YAML without creating resources, useful for quick scaffolding.

58. What is minikube?

A. Tool to run single-node Kubernetes cluster locally

B. Cluster monitoring

C. Deployment tool

D. Config map generator

Answer: A

Explanation: Minikube spins up a local Kubernetes cluster for development or testing, often using virtualization or container runtimes.

59. What does ‘kubectl get pv‘ list?

A. PersistentVolumes

B. Pods volumes

C. PVCs

D. Pod variables

Answer: A

Explanation: ‘kubectl get pv‘ displays cluster-level PersistentVolumes, showing capacity, status, and reclaim policy.

60. Which command updates image in deployment?

A. kubectl set image deployment/app app=repo/image:v2

B. kubectl image set app repo/image:v2

C. kubectl deployment update image

D. kubectl edit image app

Answer: A

Explanation: ‘kubectl set image‘ modifies container images in Deployment specs, triggering a rolling update.

61. What is kubeconfig file path default?

A. ~/.kube/config

B. /etc/kubernetes/config

C. ~/.kube/kubeconfig

D. ~/.config/kube

Answer: A

Explanation: Kubectl reads configuration from ‘$HOME/.kube/config‘ by default, though you can use ‘KUBECONFIG‘ to override.

62. Which controller handles certificate approval automatically?

A. CertificateSigningRequest controller (part of controller-manager)

B. kube-scheduler
C. kubelet
D. kube-proxy
Answer: A
Explanation: Controllers in ‘kube-controller-manager‘ manage CSR approval if configured, automating client certificate issuance.

63. What is ‘kubectl api-resources‘?

A. List available resource types and their API groups
B. List APIs
C. Show pods
D. Show nodes
Answer: A
Explanation: ‘kubectl api-resources‘ enumerates resource kinds, short names, API versions, helping understand accessible objects.

64. How to annotate resource?

A. kubectl annotate deployment/app team=dev
B. kubectl label annotate
C. kubectl set annotation
D. kubectl note deployment
Answer: A
Explanation: ‘kubectl annotate‘ adds key-value metadata to resources, useful for tooling or organization.

65. What is PodDisruptionBudget?

A. Policy specifying minimum available pods during voluntary disruptions
B. Resource limits
C. Autoscaling rule
D. Security policy
Answer: A
Explanation: PDBs ensure a minimum number of pods remain available during voluntary disruptions like maintenance or upgrade drains.

66. Which tool manages package deployments in Kubernetes?

A. Helm
B. apt
C. rpm
D. yum
Answer: A
Explanation: Helm packages Kubernetes manifests into charts, enabling templated deployments and versioned upgrades.

67. What is container runtime interface (CRI)?

A. API for kubelet to interact with container runtime
B. Pod spec field
C. Node plugin
D. Service mesh
Answer: A
Explanation: CRI standardizes how kubelet communicates with runtimes (containerd, CRI-O), allowing pluggable implementations.

68. Which command checks API server health?

A. kubectl get --raw='/healthz'
B. kubectl health
C. kubectl status
D. kubectl ping
Answer: A
Explanation: Accessing '/healthz' endpoint verifies API server health; 'kubectl get --raw' fetches the raw response.

69. What is 'kubectl proxy'?

A. Run proxy to Kubernetes API server for local access
B. Proxy network traffic between pods
C. Proxy logs
D. Proxy storage
Answer: A
Explanation: 'kubectl proxy' starts an HTTP proxy to the API server, enabling local tools or browsers to interact with the API using local hostnames.

70. How to view resource YAML from cluster?

A. kubectl get deployment/app -o yaml
B. kubectl show yaml
C. kubectl export yaml
D. kubectl yaml get
Answer: A
Explanation: Outputting as YAML reconstructs the live resource definition, useful for backups or edits.

71. What is 'kubeadm' used for?

A. Bootstrap and manage Kubernetes clusters
B. Monitor metrics
C. Manage storage
D. Build images
Answer: A

Explanation: kubeadm automates cluster setup (control plane initialization, node joins) following best practices.

