Free Questions for KCNA by certscare

Shared by Gutierrez on 24-05-2024

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Question 1

Question Type: MultipleChoice

Which of the following is not the Kubernetes AutoScaling Strategy?

Options:

A- Horizontal Pod Autoscaler

B- Cluster Autoscaler

C- Vertical Pod Autoscaler

D- Load Balancing AutoScaler

Answer:

D

Explanation:

https://learnk8s.io/kubernetes-autoscaling-strategies

In Kubernetes, several things are referred to as "autoscaling", including:

- Horizontal Pod Autoscaler.
- Vertical Pod Autoscaler.
- Cluster Autoscaler.

Question 2

Question Type: **MultipleChoice**

Which project in this list is a leading project in the observability space?

Options:

A- Jaeger

B- Vitess

C- Argo

D- Kubernetes

Answer:

A

Explanation:

https://github.com/cncf/landscape#trail-map

CLOUD NATIVE COMPUTING FOUNDATION

CLOUD NATIVE TRAIL MAP

The Cloud Native Landscape *l.cncf.io* has a large number of options. This Cloud Native Trail Map is a recommended process for leveraging open source, cloud native technologies. At each step, you can choose a vendor-supported offering or do it yourself, and everything after step #3 is optional based on your circumstances.

HELP ALONG THE WAY

A. Training and Certification

Consider training offerings from CNCF and then take the exam to become a Certified Kubernetes Administrator or a Certified Kubernetes Application Developer

cncf.io/training

B. Consulting Help

If you want assistance with Kubernetes and the surrounding ecosystem, consider leveraging a Kubernetes Certified

1. CONTAINERIZATION

- Commonly done with Docker containers
- Any size application and dependencies (even PDP-11 code running on an emulator) can be containerized
- Over time, you should aspire towards splitting suitable applications and writing future functionality as microservices

2. CI

- Setup C that ch contain eventu
- Setup a
- Argo is deploy workfl paradi progre

3. ORCHESTRATION & APPLICATION DEFINITION

- Kubernetes is the market-leading orchestration solution
- You should select a Certified Kubernetes Distribution, Hosted Platform, or Installer: cncf.io/ck
- Helm Charts help you define, install, and upgrade even the most complex Kubernetes application

kubernetes CNCF Graduated

HELM CNCF Graduated

5. SERVICE PROXY, DISCOVERY, & MESH

- CoreDNS is a fast and flexible tool that

Question 3

Question Type: MultipleChoice

Which kubernetes object do deployments use behind the scenes when they need to scale pods?

Options:

A- Horizontal pod autoscaler

B- ReplicaSets

C- kubectl

D- Replication controller

Answer:

B

Explanation:

https://kubernetes.io/docs/concepts/workloads/controllers/replicaset/

ReplicaSet

A ReplicaSet's purpose is to maintain a stable set of replica Pods running at any given time. As such, it is often used to guarantee the availability of a specified number of identical Pods.

Question 4

Question Type: MultipleChoice

The three typical opentelemetry data is?

Options:

A- Metrics

B- Traces

C- Logs

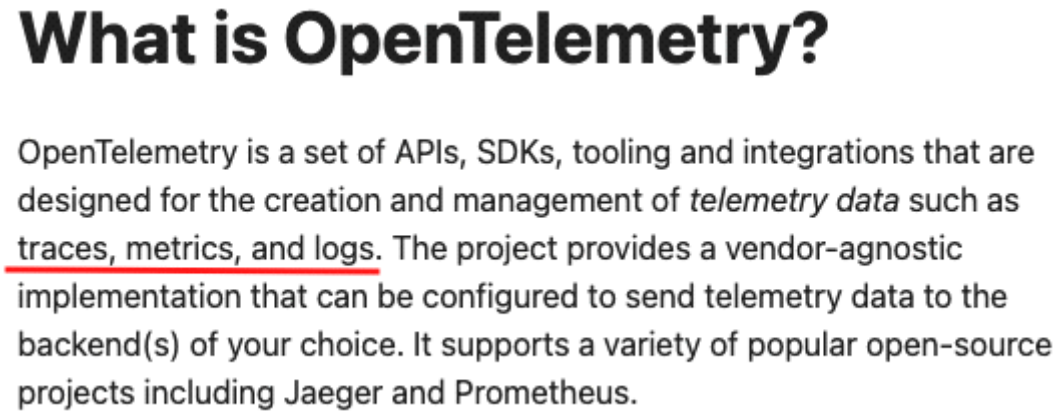
D- All of the options

Answer:

D

Explanation:

https://opentelemetry.io/docs/concepts/data-sources/



What is OpenTelemetry?

