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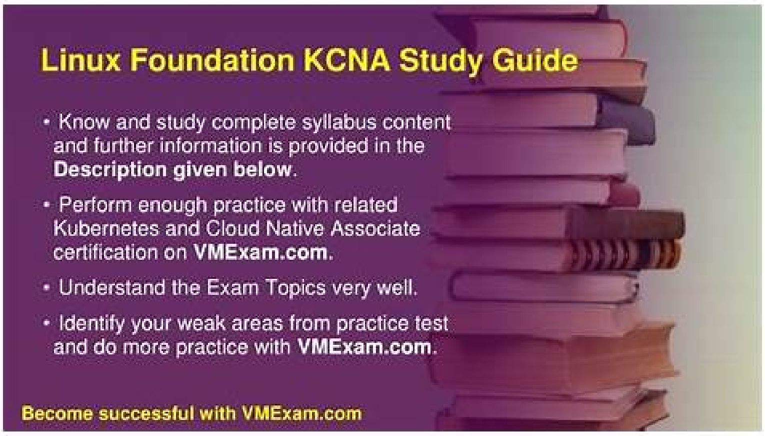

Taking the Linux Foundation KCNA practice test is very beneficial to clear the Kubernetes and Cloud Native Associate KCNA exam on the first try. You get awareness about the Linux Foundation KCNA real exam environment because the KCNA Practice Exam has an actual exam-like pattern. Furthermore, the Linux Foundation KCNA practice test tracks and reports your performance.

Linux Foundation KCNA Certification Exam is ideal for individuals who are interested in pursuing a career in cloud computing or DevOps. It is also suitable for IT professionals who want to enhance their skills in Kubernetes and cloud native technologies to support their organization's digital transformation initiatives. KCNA Exam covers a wide range of topics, including Kubernetes architecture, deployment, networking, storage, security, and troubleshooting.

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Linux Foundation Kubernetes and Cloud Native Associate Sample Questions (Q84-Q89):

NEW QUESTION # 84
Explain the concept of "histogram" metrics in Prometheus and provide an example of when they would be beneficial for monitoring.

- A. Histogram metrics are used to create custom dashboards with interactive elements for visualizing data.
- B. Histogram metrics are used for storing and retrieving time series data in a compressed format, optimizing storage space.
- C. Histogram metrics are designed to track changes in metric values over time, providing a historical view of performance trends.
- D. Histogram metrics provide a detailed distribution of values for a specific metric, allowing for analysis of performance bottlenecks or outlier behavior.
- E. Histogram metrics are only applicable to monitoring Kubernetes clusters, not for general system monitoring.

Answer: D

Explanation:

Histogram metrics provide a distribution of values for a metric. This is beneficial for monitoring scenarios where you want to understand the spread of values, such as response times of a web service. You can use the histogram to see how many requests fall within different response time buckets, helping identify performance bottlenecks or outlier requests. Histogram metrics can help identify performance issues that might not be evident with a simple average or sum metric.

NEW QUESTION # 85
Imagine there is a requirement to run a database backup every day. Which Kubernetes resource could be used to achieve that?

- A. Job
- B. kube-scheduler
- C. CronJob
- D. Task

Answer: C

Explanation:
To run a workload on a repeating schedule (like "every day"), Kubernetes provides CronJob, making B correct. A CronJob creates Jobs according to a cron-formatted schedule, and then each Job creates one or more Pods that run to completion. This is the Kubernetes-native replacement for traditional cron scheduling, but implemented as a declarative resource managed by controllers in the cluster.
For a daily database backup, you'd define a CronJob with a schedule (e.g., "0 2 * * *" for 2:00 AM daily), and specify the Pod template that performs the backup (invokes backup scripts/tools, writes output to durable storage, uploads to object storage, etc.). Kubernetes will then create a Job at each scheduled time. CronJobs also support operational controls like concurrencyPolicy (Allow/Forbid/Replace) to decide what happens if a previous backup is still running, startingDeadlineSeconds to handle missed schedules, and history limits to retain recent successful/failed Job records for debugging.
Option D (Job) is close but not sufficient for "every day." A Job runs a workload until completion once; you would need an external scheduler to create a Job every day. Option A (kube-scheduler) is a control plane component responsible for placing Pods onto nodes and does not schedule recurring tasks. Option C ("Task") is not a standard Kubernetes workload resource.
This question is fundamentally about mapping a recurring operational requirement (backup cadence) to Kubernetes primitives. The correct design is: CronJob triggers Job creation on a schedule; Job runs Pods to completion. Therefore, the correct answer is B.

NEW QUESTION # 86
Which of the following is a good habit for cloud native cost efficiency?

- A. Use only one cloud provider to simplify the cost analysis.
- B. Follow manual processes for cost analysis, including visibility and forecasting.
- C. Follow an automated approach to cost optimization, including visibility and forecasting.
- D. Keep your legacy workloads unchanged, to avoid cloud costs.

