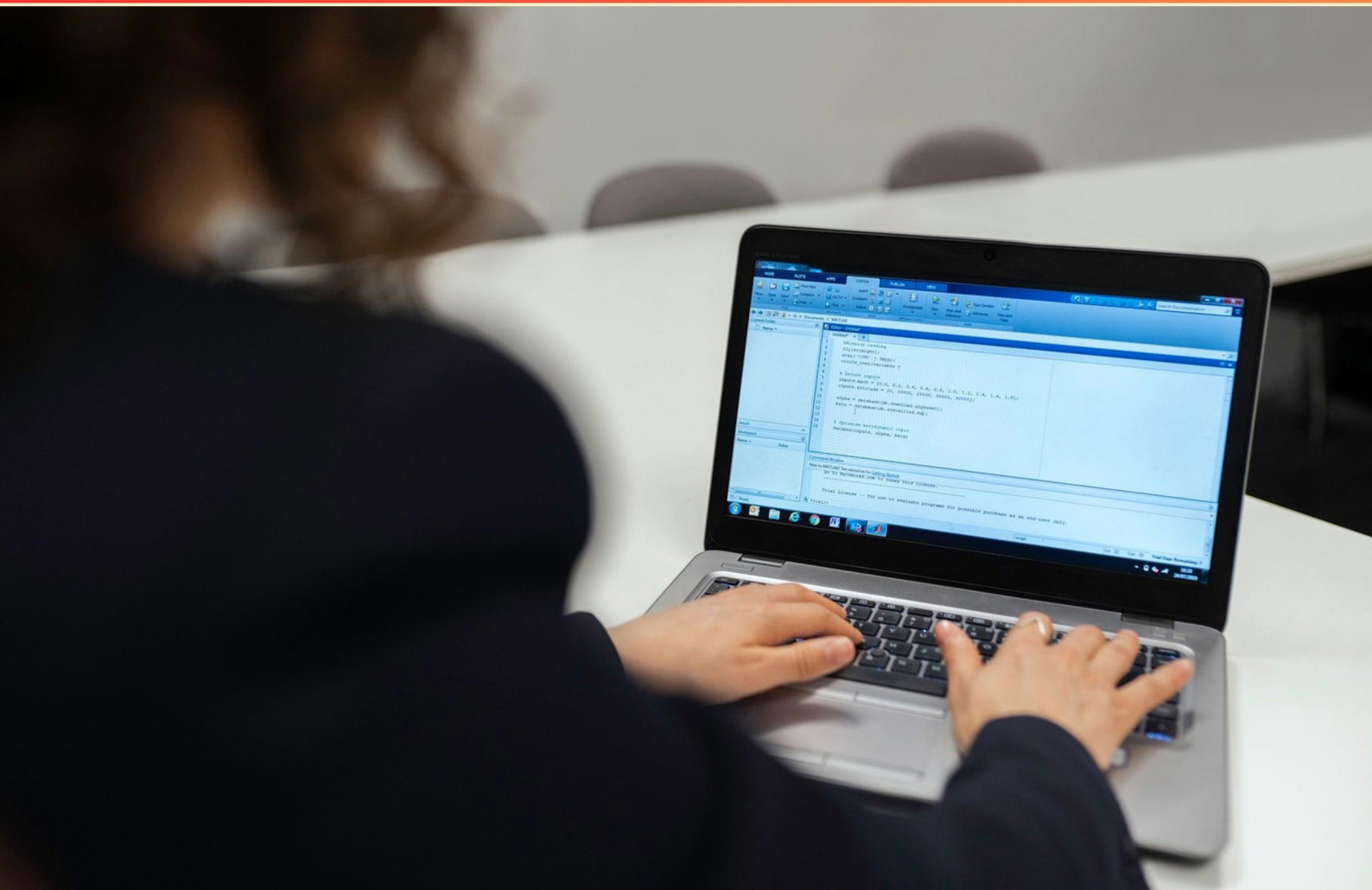


KUBERNETES CLOUD NATIVE ASSOCIATE (KCNA) CERTIFICATION 1 PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://kubernetescloudnativeassockcna1.examzify.com>



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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. What role do Alerts play in Cloud Native Observability?**
 - A. They provide notifications about system anomalies or issues
 - B. They store logs
 - C. They configure proxies
 - D. They measure latency
- 2. What is a union filesystem in the context of container images?**
 - A. A memory management technique
 - B. A network overlay for containers
 - C. A usability feature of container names
 - D. A filesystem that combines individual layers into a single view
- 3. In Kubernetes, which is an example of ephemeral storage?**
 - A. HostPath
 - B. EmptyDir
 - C. PersistentVolume
 - D. PersistentVolumeClaim
- 4. What does the command 'kubectl expose' do in Kubernetes?**
 - A. Decreases a deployment
 - B. Exposes a Kubernetes deployment as a service
 - C. Deletes a service
 - D. Scales a deployment
- 5. What is the primary function of Helm in Kubernetes?**
 - A. Automating pod scheduling
 - B. Providing a user interface for cluster administration
 - C. Simplifying the management of Kubernetes applications
 - D. Monitoring cluster resources
- 6. Which command is used to create an RSA private key?**
 - A. `ssh-keygen -t rsa -b 2048 -f user.key`
 - B. `openssl genrsa -out user.key 2048`
 - C. `openssl genrsa -out user.key 4096`
 - D. `gpg --gen-key`

