

KUBERNETES FROM ZERO · FOUNDATIONS 6 OF 12 · LESSON 6 · LESSON KIT · HOMEWORK

Kubernetes from Zero, part 6: Namespaces, labels and annotations

Exercises drawn only from the lesson: recall, run this and explain, predict the outcome.

Every command ran on a kind v0.33.0 cluster (node v1.37.0, kubectl v1.37.2) on 10 Nov 2026. Cluster: k8s-ep04.

Use the kind cluster from part 4. The lesson's cluster is `k8s-ep04` and its context is `kind-k8s-ep04`, so names on yours will differ. Answers are in the separate answer key.

Recall

Answer from memory, then check the lesson.

1. Name the four namespaces every cluster starts with, and the extra one kind adds.

2. Can two Pods both be named `web`? Can namespaces be nested?

3. Name three cluster-scoped types from the lesson, and say what `-n` does for them.

4. Name the six recommended `app.kubernetes.io` keys.

5. What belongs in an annotation instead of a label, and what is the size limit?

SCAN FOR THE LESSON

Lesson: **Kubernetes from Zero, part 6: Namespaces, labels and annotations**

https://aitamer.news/posts/k8s-from-zero-06-namespaces-labels-annotations/?utm_source=lessonkit&utm_medium=pdf&utm_campaign=k8s-06&utm_content=homework

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Run this and explain

Run each command, then answer.

6 With the context namespace still `default`, run `kubectl get pods` and then `kubectl get pods -n kube-system`. What does the first command print in the lesson, and why?

7 Run `kubectl create namespace Team_C`. What class of error does the lesson describe?

8 Run `kubectl label pod shop-cache note="talk to payments"`. What happens, and where should that sentence go?

9 Run `kubectl delete namespace team-b` after you have looked with `kubectl get all -n team-b`. What goes with the namespace?

Predict the outcome

Write your prediction first. Then check the answer key.

10 You apply a Pod into `team-a`, then run `kubectl get pods` and see `No resources found in default namespace.` What is wrong, and which two commands does the lesson give?

11 A custom-columns command for `app.kubernetes.io/part-of` prints `<none>` even though the label is there. What did the shell do, and what is the fix in the lesson?

12 `kubectl get ns` shows `team-b` as `Terminating` for a long time. What is the namespace waiting on, and what does the lesson tell you not to do?

13 You `kubectl annotate` a key that already has a value, without `--overwrite`. What does the lesson print?

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