





Components of the Control Plane:


Component	Role
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kube-apiserver	 Front door to the cluster. All requests (kubectl, UI, etc.) go through it.
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etcd	 Key-value store for all cluster data (state, config, secrets).
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kube-scheduler	 Chooses which node runs a new Pod based on resource availability.
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kube-controller-manager	 Runs controllers that monitor and react to changes (e.g., ReplicaSet, Node controller).
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cloud-controller-manager	 Connects Kubernetes to cloud providers (manages load balancers, volumes, etc.)
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How it Works Together:

You create a Pod using kubectl.

kube-apiserver receives the request.

etcd stores the desired state.

kube-scheduler selects a node for the Pod.

kubelet on that node starts the container.