- 7. What does the --selector option do in a kubectl get command?**
- A. Ignores labels and shows all resources
 - B. Show only YAML data
 - C. Filters and displays resources based on the provided label
 - D. Filters by field selector only
- 8. Which option is NOT a primary service type in Kubernetes?**
- A. ClusterIP
 - B. SwitchBalancer
 - C. LoadBalancer
 - D. NodePort
- 9. What is the function of a LoadBalancer service type in Kubernetes?**
- A. To expose a service only on the cluster's internal network.
 - B. To provide a mechanism for automatic load distribution across multiple nodes and pods.
 - C. To provide a DNS entry for external domains.
 - D. To run batch jobs that terminate after completion.
- 10. What factors does the CNCF TOC consider to establish a project's maturity?**
- A. Implementation of CNCF Code of Conduct
 - B. External committers from different organisations
 - C. Demonstrating adoption, healthy rate of changes, external committers from different organisations and implementation of CNCF Code of Conduct
 - D. Demonstrating adoption

Answers

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1. A
2. D
3. B
4. B
5. C
6. C
7. C
8. B
9. B
10. C

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Explanations

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1. What role do Alerts play in Cloud Native Observability?

- A. They provide notifications about system anomalies or issues
- B. They store logs
- C. They configure proxies
- D. They measure latency

Alerts are the notification mechanism of Cloud Native Observability. They watch signals collected from metrics, logs, and traces and trigger when predefined conditions are met—such as a spike in error rate or CPU usage crossing a threshold. When an alert fires, it notifies on-call engineers or incident channels, often with context, severity, and links to runbooks, and can be routed through tools that manage who gets notified and when (for example, Slack, PagerDuty, or email). Proper alerting enables fast, targeted responses and helps avoid fatigue by tuning thresholds and using suppression windows and multi-signal correlation. Storing logs, configuring proxies, or simply measuring latency are separate activities. Logs are about recording events, proxies handle traffic routing, and latency measurement is part of data collection, not the alerting action itself.

2. What is a union filesystem in the context of container images?

- A. A memory management technique
- B. A network overlay for containers
- C. A usability feature of container names
- D. A filesystem that combines individual layers into a single view

A union filesystem is a system that presents multiple directories as one unified filesystem. In container images, each image is built from layered changes. A runtime uses a union filesystem (such as OverlayFS or AUFS) to stack these layers so the container appears to have a single, coherent filesystem. The lower layers are read-only, and there is a writable top layer where any changes are recorded. When a file is modified, the write goes to this top layer without altering the underlying layers, a copy-on-write behavior. This arrangement keeps storage efficient, lets many containers share common base layers, and provides a clean, modular way to compose images from multiple layers.

3. In Kubernetes, which is an example of ephemeral storage?

- A. HostPath
- B. EmptyDir
- C. PersistentVolume
- D. PersistentVolumeClaim

Ephemeral storage is storage that exists for the lifetime of a Pod and is not preserved after the Pod is removed. EmptyDir fits this role perfectly: it is created on the node when the Pod is assigned there and vanishes when the Pod is deleted or recreated, providing a scratch space that doesn't persist beyond the Pod's life. PersistentVolume and PersistentVolumeClaim are designed for durable storage that remains available beyond the life of any single Pod, so they are not ephemeral. HostPath uses a directory on the node's filesystem and is tied to the node; while it can be affected by node lifecycle, it isn't the standard ephemeral scratch storage intended for Pod lifetimes, so it's not the canonical example of ephemeral storage.

4. What does the command 'kubectl expose' do in Kubernetes?

- A. Decreases a deployment
- B. Exposes a Kubernetes deployment as a service**
- C. Deletes a service
- D. Scales a deployment

Exposing a deployment by creating a Service object is what this command does. It takes the specified resource (like a Deployment) and creates a Service that selects the pods with the matching labels, giving them a stable network endpoint inside the cluster. By default, this creates a ClusterIP service, which is reachable from within the cluster only; you can make it accessible outside the cluster by choosing a different type, such as NodePort or LoadBalancer. This operation does not change the number of replicas, delete resources, or scale the deployment.