72. Which component enforces admission control?

A. kube-apiserver (with admission controllers)
B. kube-scheduler
C. etcd
D. kube-proxy
Answer: A
Explanation: Admission controllers intercept API requests after authentication/authorization, modifying or rejecting them based on policy.

73. What is ‘kubectl taint nodes node1 key=value:NoSchedule‘?

A. Prevent pods lacking toleration from scheduling on node1
B. Remove pods
C. Label node
D. Drain node
Answer: A
Explanation: Taints with effect ‘NoSchedule‘ block pods unless they tolerate the taint, controlling node assignment.

74. How to list CRDs installed?

A. kubectl get crd
B. kubectl list crd
C. kubectl get custom-resources
D. kubectl describe crd
Answer: A
Explanation: ‘kubectl get crd‘ enumerates CustomResourceDefinitions, revealing custom API types in the cluster.

75. What is resource limit in pod spec?

A. Maximum CPU/memory container can use
B. Minimum resources
C. Node limit
D. Namespace limit
Answer: A
Explanation: Limits cap resource usage; requests specify minimum guaranteed resources, enabling scheduling and QoS classes.

76. What does ‘kubectl delete pod --force --grace-period=0‘ do?

A. Force delete pod immediately (not recommended usually)
B. Graceful delete
C. Delete deployment

D. Delete namespace

Answer: A

Explanation: Forcing deletion bypasses grace periods, removing pods instantly, which can lead to abrupt termination.

77. How to run imperatively single pod?

A. kubectl run nginx --image=nginx

B. kubectl create pod nginx

C. kubectl pod nginx

D. kubectl deploy pod

Answer: A

Explanation: ‘kubectl run‘ quickly launches a pod, useful for testing or ephemeral jobs.

78. What is NodePort service?

A. Exposes service on each node’s IP at static port range 30000-32767

B. Only internal

C. Only load balancer

D. Headless service

Answer: A

Explanation: NodePort allocates a port on all nodes forwarding to the service, enabling external access without cloud load balancers.

79. Which command updates environment variable in deployment?

A. kubectl set env deployment/app KEY=value

B. kubectl env set app KEY=value

C. kubectl update env app

D. kubectl change env app

Answer: A

Explanation: ‘kubectl set env‘ modifies environment variables in pod templates, triggering Deployment rollouts.

80. What is Vertical Pod Autoscaler?

A. Adjusts container resource requests/limits automatically

B. Adjusts replica count

C. Adds nodes

D. Moves pods

Answer: A

Explanation: VPA suggests or applies new resource requests based on usage, optimizing resource allocation per pod.

81. Which kubeconfig command merges additional config file?

A. export KUBECONFIG=config1:config2

B. kubectl config merge

C. kubectl combine
D. kubectl config add
Answer: A
Explanation: Setting ‘KUBECONFIG‘ with colon-separated files merges contexts, clusters, and users, accessible in the current shell session.

82. What is container readiness probe?

A. Check indicating container ready to receive traffic
B. Liveness check
C. Startup check
D. Resource limit
Answer: A
Explanation: Readiness probes control endpoint availability: pods failing readiness aren’t considered for service traffic.

83. Which storage class parameter enables dynamic provisioning?

A. provisioner field specifying driver
B. storagePolicy
C. volumeBinding
D. dynamic: true
Answer: A
Explanation: StorageClasses define provisioners that create volumes on demand (e.g., ‘kubernetes.io/aws-ebs‘), enabling dynamic provisioning.

84. What does ‘kubectl edit deployment/app‘ do?

A. Open resource in editor for inline modification
B. Delete resource
C. Read-only display
D. Export YAML
Answer: A
Explanation: ‘kubectl edit‘ fetches the manifest into an editor, applies changes upon save, and updates the resource live.

85. Which command displays cluster info summary?

A. kubectl cluster-info
B. kubectl info cluster
C. kubectl show cluster
D. kubectl describe cluster
Answer: A
Explanation: ‘kubectl cluster-info‘ lists control plane endpoints and services like CoreDNS, verifying connectivity.

86. What is ‘kubectl api-versions‘?

A. List available API versions on server
B. List resources
C. List contexts
D. List nodes
Answer: A
Explanation: ‘api-versions‘ enumerates API groups/versions supported by the cluster, aiding compatibility checks.