Answer: C

Explanation:
The correct answer is A. In cloud-native environments, costs are highly dynamic: autoscaling changes compute footprint, ephemeral environments come and go, and usage-based billing applies to storage, network egress, load balancers, and observability tooling. Because of this variability, automation is the most sustainable way to achieve cost efficiency. Automated visibility (dashboards, chargeback/showback), anomaly detection, and forecasting help teams understand where spend is coming from and how it changes over time. Automated optimization actions can include right-sizing requests/limits, enforcing TTLs on preview environments, scaling down idle clusters, and cleaning unused resources.
Manual processes (B) don't scale as complexity grows. By the time someone reviews a spreadsheet or dashboard weekly, cost spikes may have already occurred. Automation enables fast feedback loops and guardrails, which is essential for preventing runaway spend caused by misconfiguration (e.g., excessive log ingestion, unbounded autoscaling, oversized node pools).
Option C is not a cost-efficiency "habit." Single-provider strategies may simplify some billing views, but they can also reduce leverage and may not be feasible for resilience/compliance; it's a business choice, not a best practice for cloud-native cost management. Option D is counterproductive: keeping legacy workloads unchanged often wastes money because cloud efficiency typically requires adapting workloads-right-sizing, adopting autoscaling, and using managed services appropriately.
In Kubernetes specifically, cost efficiency is tightly linked to resource management: accurate CPU/memory requests, limits where appropriate, cluster autoscaler tuning, and avoiding overprovisioning. Observability also matters because you can't optimize what you can't measure. Therefore, the best habit is an automated cost optimization approach with strong visibility and forecasting-A.

NEW QUESTION # 87
How many different Kubernetes service types can you define?

- A. 0
- B. 1
- C. 2
- D. 3

Answer: B

Explanation:
Kubernetes defines four primary Service types, which is why C (4) is correct. The commonly recognized Service spec.type values are:
* ClusterIP: The default type. Exposes the Service on an internal virtual IP reachable only within the cluster. This supports typical east-west traffic between workloads.
* NodePort: Exposes the Service on a static port on each node. Traffic to <NodeIP>:<NodePort> is forwarded to the Service endpoints. This is often used for simple external access in environments without load balancers, or as a building block for other systems.
* LoadBalancer: Integrates with a cloud provider (or load balancer implementation) to provision an external load balancer and route traffic to the Service. This is common in managed Kubernetes.
* ExternalName: Maps the Service name to an external DNS name via a CNAME record, allowing in- cluster clients to use a consistent Service DNS name to reach an external dependency.
Some people also talk about "Headless Services," but headless is not a separate type; it's a behavior achieved by setting clusterIP: None. Headless Services still use the Service API object but change DNS and virtual-IP behavior to return endpoint IPs directly rather than a ClusterIP. That's why the canonical count of "Service types" is four.
This question tests understanding of the Service abstraction: Service type controls how a stable service identity is exposed (internal VIP, node port, external LB, or DNS alias), while selectors/endpoints control where traffic goes (the backend Pods). Different environments will favor different types: ClusterIP for internal microservices, LoadBalancer for external exposure in cloud, NodePort for bare-metal or simple access, ExternalName for bridging to outside services.
Therefore, the verified answer is C (4).

NEW QUESTION # 88
What is the primary mechanism to identify grouped objects in a Kubernetes cluster?

- A. Custom Resources
- B. Labels
- C. Pod
- D. Label Selector

Answer: B

Explanation:
Kubernetes groups and organizes objects primarily using labels, so B is correct. Labels are key-value pairs attached to objects (Pods, Deployments, Services, Nodes, etc.) and are intended to be used for identifying, selecting, and grouping resources in a flexible, user-defined way.
Labels enable many core Kubernetes behaviors. For example, a Service selects the Pods that should receive traffic by matching a label selector against Pod labels. A Deployment's ReplicaSet similarly uses label selectors to determine which Pods belong to the replica set. Operators and platform tooling also rely on labels to group resources by application, environment, team, or cost center. This is why labeling is considered foundational Kubernetes hygiene: consistent labels make automation, troubleshooting, and governance easier.
A "label selector" (option C) is how you query/group objects based on labels, but the underlying primary mechanism is still the labels themselves. Without labels applied to objects, selectors have nothing to match. Custom Resources (option A) extend the API with new kinds, but they are not the primary grouping mechanism across the cluster. "Pod" (option D) is a workload unit, not a grouping mechanism.
Practically, Kubernetes recommends common label keys like app.kubernetes.io/name, app.kubernetes.io/instance, and app.kubernetes.io/part-of to standardize grouping. Those conventions improve interoperability with dashboards, GitOps tooling, and policy engines.
So, when the question asks for the primary mechanism used to identify grouped objects in Kubernetes, the most accurate answer is

Labels (B)-they are the universal metadata primitive used to group and select resources.

NEW QUESTION # 89
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