

# Kubernetes

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## ARCHITECTURAL COMPONENTS



*You Must know!*





# kubernetes Architecture



## Control Plane Components

kube-controller-manager

etcd

kube-apiserver

kube-scheduler

## Node Components

kube-proxy

kubelet

Container  
Runtime

Control Plane Component



# kube-apiserver



“

Serves as the primary management point for the Kubernetes control plane and all other components, and exposes the Kubernetes API.

”

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Control Plane Component



etcd



“

Consistent and highly-available key-value store that stores the configuration and state data for the entire cluster.

”

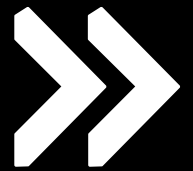
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Control Plane Component



# kube-controller-manager



“

A component that runs controller processes, monitors the cluster and makes changes to ensure that the current state matches the desired state.

”

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Control Plane Component



# kube-scheduler



“

Assigns workloads to worker nodes based on resource availability and other policies.

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Node Component



# kubelet



“

Runs on each worker node  
and is responsible for  
starting, stopping, and  
monitoring containers.

”

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Node Component



# kube-proxy



“

Manages network communications between services and maintains network rules on each worker node.

”

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Node Component



# Container Runtime



“

Executes and manages containers, providing an isolated environment for applications to run in, enabling portability, such as Docker or CRI-O.

”

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# #CodeCravings

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