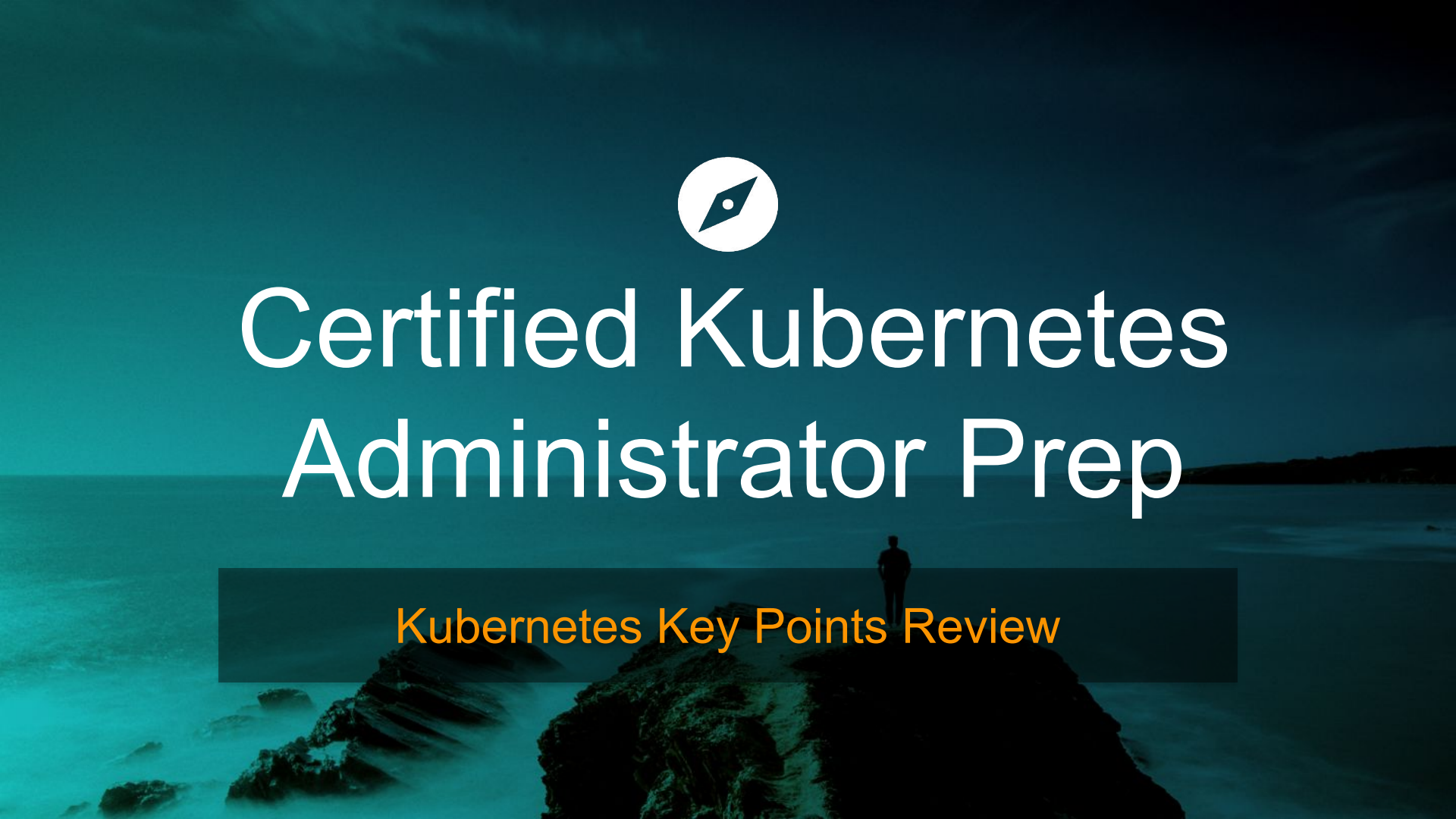

Certified Kubernetes Administrator Prep

Kubernetes Key Points Review

Scheduling -- 5%

- Use label selectors to schedule pods.
- Understand the role of DaemonSets.
- Understand how resource limits can affect pod scheduling.
- Understand how to run multiple schedulers and how to configure pods to use them.
- Manually schedule a pod without a scheduler.
- Display scheduler events.
- Know how to configure the Kubernetes Scheduler.

Logging & Monitoring -- 5%

- Understand how to monitor cluster components.
- Understand how to monitor applications.
- Manage cluster component logs.
- Manage application logs.

Application Lifecycle Management -- 8%

- Understand deployments and how to perform updates and rollbacks.
- Know various ways to configure applications.
- Know how to scale applications.
- Understand the primitives necessary to create a self-healing application.

Cluster Maintenance -- 11%

- Understand the Kubernetes Cluster upgrade process.
- Facilitate operating system upgrades.
- Implement backup and restore methodologies.

Security -- 12%

- Know how to configure authentication and authorization.
- Understand Kubernetes security primitives.
- Know how to configure network policies.
- Create and manage TLS certificates for cluster components.
- Work with images securely.
- Define security contexts.
- Secure your persistent key value store.
- Work with role based access control.

Storage -- 7%

- Understand persistent volumes and how to create them.
- Understand access modes for volumes.
- Understand persistent volume claims primitive.
- Understand Kubernetes storage objects.
- Know how to configure applications with persistent storage.

Troubleshooting -- 10%

- Troubleshoot application failure.
- Troubleshoot control plane failure.
- Troubleshoot worker node failure.
- Troubleshoot networking.

Core Concepts -- 19%

- Understand the Kubernetes API primitives.
- Understand the Kubernetes cluster architecture.
- Understand services and other network primitives.

Networking -- 11%

- Understand the networking configuration on the cluster nodes.
- Understand pod networking concepts.
- Understand service networking.
- Deploy and configure a network load balancer.
- Know how to use Ingress rules.
- Know how to configure and use the cluster DNS.
- Understand CNI.

Installation, Configuration, & Validation -- 12%

- Design a Kubernetes cluster.
- Install Kubernetes masters and nodes, including the use of TLS bootstrapping.
- Configure secure cluster communications.
- Configure a Highly-Available Kubernetes cluster.
- Know where to get the Kubernetes release binaries.
- Provision underlying infrastructure to deploy a Kubernetes cluster.
- Choose a network solution.
- Choose your Kubernetes infrastructure configuration
- Run end-to-end tests on your cluster.
- Analyze end-to-end test results.
- Run node end-to-end tests.

Conclusion

- Practice labs until it is second nature.
- Do each lab multiple times -- especially if you find it difficult.
- Review videos for concepts you had trouble with.
- Ask questions in the community.
- Watch “The Certified Kubernetes Administrator Exam Process”.
- Do the Practice Exam exercise.
- Watch “Some Words of Encouragement”.