87. How to ensure only selected pods access service?

A. Use NetworkPolicy to restrict traffic
B. Use ConfigMap
C. Use Secret
D. Use Helm
Answer: A
Explanation: NetworkPolicies can allow or deny traffic based on pod selectors and namespaces, controlling service access.

88. What is the effect of ‘imagePullPolicy: Always‘?

A. Pull image every time pod starts
B. Pull only if not present
C. Never pull
D. Pull if newer
Answer: A
Explanation: ‘Always‘ forces Kubernetes to check the registry for the image on each pod start, ensuring latest version is used.

89. Which component manages cloud provider integrations (legacy)?

A. cloud-controller-manager
B. kube-controller-manager
C. kube-scheduler
D. kubelet
Answer: A
Explanation: The cloud-controller-manager handles cloud-specific control loops (load balancers, routes, nodes) separated from core controllers.

90. What is ‘kubectl version --short‘ for?

A. Display client and server versions concise
B. Display only client
C. Display detailed version
D. Display nodes version
Answer: A
Explanation: ‘--short‘ prints compact version info for kubectl and server, useful for

quick compatibility checks.

91. How to check rollout history?

A. kubectl rollout history deployment/app
B. kubectl history app
C. kubectl deploy history
D. kubectl list rollout

Answer: A

Explanation: Rollout history shows previous revisions, enabling rollbacks and auditing release changes.

92. What is PodSecurityPolicy (deprecated) replaced by?

A. Pod Security Admission (PSA)
B. NetworkPolicy
C. RBAC
D. AppArmor

Answer: A

Explanation: PodSecurityPolicy was deprecated in favor of Pod Security Admission, which enforces security standards via namespace-level modes.

93. How do you configure pod affinity?

A. Use ‘affinity‘ field in pod spec with ‘podAffinity/podAntiAffinity‘
B. Use labels only
C. Use taints
D. Use service

Answer: A

Explanation: Affinity rules in PodSpec allow co-locating or separating pods based on labels, improving workload topology control.

94. What does ‘kubectl get endpoints service‘ show?

A. Pod IPs backing the service
B. Node endpoints
C. External IPs only
D. Ingress addresses

Answer: A

Explanation: Service endpoints list the actual pod IPs and ports associated with the service, verifying backend readiness.

95. Which resource ensures config rolled gradually?

A. RollingUpdate strategy in Deployment
B. Recreate strategy
C. StatefulSet
D. Job

Answer: A

Explanation: The default rolling update strategy updates pods incrementally, controlling maximum unavailable and surge counts.

96. What is ‘kubectl convert‘ used for?

A. Convert manifest between API versions (if plugin available)

B. Convert YAML to JSON

C. Convert JSON to YAML

D. Convert pods to services

Answer: A

Explanation: ‘kubectl convert‘ (optional plugin) upgrades manifests to newer API versions, assisting migration when API versions deprecate.

97. How to debug CrashLoopBackOff pod quickly?

A. kubectl logs pod --previous

B. kubectl describe pod

C. kubectl get events

D. All of the above steps useful

Answer: D

Explanation: Examining previous logs, describing the pod, and checking events together provide insight into crash causes.

98. What is ClusterRoleBinding?

A. Bind ClusterRole to subject across namespaces

B. Bind Role in namespace

C. Bind ServiceAccount to node

D. Bind Pod to node

Answer: A

Explanation: ClusterRoleBindings grant cluster-wide permissions by linking ClusterRoles to users, groups, or service accounts.

99. Which tool provides packaged Kubernetes distributions for microk8s?

A. Canonical microk8s

B. Kubeadm

C. Kind

D. Kops

Answer: A

Explanation: MicroK8s is a lightweight Kubernetes distribution packaged by Canonical for local or edge deployments.

100. What does ‘kubectl drain node --force --delete-emptydir-data‘ do?

A. Evict pods from node preparing for maintenance (force emptyDir deletion)

B. Delete node

C. Remove cluster
D. Scale deployment
Answer: A
Explanation: Draining with ‘--force‘ and ‘--delete-emptydir-data‘ evicts pods, including those with local data, to safely take node offline.