OpenTelemetry is a set of APIs, SDKs, tooling and integrations that are designed for the creation and management of *telemetry data* such as traces, metrics, and logs. The project provides a vendor-agnostic implementation that can be configured to send telemetry data to the backend(s) of your choice. It supports a variety of popular open-source projects including Jaeger and Prometheus.

Question 5

Question Type: MultipleChoice

What CNCF project is the leading DNS project in the CNCF landscape?

Options:

A- Kubernetes

B- gRPC

C- KubeDNS

D- CoreDNS

Answer:

D

Explanation:

https://github.com/cncf/landscape#trail-map

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Question 6

Question Type: MultipleChoice

kubeadm is an administrative dashboard for kubernetes

Options:

A- False

B- True

Answer:

A

Explanation:

https://kubernetes.io/docs/reference/setup-tools/kubeadm/

Kubeadm

Kubeadm is a tool built to provide `kubeadm init` and `kubeadm join` as best-practice "fast paths" for creating Kubernetes clusters.

kubeadm performs the actions necessary to get a minimum viable cluster up and running. By design, it cares only about bootstrapping, not about provisioning machines. Likewise, installing various nice-to-have addons, like the Kubernetes Dashboard, monitoring solutions, and cloud-specific addons, is not

Instead, we expect higher-level and more tailored tooling to be built kubeadm, and ideally, using kubeadm as the basis of all deploymen easier to create conformant clusters.

Question 7

Question Type: MultipleChoice

Which component of the kubernetes control-plane (master) are all requests to deploy and manage objects posted to?

Options:

A- ETCD

B- Controller Manager

C- Kube-proxy

D- API Server

E- Kubelet

Answer:

D

Explanation:

https://kubernetes.io/docs/reference/command-line-tools-reference/kube-apiserver/

Synopsis

The Kubernetes API server validates and configures data for the api objects which include pods, services, replicationcontrollers, and others. The API Server services REST operations and provides the frontend to the cluster's shared state through which all other components interact.

```
kube-apiserver [flags]
```

Question 8

Question Type: MultipleChoice

How can persistent volume be provisioned?

Options:

A- Automatically

B- Bootstrap

C- Dynamically

Answer:

C

Explanation:

https://kubernetes.io/docs/concepts/storage/persistent-volumes/

A *PersistentVolume* (PV) is a piece of storage in the cluster that has been provisioned by an administrator or dynamically provisioned using Storage Classes. It is a resource in the cluster just like a node is a cluster resource. PVs are volume plugins like Volumes, but have a lifecycle independent of any individual Pod that uses the PV. This API object captures the details of the implementation of the storage, be that NFS, iSCSI, or a cloud-provider-specific storage system.

Question 9

Question Type: MultipleChoice

Which statement is true about Pod Networking?

Options:

A- All pod requires an external DNS server to get the hostname

B- All containers in a pod get a unique IP address

C- All containers in a pod share a single IP address

D- All pod requires NAT to get a unique IP address.

Answer:

C

Explanation:

https://kubernetes.io/docs/concepts/workloads/pods/#pod-networking

Pod networking

Each Pod is assigned a unique IP address for each address family. Every container in a Pod shares the network namespace, including the IP address and network ports. Inside a Pod (and **only** then), the containers that belong to the Pod can communicate with one another using `localhost`. When containers in a Pod communicate with entities *outside the Pod*, they must coordinate how they use the shared network resources (such as ports). Within a Pod, containers share an IP address and port space, and can find each other via `localhost`. The containers in a Pod can also communicate with each other using standard inter-process communications like SystemV semaphores or POSIX shared memory. Containers in different Pods have distinct IP addresses and can not communicate by OS-level IPC without special configuration. Containers that want to interact with a container running in a different Pod can use IP networking to communicate.

Containers within the Pod see the system hostname as being the same as the configured `name` for the Pod. There's more about this in the networking section.

Question 10

Question Type: MultipleChoice

Which CNCF project is the dominant project with respect to container registries

Options:

A- Envoy

B- Harbor

C- Kubernetes

D- Rook

Answer:

B

Explanation:

https://goharbor.io/

Question 11

Question Type: MultipleChoice

Which of the following command is used to get detailed information about the pod?

Options:

A- kubectl info

B- kubectl get

C- kubectl describe

D- kubectl explain

Answer:

C

Explanation:

https://kubernetes.io/docs/reference/generated/kubectl/kubectl-commands#describe

Describe a pod

```
kubectl describe pods/nginx
```

Describe a pod identified by type and name in "pod.json"

```
kubectl describe -f pod.json
```

Describe all pods

```
kubectl describe pods
```