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1. In what three environments can container orchestration be implemented?

☒ On-premises environments

☒ **Correct**

Correct! Container orchestration can be implemented in on-premises, public cloud, private cloud, and multicloud environments.

☒ Public cloud environments

☒ **Correct**

Correct! Container orchestration can be implemented in on-premises, public cloud, private cloud, and multicloud environments.

☒ Private cloud environments

☒ **Correct**

Correct! Container orchestration can be implemented in on-premises, public cloud, private cloud, and multicloud environments.

☐ A single device

2. What is the most popular container orchestration tool used as of 2022?

☐ Docker Swarm

☐ Nomad

☒ Kubernetes

☐ Marathon

☒ **Correct**

Correct! The most popular container orchestration tool in 2022 is Kubernetes.

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3. What does a control plane do?

- ☒ Maintains the intended Cluster state by making decisions about the Cluster and detecting and responding to events in the Cluster
- ☐ Shares all the resources of a node
- ☐ Assigns newly created Pods to nodes
- ☐ Contains Pods

✓ **Correct**

Correct! A control plane maintains the intended Cluster state by making decisions about the Cluster and detecting and responding to events in the Cluster.

4. What component of a worker node ensures containers are running as desired?

- ☐ The Kubernetes proxy
- ☒ The kubelet
- ☐ Container runtime
- ☐ Etcd

✓ **Correct**

Correct! The kubelet communicates with the kube-api server to receive new and modified Pod specifications and ensures that the Pods and their associated containers are running as desired.

5. What are three Kubernetes capabilities?

- ☐ CI/CD pipelines
- ☒ Secret and configuration management

✓ **Correct**

Correct! Kubernetes offers many features, including automated rollouts, storage orchestration, and management of secrets and configuration.

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☒ Automated rollouts

☒ **Correct**

Correct! Kubernetes offers many features, including automated rollouts, storage orchestration, and management of secrets and configuration.

☒ Storage orchestration

☒ **Correct**

Correct! Kubernetes offers many features, including automated rollouts, storage orchestration, and management of secrets and configuration.

6. What is automated bin packing?

- ☒ A Kubernetes capability that performs container auto-placement based on resource requirements and conditions without sacrificing high availability
- ☐ A Kubernetes capability that mounts a chosen storage system
- ☐ A Kubernetes capability that scales workloads based on metrics or commands
- ☐ A Kubernetes capability that applies automatic changes

☒ **Correct**

Correct! Automated bin packing is a Kubernetes feature that performs container auto-placement based on resource requirements and conditions without sacrificing high availability.

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7. What is a label?

- ☐ A mechanism for isolating groups of resources within a single Cluster
- ☒ A key-value pair attached to an object
- ☐ The simplest unit in Kubernetes
- ☐ A set of identical running Pod replicas that are horizontally scaled

✓ **Correct**

Correct! Labels are defined as key-value pairs attached to objects.

8. What Kubernetes object should be used for stateless applications?

- ☐ StatefulSet
- ☒ Deployment
- ☐ DaemonSet
- ☐ ReplicaSet

✓ **Correct**

Correct. A Deployment is suitable for stateless applications.

9. What is Kubectl?

- ☐ Docker command line interface
- ☐ Cloud command line interface
- ☒ Kubernetes command line interface (CLI)
- ☐ OpenShift command line interface (oc)

✓ **Correct**

Correct! Kubectl stands for Kube Command Tool Line. Kubectl is the Kubernetes CLI.

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10. What is the function of an External Name Service?

- ☒ Maps to a DNS name
- ☐ Directs traffic to the NodePort Service
- ☐ Creates and routes the incoming requests automatically to the ClusterIP Service
- ☐ Provides inter-service communication within the Cluster

✓ **Correct**

Correct! The External Name Service is the service type that maps to a DNS name.