Controller Manager (kube-controller-manager)

The controller managers are control plane components on the master node running controllers to **regulate** the state of the Kubernetes cluster. Controllers are continuously running and comparing the cluster's desired state (provided by objects' configuration data) with its current state (obtained from etcd data store via the API server). In case of a mismatch corrective action is taken in the cluster until its current state matches the desired state.

The **kube-controller-manager** runs controllers responsible to act when nodes become unavailable, to ensure pod counts are as expected, to create endpoints, service accounts, and API access tokens.

The **cloud-controller-manager** embeds cloud-specific control logic. The cloud controller manager lets you link your cluster into your cloud provider's API, and separates out the components that interact with that cloud platform from components that only interact with your cluster.

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