5. What is the primary function of Helm in Kubernetes?

- A. Automating pod scheduling
- B. Providing a user interface for cluster administration
- C. Simplifying the management of Kubernetes applications**
- D. Monitoring cluster resources

Helm is a package manager for Kubernetes, and its main function is to simplify the management of Kubernetes applications. It does this by packaging related Kubernetes resources into reusable charts, using templating to customize configurations, and providing a release-based lifecycle (install, upgrade, rollback). A chart defines all the resources needed for an application in one unit, parameterized with values that let you adapt it for different environments without editing individual manifests. Helm keeps a history of releases, so you can upgrade to newer chart versions or roll back to a previous state if needed. It also handles dependencies between charts, enabling complex applications to be deployed as cohesive units. This is different from automated pod scheduling, cluster admin UI, or monitoring tools, which serve other roles in the Kubernetes ecosystem.

6. Which command is used to create an RSA private key?

- A. `ssh-keygen -t rsa -b 2048 -f user.key`
- B. `openssl genrsa -out user.key 2048`
- C. `openssl genrsa -out user.key 4096`**
- D. `gpg --gen-key`

Generating an RSA private key is commonly done with OpenSSL's key-generation tool. The command `openssl genrsa -out user.key 4096` creates a private RSA key and saves it to the file named `user.key`, using a 4096-bit length. A longer key sharpens security, so 4096 bits is preferred over 2048. The other options either generate keys for different purposes or use shorter or non-RSA key setups: `ssh-keygen` can create an RSA key for SSH use (not a general-purpose RSA private key file), `openssl genrsa -out user.key 2048` produces a valid RSA private key but with weaker 2048-bit strength, and `gpg --gen-key` makes OpenPGP keys, which may include RSA but are not the direct, standalone RSA private key file described here.

7. What does the --selector option do in a kubectl get command?

- A. Ignores labels and shows all resources
- B. Show only YAML data
- C. Filters and displays resources based on the provided label**
- D. Filters by field selector only

Label selectors filter the resources you list by their labels. When you use the --selector option with kubectl get, Kubernetes only returns resources whose label expressions match what you provide. For example, `kubectl get pods -l app=frontend` will show only pods labeled with `app=frontend`, and you can combine multiple requirements like `-l app=frontend,env=prod`. The `-l` shorthand works the same as --selector. This filtering is about labels, not about YAML output or field-based filtering (which uses --field-selector).

8. Which option is NOT a primary service type in Kubernetes?

- A. ClusterIP
- B. SwitchBalancer**
- C. LoadBalancer
- D. NodePort

Kubernetes services are exposed in specific ways defined by their type, which determines how clients reach the service. The valid service types are ClusterIP, NodePort, LoadBalancer, and ExternalName. ClusterIP is the default and enables intra-cluster access; NodePort opens a static port on each node to expose the service externally through the node IPs; LoadBalancer asks the cloud provider to provision an external load balancer that routes to the service; ExternalName maps the service to an external DNS name. The option named SwitchBalancer is not a recognized service type in Kubernetes, so it isn't a primary service type. The other choices correspond to real service types, whereas SwitchBalancer does not exist in this context.

9. What is the function of a LoadBalancer service type in Kubernetes?

- A. To expose a service only on the cluster's internal network.
- B. To provide a mechanism for automatic load distribution across multiple nodes and pods.**
- C. To provide a DNS entry for external domains.
- D. To run batch jobs that terminate after completion.

When you use a LoadBalancer, you're enabling external access to a service and automatically distributing incoming traffic across multiple pods (and often across multiple nodes). In cloud environments, Kubernetes provisions an external load balancer and gives the service a stable external IP or DNS name. The load balancer then forwards requests to healthy pods behind the service, balancing the load so no single pod is overwhelmed and the application remains available even if some pods fail. This differs from internal-only exposure (that would be a ClusterIP), and from simply creating a DNS entry or running batch jobs. The goal here is to provide scalable, fault-tolerant routing of external requests to the service's pods. In environments without an integrated cloud LB, you'd use an alternative like MetalLB to achieve the same external load-balancing behavior.

10. What factors does the CNCF TOC consider to establish a project's maturity?

- A. Implementation of CNCF Code of Conduct
- B. External committers from different organisations
- C. Demonstrating adoption, healthy rate of changes, external committers from different organisations and implementation of CNCF Code of Conduct
- D. Demonstrating adoption

Maturity is shown by a project that demonstrates real-world use, ongoing maintenance, diverse governance, and formal community standards. Adoption proves the project delivers value at scale and is trusted by users. A healthy rate of changes indicates active development, timely fixes, and continuous improvement rather than stagnation. Having external committers from different organizations signals a broad, collaborative governance model that reduces reliance on a single contributor and supports sustainability. Implementing the CNCF Code of Conduct shows a commitment to an inclusive and well-managed community, which is essential for long-term viability. Together, these factors give a complete picture of both technical health and community maturity. Relying on any one factor alone—such as only adoption, or only governance, or only a code of conduct—does not fully capture maturity.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://kubernetescloudnativeassockcna1.examzify.com>

We wish you the very best on your exam journey. You've got this!

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