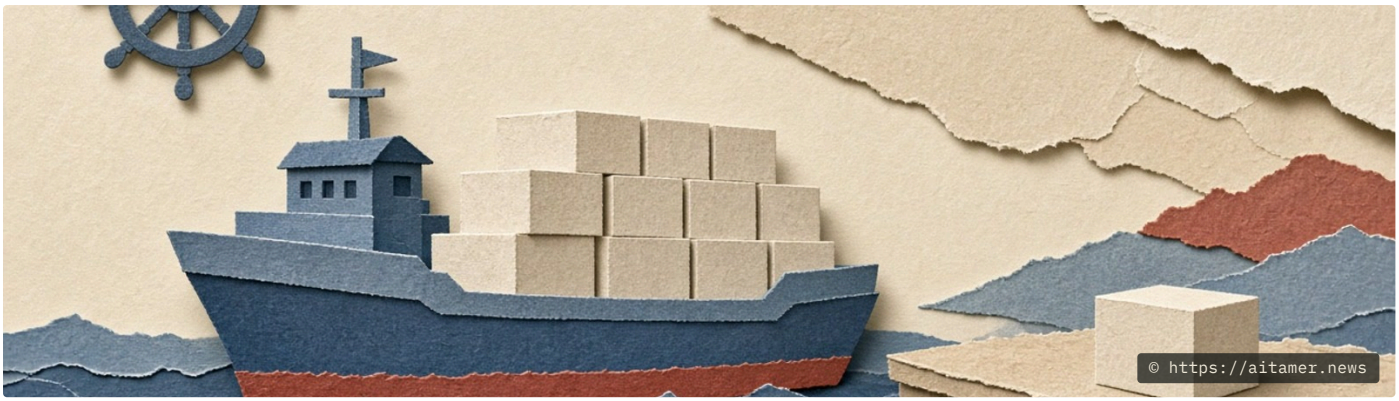

KUBERNETES FROM ZERO · FOUNDATIONS 11 OF 12 · LESSON 11 · LESSON KIT · HOMEWORK

Kubernetes from Zero, part 11: requests, limits and QoS classes

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

Ran every example on kind v0.33.0, node v1.37.0, kubectl v1.37.2, cgroup v2 node, 10 Nov 2026. Cluster: k8s-ep10.

Use the kind cluster and the namespace `k8s-from-zero` from part 4. The lesson's node is `k8s-ep10-control-plane`, with 8 CPUs and about 16 GiB, and it is a cgroup v2 node. `kubectl top` is not available: kind does not install a metrics add-on. Answers are in the separate answer key.

Recall

Answer from memory, then check the lesson.

1. What does the scheduler count, and what does the kernel enforce?

2. At the limit, what happens to CPU, and what happens to memory?

3. Name the three QoS classes and the eviction order.

4. Where do you see a quota error on a Deployment?

Predict the outcome

Write your prediction first. Then check the answer key.

5. A Pod stays Pending with `Insufficient cpu` or `Insufficient memory`. What does the lesson tell you to read, and why will a usage graph not explain it?

SCAN FOR THE LESSON

Lesson: **Kubernetes from Zero, part 11: requests, limits and QoS classes**

https://aitamer.news/posts/k8s-from-zero-11-requests-limits-and-qos/?utm_source=lessonkit&utm_medium=pdf&utm_campaign=k8s-11&utm_content=homework

NEXT IN THE SERIES **Next: Lesson 12, the first checkpoint lab.** The first checkpoint lab, where you build a two-tier app with everything from parts 1 to 11 and grade it with a script. Lesson page

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6 RESTARTS climbs and lastState says OOMKilled with exit 137. What are the two responses in the lesson?

7 `kubectl top` prints `error: Metrics API not available`. What does the lesson say to read instead?

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