



Lightweight Kubernetes. Easy to install, half the memory, all in a binary of less than 100 MB.

Great for:

- Edge
- Homelab
- Internet of Things (IoT)
- Continuous Integration (CI)
- Development
- Single board computers (ARM)
- Air-gapped environments
- Embedded K8s
- Situations where a PhD in K8s clusterology is infeasible

What is K3s?

K3s is a fully compliant Kubernetes distribution with the following enhancements:

- Distributed as a single binary or minimal container image.
- Lightweight datastore based on sqlite3 as the default storage backend. etcd3, MySQL, and Postgres are also available.
- Wrapped in simple launcher that handles a lot of the complexity of TLS and options.
- Secure by default with reasonable defaults for lightweight environments.
- Operation of all Kubernetes control plane components is encapsulated in a single binary and process, allowing K3s to automate and manage complex cluster operations like distributing certificates.
- External dependencies have been minimized; the only requirements are a modern kernel and cgroup mounts.
- Packages the required dependencies for easy "batteries-included" cluster creation:
 - containerd / cri-dockerd container runtime (CRI)
 - Flannel Container Network Interface (CNI)
 - CoreDNS Cluster DNS

- Traefik Ingress controller
- ServiceLB Load-Balancer controller
- Kube-router Network Policy controller
- Local-path-provisioner Persistent Volume controller
- Spegel distributed container image registry mirror
- Host utilities (iptables, socat, etc)

What's with the name?

We wanted an installation of Kubernetes that was half the size in terms of memory footprint.

Kubernetes is a 10-letter word stylized as K8s. So something half as big as Kubernetes would be a 5-letter word stylized as K3s. There is no long form of K3s and no official pronunciation.

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